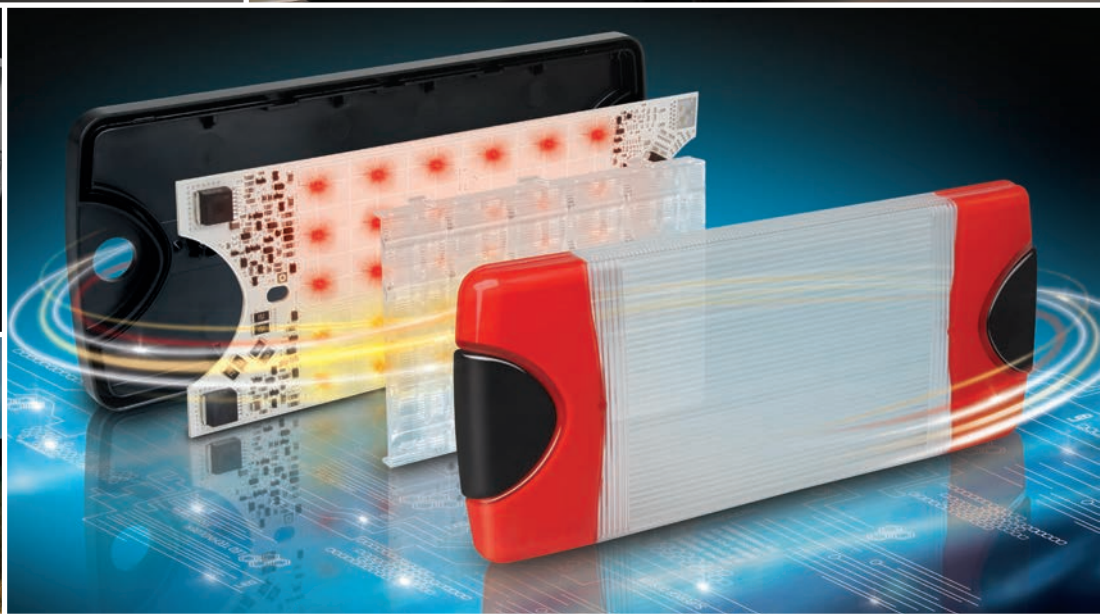




Technology with Vision

## HELLA NEW ZEALAND CATALOGUE 2014-2016



# Road Transport Lighting, Safety Lighting and Accessories

Expertly Designed and Precision Manufactured



# Welcome to HELLA New Zealand's 2014 - 2016 Catalogue

Our 2014 - 2016 catalogue offers a comprehensive range of innovative road transport lighting, safety lighting and accessories for the transport sector.

Since the launch of our first LED automotive signal lamps in 1990, HELLA design and commitment to excellence continues to set new standards. HELLA's innovative solutions have become the benchmark for the road transport industry with lamps to suit the most demanding environmental conditions.

When you select a HELLA LED based product you know that functional safety, a perfect fit and long term product durability are guaranteed.

You have our promise that as a local designer and developer, manufacturer and service provider we will stand behind our products.

## **HELLA-New Zealand Limited**

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HELLA Fit and Forget LED Products

# Where Environmental Choice meets Economic Sense

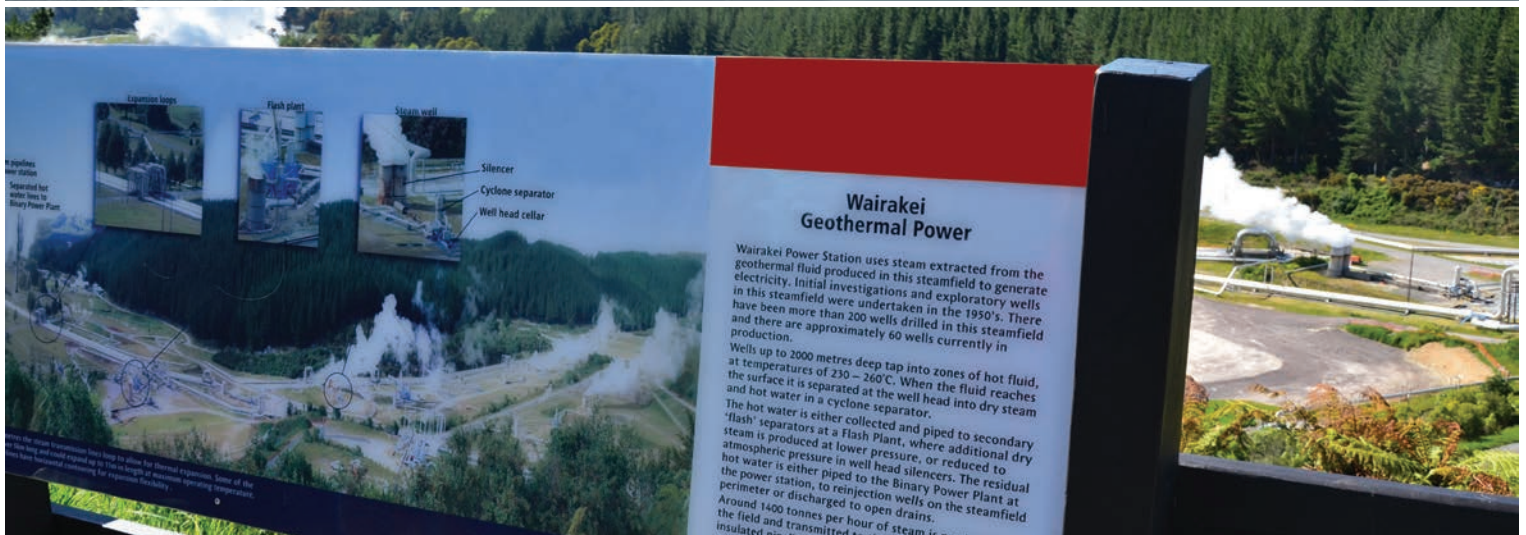
In a world where the development of renewable energy sources and the conservation of precious resources is given prominence by scientists and decision makers, energy efficient LED lighting has a substantial role to play towards the lowering of our carbon footprint without sacrificing functionality or compromising safety.

At HELLA New Zealand we are dedicated to designing and manufacturing products for an extended useful economic life, which is the responsible choice to conserve the world's precious resources.

Martin Reinbach, Managing Director, HELLA-New Zealand Limited



HELLA Fit and Forget – The responsible choice for a sustainable tomorrow.





# PRODUCT SECTION CONTENTS

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2550	001384-28	48/00	Number Plate Lamp
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2902	002014-11	47/00	Retro Reflector (Red/
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# HELLA NEW ZEALAND

## TECHNOLOGY WITH VISION

For over 20 years HELLA New Zealand has adopted the entrepreneurial spirit of its founders and developed into a LED lighting technology company with comprehensive in-house design and manufacturing facilities.

The history of HELLA is inextricably linked to the development of the automobile. Registered in June 1899, in Lippstadt, Germany, the company has grown due to entrepreneurial boldness and foresight, developing innovative products and processes, a committed workforce and by a customer-focused approach.

HELLA International represents the worldwide HELLA organisation. This includes all HELLA production facilities, research and development, original equipment and aftermarket sales and trading companies with over 29,000 employees. With over 100 manufacturing facilities, production subsidiaries and joint ventures located in more than 35 countries, the company group is a global-operations partner to the motor industry. Sales companies and partners worldwide supply automobile manufacturers and the specialised trade around the globe.

### HELLA-New Zealand Limited

HELLA-New Zealand Limited was founded in 1973 to manufacture, market and distribute products in New Zealand.

Today the company designs and manufactures innovative lighting products for the commercial transport and automotive industries, using the latest LED (Light Emitting Diode) technology. With these products HELLA New Zealand is a supplier to automotive manufacturers and commercial transport fleets all over the world.

HELLA is a prominent brand in the New Zealand aftermarket and in the commercial transport sector, with key relationships with original equipment bus, coach and trailer manufacturers.

### Customer Service

HELLA backs up its products with a dedicated customer services team that can advise customers on product availability, product selection, installation and delivery.

The advantage of manufacturing a large percentage of our products locally; for both local customers and a large overseas client base, allows for a high degree of flexibility and customisation unmatched in the New Zealand automotive industry, thus our order fill rate ranks consistently among the highest in the industry.

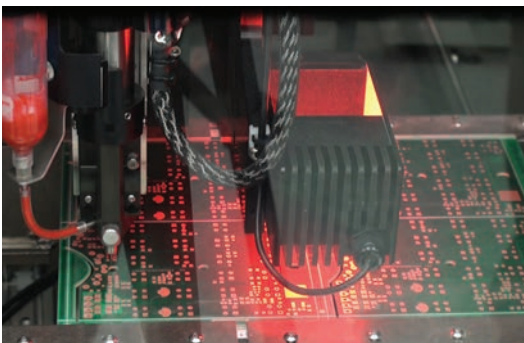
HELLA customer service provides customers with 'best fit' solutions based on sound professional knowledge and experience in the commercial transport sector. With access to a wide global database within the HELLA group, customer service is the recommended first stop for any customer inquiries.



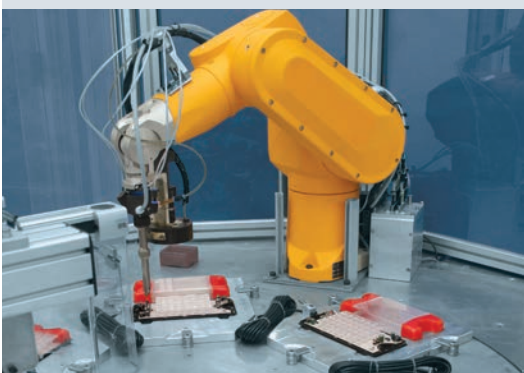




## EXPERTLY DESIGNED AND PRECISION MANUFACTURING FOR VISIBILITY AND SAFETY ON NEW ZEALAND ROADS



“Fit and Forget by Design is your peace of mind of purchasing a product which is designed to stand the test of time, without compromise.”



Fit and Forget by Design is not just a marketing slogan, it is a philosophy adopted by our design team in 1998 when HELLA New Zealand designed our first DuraLED® signal lamp for the commercial transport sector.

To create lamps that will function faultlessly for the vehicle life and beyond requires dedication to excellence and the most rigorous, verified test regime. Extensive consultation with our most discerning industry partners was conducted, followed by months of field tests before the first DuraLED® was ever sold to a customer.

Over the past 16 years the same team of dedicated perfectionists have continuously improved the latest designs from ongoing research and market experience.

Material selection, LEDs, optics, drive electronic, circuit protection, design of the sealing geometries, rigidity versus deliberate flexibility of the mounting system all work in harmony to create a product of truly lasting value and safe operation.

Fit and Forget by Design is your peace of mind of purchasing a product which is designed to stand the test of time, without compromise.

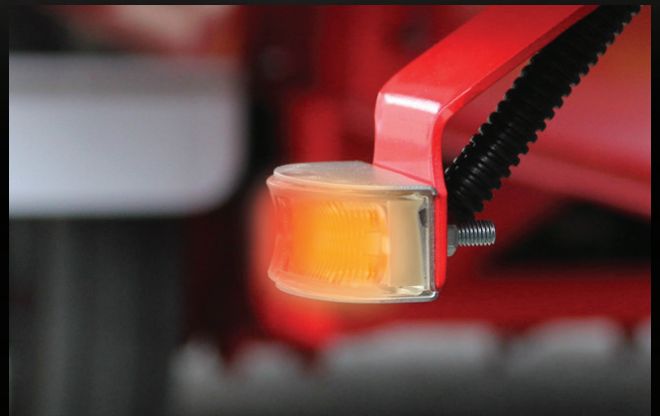


Designed and tested for guaranteed reliability and performance.



# Marker and Signal Lamps

The range of HELLA Marker and Signal Lamps have been accepted as the most advanced lighting solution for commercial vehicles.





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## Marker and Signal Lamps

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# LED MARKER AND SIGNAL LAMPS

Our expanding range of LED based marker and signal lamps has been accepted as the most advanced solution to trim maintenance expenses of Commercial Transport Fleets and Operators.

Since the introduction of the first HELLA LED signal lamp in 1990, this innovative technology has set new standards and received considerable worldwide recognition. Over two decades, we have refined our designs and developed production technologies now used in millions of lamps produced annually, all engineered and tested to the most demanding standards.

Our local research, development and production facilities have allowed us to respond quickly to market feedback from New Zealand and Australian manufacturers of transport equipment, as well as many discerning Fleet Operators from all over the globe. Their input has been invaluable and has ultimately helped New Zealand manufactured LED technology products to succeed in world markets.

HELLA Fit and Forget LED lighting systems are now firmly established as the solution that fully meets both environmental and economic considerations of the astute operator, in an ever growing catalogue of applications.

## DuraLED®

HELLA's growing range of DuraLED® lamps, incorporating the latest LED technology, has proven to be the superior economic and environmental choice for transport operators in New Zealand. DuraLED® has a track record to last the distance. The first DuraLED® lamps were supplied in 1998, some 16 years ago and are still in use today.

DuraLED® lamps offer distinctive designs with shallow shapes and concealed mounting screws for enhanced protection against damage.

Most marker and signal lamps are pre-wired with sheathed multi-core cable, fully sealed against dust and moisture to International Protection Standards IP 6K6/IP 6K7, and compliant with current ADR (Australian Design Rules). As a result, these lamps are approved for use in New Zealand and Australia.

Once again following market demand, we now offer a range of selected models of DuraLED® lamps with moulded-in-Deutsch (DT) Connectors.

HELLA's innovative DuraLED® lamps are designed for use on trucks, buses, caravans, emergency vehicles and speciality applications. The range includes marker lamps, direction indicators, end outline lamps, position lamps, high intensity warning signal lamps and a combination stop/rear position/indicator lamp range incorporating special ultra wide optics for enhanced visibility.

## EuroLED®

The EuroLED® marker and signal range of LED lamps harness the benefits of a single high intensity LED. The use of precision optics give the EuroLED® lamp a unique look along with the benefits of low power consumption. EuroLED® marker and signal lamps feature a shallow design and special ultra wide optics for significantly improved side visibility.

EuroLED® lamps are also shockproof and fully sealed to withstand temporary water submersion and high-pressure washing, ensuring long service life and durability. EuroLED® lenses are made from specially formulated high impact acrylic with enhanced chemical resistance.







### Superior Lens and Optic Materials

The majority of HELLA DuraLED® and EuroLED® lamps are produced using specially formulated enhanced high impact acrylic, that has superior resistance to most commonly used wash and cleaning liquids.

HELLA recommends these hermetically sealed marker and signal lamps for most commercial transport applications to provide an ultra long term and environmentally friendly lighting solution.

In 2009 HELLA took the design and development of ultra durable lighting solutions to a new level by specifying the Swiss Made high-tech material Grilamid® for some selected applications.

Grilamid® has quickly become the material of choice for the discerning equipment operator and fleet managers.

### UV Resistance

New Zealand and Australia are exposed to some of the highest and harshest UV radiation in the world. Most consumers will have purchased and experienced products made from plastic materials that deteriorate, fade and often become brittle very quickly when exposed to the sun.

Most of the LED lighting equipment we supply is likely to be continually exposed to this harsh environment. HELLA New Zealand only manufactures products from materials which are highly resistant to UV deterioration.

HELLA New Zealand LED lamps are designed to withstand our harsh environmental conditions and will tolerate long term exposure to high UV levels without fading or embrittlement.

## GRILAMID®

Specified by HELLA

Grilamid® has quickly become the material of choice for operators of equipment exposed to high vibration, impact and chemical conditions.

### An Increasing Range of Lamps with Grilamid® Lenses and Optics

Grilamid® is a revolutionary optical grade Polyamide made in Switzerland. Grilamid® offers an unbeatable combination of properties including toughness against impact, long term UV stability and resistance to commonly used chemicals and washes. As such Grilamid® has become the specified material of choice for many of HELLA's valued commercial customers and end users.

HELLA has responded to this strong customer demand and has significantly expanded the range of products with optional Grilamid® lenses. In addition, we have taken the bold step and standardised Grilamid® for some popular lamps at no extra cost to our customers.

### Long Term Transparency

Grilamid® will not lose its lustre or embrittle over time but will remain clear, transparent and impact tough for the life of the product. Grilamid® retains its superior optical performance without discolouration.

### Cleaning Products

The use of cleaning chemicals and even general liquid detergents is sometimes used as a reason to void warranties for products made from Polycarbonate. Such chemicals can cause crazing and/or cracking of this particular plastic type.

Grilamid® is highly resistant to chemicals commonly used in the transport industry, even in applications where it is regularly exposed to chemicals used to wash and sterilise equipment used in our Primary Industries. It is the ideal material for a true Fit and Forget performance.

### Grilamid® Retains its Toughness

LED truck and trailer lamps are frequently exposed to mechanical impacts by stones, tree branches and general shocks. Uncoated Polycarbonate will lose its impact resistance over time.

Tests prove and market feedback confirms the superior strength and toughness of Grilamid® is not compromised even through the prolonged effects of weathering and UV exposure.



HELLA Marker and Signal Lamps have been accepted as the most advanced lighting solution for commercial vehicles.



#### **Electromagnetic Compatibility (EMC)**

HELLA LED lamps are electronic devices. The electrical circuits contain components that have been optimised to suppress frequencies that can interfere with communication equipment or even the common radio. The circuits are also specially designed to reduce the susceptibility to interference from electric fields.

#### **Protection Against Damage Due to Voltage Spikes**

HELLA lamps are protected against damage from positive voltage spikes caused by events such as load dump conditions and overvoltage. The circuits are also protected against reverse polarity connection and negative voltage spikes.

#### **Easy Refurbishment of Acrylic and Grilamid® Lenses**

In a world consuming resources at an ever increasing rate, HELLA LED lamps manufactured with enhanced impact acrylic and Grilamid® are a truly long-term investment.

Both these materials can be refurbished to near new condition by polishing out fine scratches and road grime.

As illustrated in the photo, a DuraLED® lamp with several years of active high mileage road use can be refurbished to pristine near new condition.



Acrylic and Grilamid® lamps can be polished to look like new.

HELLA Fit and Forget LED lighting systems are firmly established as the solution that fully meets both environmental and economic considerations of the astute operator.





# TECHNICAL PRODUCT LOGOS

Your guide to understanding the technical product logos found throughout the marker and signal section.



## Multivolt™

One of the leading advantages of HELLA's LED technology is the Multivolt™ circuitry fitted to most of our LED lamps, ensuring a uniform level of intensity and optimum brightness. Multivolt™ LED lamps can be connected to either 12 or 24 volt DC electrical systems. The light performance will not be adversely affected by voltage drop over long cables and corroded connectors. LED lamps fitted with Multivolt™ circuitry are clearly marked throughout the catalogue.



## Grilamid®

Grilamid® has quickly become the material of choice for operators of equipment exposed to high vibration and impact conditions as well as in applications regularly exposed to petrochemicals and chemicals used to wash and sterilise equipment used in our Primary Industries.

See page 9 for further information on Grilamid®



## HCS - HELLA Compatibility Solution

Vehicles operating on New Zealand public roads require the direction indicator lamps to be monitored for correct function. When a 21 watt bulb based lamp is exchanged with an LED lamp, some flasher units will not recognise this LED lamp because of its low power consumption and indicate a bulb failure. Many transport fleets will operate trucks/trailers which can feature a mixture of bulb based direction indicator lamps and low power consumption LED direction indicator lamps.

In 1999 HELLA New Zealand designed the HELLA Compatibility Solution (HCS) to offer seamless compatibility between conventional bulb based lamps and HCS equipped LED lamps. The HCS control unit recognizes either a standard bulb lamp or an HCS LED lamp or a mixture thereof, and continues to work normally, without triggering the bulb failure warning function.

This technical solution has become the ISO Standard 13207-1 which is being incorporated into the body electronic of European Trucks.

Astute fleet operators today specify LED lamps designed to ISO Standard 13207-1 to ensure the future-proofing of their fleet.

See page 210 for further information on HCS Technology and ISO 13207-1



## Ultra Wide Visibility Optics

HELLA continues to increase its range of LED signal lamps that incorporate Ultra Wide Visibility Optics. LED lamps strictly designed to minimum legal requirements in the horizontal +/-10 to +/-45 degree field suffer from signal fade and become less visible in bright sunlight.

By incorporating Ultra Wide Visibility Optics, HELLA LED signal lamps are much more noticeable to following drivers particularly as the vehicle in front turns and the LED stop or turn signal is viewed from an angle.

HELLA LED signal lamps, incorporating Ultra Wide Visibility Optics, far exceed the minimum legal brightness requirement beyond the +/-10 degree horizontal angle. These lamps provide a significantly enhanced stop and turn signal to the driver of the following vehicle. LED signal lamps incorporating Ultra Wide Visibility Optics, are clearly marked throughout the catalogue.



## Enhanced Definition Technology (EDT)

A stop lamp has to be instantly recognised as a warning signal. To further enhance recognition an increase in illuminated area (compared to the rear position lamp) is combined with an increase in intensity. As a result the illuminated area gets larger and brighter on an EDT lamp for increased safety and awareness

# QUICK REFERENCE PRODUCT GUIDE

## LED LAMPS



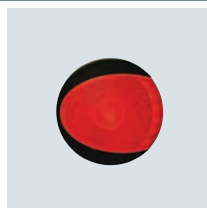
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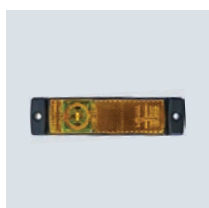
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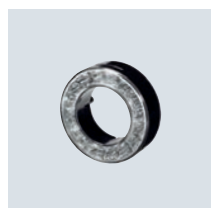
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BULB LAMPS



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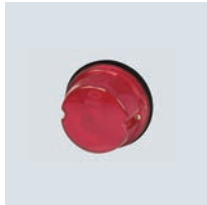
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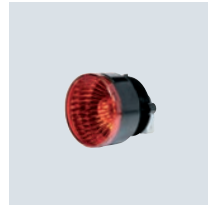
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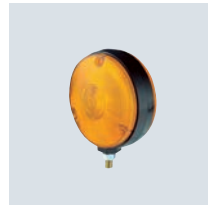
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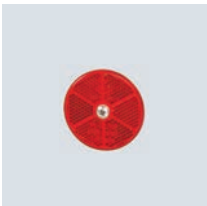


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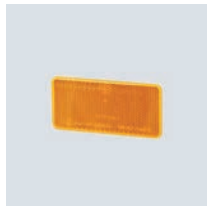
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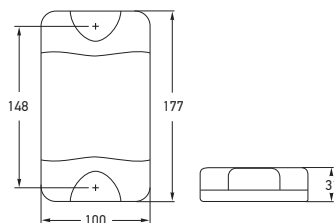
ACCESSORIES



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## DuraLED® Stop/Rear Position Lamp with Night Light

DuraLED® stop, rear position lamp featuring Enhanced Definition Technology (EDT) for increased safety and awareness. Night light function allows illumination of the rear position lamp independently from the remaining marker lamps on the vehicle. Features HELLA Ultra Wide Visibility Optics for significantly improved side visibility.



Part Number	2330-V
Mounting	Two hole surface mount with mounting bushes supplied. Suitable for vertical mounting.
Voltage	Multivolt™ for optimum brightness at input voltages from 9 to 33 volts.
Power Consumption	Stop: 6W      Rear position: 2.5W      Night: 2.5W
Protection	Reverse polarity and 5000 watt Transient Voltage Suppressor (TVS) IP 6K6 (Protection against dust and high-pressure water jets) IP 6K7 (Protection against dust and temporary water immersion)
Cable Length	Pre-wired with 2.5m of sheathed multi-core cable.
Compliance	ADR 49/00      E24 5850      ECE R7/02

See page 66 for DuraLED® accessories.

## DuraLED® Rear Direction Indicator Lamp

DuraLED® rear direction indicator lamp for trucks, buses, caravans and trailers. Features HELLA Ultra Wide Visibility Optics for significantly improved side visibility.



Part Number	2151-V	2151-VCS	HCS TECHNOLOGY
Mounting	Two hole surface mount with mounting bushes supplied. Suitable for vertical mounting.		
Voltage	Multivolt™ for optimum brightness at input voltages from 9 to 33 volts.		
Power Consumption	2151-V      6W	2151-VCS      4W	
Protection	Reverse polarity and 5000 watt Transient Voltage Suppressor (TVS) IP 6K6 (Protection against dust and high-pressure water jets) IP 6K7 (Protection against dust and temporary water immersion)		
Cable Length	Pre-wired with 2.5m of sheathed multi-core cable.		
Compliance	ADR 6/00: Cat 2a      E24 5850      ECE R6/01      ISO 13207-1 (2151-VCS only)		

See page 210 for further information on HCS Technology and ISO 13207-1.

## DuraLED® Reversing Lamp

DuraLED® reversing lamp for trucks, buses, caravans and trailers.

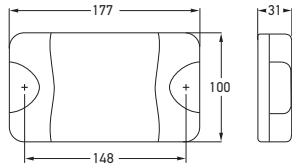


Part Number	1430-V
Mounting	Two hole surface mount with mounting bushes supplied. Suitable for vertical mounting.
Voltage	Multivolt™ for optimum brightness at input voltages from 9 to 33 volts.
Power Consumption	4W
Protection	Reverse polarity and 5000 watt Transient Voltage Suppressor (TVS) IP 6K6 (Protection against dust and high-pressure water jets) IP 6K7 (Protection against dust and temporary water immersion)
Cable Length	Pre-wired with 2.5m of sheathed multi-core cable.
Compliance	ADR 1/00      E24 5850      ECE R23/00

Reversing lamps are not designed for continuous operation.



MARKER AND SIGNAL LAMPS



Part Number	2330-H					
	2330-HBL		BLISTER PACK			
	2330-HBULK		PACK OF 4			
Mounting	Two hole surface mount with mounting bushes supplied. Suitable for horizontal mounting.					
Voltage	Multivolt™ for optimum brightness at input voltages from 9 to 33 volts.					
Power Consumption	Stop:	6W	Rear position:	2.5W	Night:	2.5W
Protection	Reverse polarity and 5000 watt Transient Voltage Suppressor (TVS) IP 6K6 (Protection against dust and high-pressure water jets) IP 6K7 (Protection against dust and temporary water immersion)					
Cable Length	Pre-wired with 2.5m of sheathed multi-core cable.					
Compliance	ADR 49/00		E24 5850		ECE R7/02	

See page 66 for DuraLED® accessories.

DuraLED® Stop/Rear Position Lamp with Night Light

DuraLED® stop, rear position lamp featuring Enhanced Definition Technology (EDT) for increased safety and awareness. Night light function allows illumination of the rear position lamp independently from the remaining marker lamps on the vehicle. Features HELLA Ultra Wide Visibility Optics for significantly improved side visibility.



P/N 2330-HBL



Part Number	2151-H			
	2151-HBL		BLISTER PACK	
	2151-HBULK		PACK OF 4	
	2151-HCS		HCS TECHNOLOGY	
Mounting	Two hole surface mount with mounting bushes supplied. Suitable for horizontal mounting.			
Voltage	Multivolt™ for optimum brightness at input voltages from 9 to 33 volts.			
Power Consumption	2151-H/...-HBL/...-HBULK	6W	2151-HCS	4W
Protection	As per P/N 2330-H.			
Cable Length	Pre-wired with 2.5m of sheathed multi-core cable.			
Compliance	ADR 6/00: Cat 2a	E24 5850	ECE R6/01	ISO 13207-1 (2151-HCS only)

See page 210 for further information on HCS Technology and ISO 13207-1.

DuraLED® Rear Direction Indicator Lamp

DuraLED® rear direction indicator lamp for trucks, buses, caravans and trailers. Features HELLA Ultra Wide Visibility Optics for significantly improved side visibility.



P/N 2151-HBL



Part Number	1430-H	
	1430-HBL	BLISTER PACK
Mounting	Two hole surface mount with mounting bushes supplied. Suitable for horizontal mounting.	
Voltage	Multivolt™ for optimum brightness at input voltages from 9 to 33 volts.	
Power Consumption	4W	
Protection	As per P/N 2330-H.	
Cable Length	Pre-wired with 2.5m of sheathed multi-core cable.	
Compliance	ADR 1/00	E24 5850 ECE R23/00

Reversing lamps are not designed for continuous operation.

DuraLED® Reversing Lamp

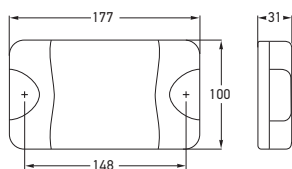
DuraLED® reversing lamp for trucks, buses, caravans and trailers.



P/N 1430-HBL

## DuraLED® Stop/Rear Position Lamp with Night Light

DuraLED® stop, rear position lamp featuring Enhanced Definition Technology (EDT) for increased safety and awareness. Night light function allows illumination of the rear position lamp independently from the remaining marker lamps on the vehicle.



Part Number	2330	
	2330-BULK	PACK OF 4
Mounting	Two hole surface mount with mounting bushes supplied. Suitable for horizontal or vertical mounting.	
Voltage	Multivolt™ for optimum brightness at input voltages from 9 to 33 volts.	
Power Consumption	Stop: 6W Rear position: 1W Night: 1W	
Protection	Reverse polarity and 5000 watt Transient Voltage Suppressor (TVS) IP 6K6 (Protection against dust and high-pressure water jets) IP 6K7 (Protection against dust and temporary water immersion)	
Cable Length	Pre-wired with 2.5m of sheathed multi-core cable.	
Compliance	ADR 49/00	

See page 66 for DuraLED® accessories.

## DuraLED® Rear Direction Indicator Lamp

DuraLED® rear direction indicator lamp for trucks, buses, caravans and trailers.



Part Number	<b>2151</b>	
	<b>2151-BULK</b>	<b>PACK OF 4</b>
Mounting	Two hole surface mount with mounting bushes supplied. Suitable for horizontal or vertical mounting.	
Voltage	Multivolt™ for optimum brightness at input voltages from 9 to 33 volts.	
Power Consumption	9W	
Protection	Reverse polarity and 5000 watt Transient Voltage Suppressor (TVS) IP 6K6 (Protection against dust and high-pressure water jets) IP 6K7 (Protection against dust and temporary water immersion)	
Cable Length	Pre-wired with 2.5m of sheathed multi-core cable.	
Compliance	ADR 6/00: Cat 2a	

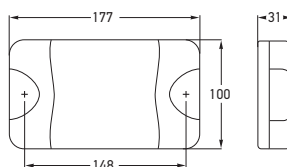


## MARKER AND SIGNAL LAMPS

## Polycarbonate Lenses

Whilst polycarbonate features a higher impact resistance compared to our preferred Enhanced Impact Acrylic, the trade-off for polycarbonate is its lower resistance to a number of commonly used chemicals.

For applications where both extreme impact resistance as well as a high resistance to chemicals is required, we recommend HELLA LED lamps manufactured from Swiss-made Grilamid® Optical Nylon.



Part Number	2331-BULK	PACK OF 4
Mounting	Two hole surface mount with mounting bushes supplied. Suitable for horizontal or vertical mounting.	
Voltage	Multivolt™ for optimum brightness at input voltages from 9 to 33 volts.	
Power Consumption	Stop: 6W Rear position: 1W Night: 1W	
Protection	Reverse polarity and 5000 watt Transient Voltage Suppressor (TVS) IP 6K6 (Protection against dust and high-pressure water jets) IP 6K7 (Protection against dust and temporary water immersion)	
Cable Length	Pre-wired with 2.5m of sheathed multi-core cable.	
Lens Material	Polycarbonate.	
Compliance	ADR 49/00	
See page 66 for DuraLED® accessories.		

## DuraLED® Stop/Rear Position Lamp with Night Light

DuraLED® stop, rear position lamp made from polycarbonate, for off-road vehicles such as logging trucks. Night light function allows illumination of the rear position lamp independently from the remaining marker lamps on the vehicle, resulting in low power consumption.



Part Number	2152-BULK	PACK OF 4
Mounting	Two hole surface mount with mounting bushes supplied. Suitable for horizontal or vertical mounting.	
Voltage	Multivolt™ for optimum brightness at input voltages from 9 to 33 volts.	
Power Consumption	9W	
Protection	Reverse polarity and 5000 watt Transient Voltage Suppressor (TVS) IP 6K6 (Protection against dust and high-pressure water jets) IP 6K7 (Protection against dust and temporary water immersion)	
Cable Length	Pre-wired with 2.5m of sheathed multi-core cable.	
Lens Material	Polycarbonate.	
Compliance	ADR 6/00: Cat 2a	

## DuraLED® Rear Direction Indicator Lamp

DuraLED® rear direction indicator lamp made from polycarbonate for off-road vehicles such as logging trucks.



## DuraLED® Combi-S Stop/Rear Position/Rear Direction Indicator Lamp - Heavy Duty

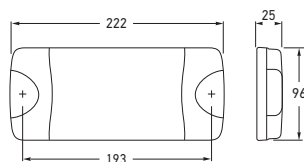
DuraLED® combination lamp featuring Ultra Wide Visibility Optics for significantly improved side visibility and Enhanced Definition Technology (EDT). Suitable for commercial and boat trailers. Shockproof and fully sealed to withstand water submersion and high-pressure washing. Optic appears clear until illuminated.



P/N 2378-BL



Ultra slim height of only 25mm.



Part Number	2378		
	2378-BL	BLISTER PACK	
	2378-BULK	PACK OF 12	
	2378-CS	HCS TECHNOLOGY	
Mounting	Two hole surface mount with mounting bushes supplied. Suitable for horizontal or vertical mounting.		
Voltage	Multivolt™ for optimum brightness in 12 and 24 volt systems.		
Power Consumption	Stop: 5W Rear position: 1W Rear direction indicator: 5W		
Protection	Reverse polarity and 5000 watt Transient Voltage Suppressor (TVS). IP 6K7 (Protection against dust and temporary water immersion) IP 6K9K (Protection against dust and high-pressure/steam jet cleaning)		
Cable Length	Pre-wired with 2.5m of sheathed multi-core cable.		
Lens Material	Grilamid®		
Compliance	ADR 6/00: Cat 2a	ADR 49/00	ISO 13207-1 (2378-CS only)
See page 210 for further information on HCS Technology and ISO 13207-1. See page 66 for DuraLED® accessories.			

### COMBI-S LAMP FUNCTIONS



Stop



Rear position



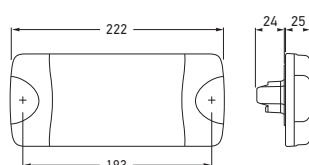
Rear direction indicator

## DuraLED® Combi-S Stop/Rear Position/Rear Direction Indicator Lamp with DT Connector and Night Light - Heavy Duty

DuraLED® combination lamp featuring Ultra Wide Visibility Optics for significantly improved side visibility and Enhanced Definition Technology (EDT). Night light function allows illumination of the rear position lamp independently from the remaining marker lamps on the vehicle, resulting in low power consumption. Suitable for commercial and boat trailers. Shockproof and fully sealed to withstand water submersion and high-pressure washing. Optic appears clear until illuminated.



Rear view showing DT connector that allows application of self-adhesive heat shrink.

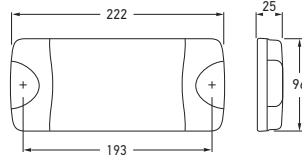


Part Number	2378-DT			
	2378-DTCS			HCS TECHNOLOGY
Mounting	Two hole surface mount with mounting bushes supplied. Suitable for horizontal or vertical mounting.			
Voltage	Multivolt™ for optimum brightness in 12 and 24 volt systems.			
Power Consumption	Stop:	5W	Rear direction indicator:	5W
	Rear position:	1W	Night:	1W
Protection	As per P/N 2378.			
Accessory	4963-P 6 pole DT plug, wedge and 6 contacts.			
Lens Material	Grilamid®			
Compliance	ADR 6/00: Cat 2a		ADR 49/00 ISO 13207-1 (2378-DTCS only)	
See page 210 for further information on HCS Technology and ISO 13207-1.				



P/N 4963-P  
Not included with lamp.





Part Number	2377		
	2377-BL		BLISTER PACK
Mounting	Two hole surface mount with mounting bushes supplied. Suitable for horizontal mounting.		
Voltage	Multivolt™ for optimum brightness in 12 and 24 volt systems.		
Power Consumption	Stop:	4W	
	Rear position:	1W	
	Rear direction indicator:	4W	
Protection	Reverse polarity and transient spike circuit protection. IP 6K7 (Protection against dust and temporary water immersion) IP 6K9K (Protection against dust and high-pressure/steam jet cleaning)		
Cable Length	Pre-wired with 2.5m of sheathed multi-core cable.		
Lens Material	Grilamid®		
Compliance	ADR 6/00: Cat 2a	ADR 47/00	ADR 49/00
See page 66 for DuraLED® accessories.			

## DuraLED® Combi-R Stop/Rear Position/Rear Direction Indicator Lamp with Retro Reflector

DuraLED® combination lamp with 34cm<sup>2</sup> red retro reflector which features Enhanced Definition Technology (EDT). Suitable for light commercial and boat trailers. Shockproof and fully sealed to withstand water submersion and high-pressure washing.



P/N 2377-BL



Ultra slim height of only 25mm.

### COMBI-R LAMP FUNCTIONS



Stop

Rear position

Rear direction indicator

## DuraLED® Combi-R Trailer Lighting Kit

A complete Fit and Forget solution for trailers or caravans.

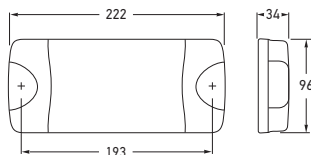


Part Number	2377-TP		
Kit Contents	Each trailer lamp kit contains:		
	2 x 2377	DuraLED® Combi-R stop/rear position and rear direction indicator lamp with retro reflector and 6m sheathed multi-core cable.	
	1 x 2559	LED number plate lamp with 5m sheathed multi-core cable.	
	1 x 4921	7 pole flat plug	



## DuraLED® Combi Stop/Rear Position/ Rear Direction Indicator Lamp

DuraLED® combination lamp, features Ultra Wide Visibility Optics for significantly improved side visibility and Enhanced Definition Technology (EDT). Suitable for light commercial and boat trailers. Shockproof and fully sealed to withstand water submersion and high-pressure washing. Optic appears clear until illuminated.



Part Number	<b>2379</b>	
	<b>2379-BL</b>	<b>BLISTER PACK</b>
	<b>2379-BULK</b>	<b>PACK OF 12</b>
	<b>2379-CS</b>	<b>HCS TECHNOLOGY</b>
	<b>2379-GMD (With Grilamid® lens)</b>	

Mounting Two hole surface mount with mounting bushes supplied. Suitable for horizontal mounting.

Voltage Multivolt™ for optimum brightness at input voltages from 8 to 28 volts.

Power Consumption	P/N 2379	P/N 2379-CS/2379-GMD
	Stop:	5W
	Rear position:	1W
	Rear direction indicator:	5W

Protection Reverse polarity and 5000 watt Transient Voltage Suppressor (TVS)  
IP 6K6 (Protection against dust and high-pressure water jets)  
IP 6K7 (Protection against dust and temporary water immersion)

Cable Length Pre-wired with 6m of sheathed multi-core cable.  
Blister pack pre-wired with 2.5m of sheathed multi-core cable.

Compliance	ADR 6/00: Cat 2a	ADR 49/00	E4 10176	ECE R6/01
	ECE R7/02	ISO 13207-1 (2379-GMD and 2379-CS only)		

See page 210 for further information on HCS Technology and ISO 13207-1. See page 66 for DuraLED® accessories.



P/N 2379-GMD

P/N 2379-BL

### COMBINATION LAMP FUNCTIONS



Stop

Rear position

Rear direction indicator

## DuraLED® Multivolt™ Trailer Lighting Conversion Kit

A complete Fit and Forget solution for trailers or caravans. Features HELLA Ultra Wide Visibility Optics for significantly improved side visibility.

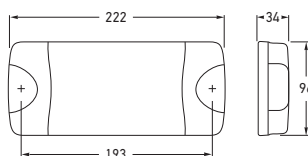



Part Number	<b>2379-TP</b>	
Kit Contents	Each trailer lamp kit contains:	
	2 x 2379	DuraLED® Combination stop/rear position and rear direction indicator lamp with 6m cable
	2 x 2920	Red retro reflector
	1 x 2559	LED number plate lamp
	1 x 4921	7 pole flat plug





## MARKER AND SIGNAL LAMPS



Part Number	2380		
	2380-BL	BLISTER PACK	
	2380-GMD	GRILAMID® LENS	
Mounting	Two hole surface mount with mounting bushes supplied. Suitable for horizontal mounting.		
Voltage	Multivolt™ for optimum brightness in 12 and 24 volt systems.		
Power Consumption	Stop:	5W	
	Rear position:	1W	
	Rear direction indicator:	4W	
	Reverse:	3W	
Protection	Reverse polarity and 5000 watt Transient Voltage Suppressor (TVS). IP 6K7 (Protection against dust and temporary water immersion) IP 6K9K (Protection against dust and high-pressure/steam jet cleaning)		
Cable Length	Pre-wired with 2.5m of sheathed multi-core cable.		
Lens Material	Grilamid®		
Compliance	ADR 1/00 ECE R6/01	ADR 6/00: Cat 2a ECE R7/02	ADR 49/00 ECE R23/00
 5870			
See page 66 for DuraLED® accessories.			

## DuraLED® Combi Stop/Rear Position/Rear Direction Indicator/Reversing Lamp

DuraLED® combination lamp featuring modern clear lens design. Low power consumption and long life equates to economical running costs. Ideal for trucks and utes.



P/N 2380-BL

## COMBINATION LAMP FUNCTIONS

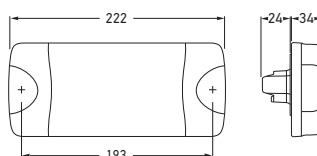


Stop

Rear position

Rear direction indicator

Reverse



Part Number	2380-DT		
	2380-DTGMD		GRILAMID® LENS
Mounting	Two hole surface mount with mounting bushes supplied. Suitable for horizontal mounting.		
Voltage	Multivolt™ for optimum brightness in 12 and 24 volt systems.		
Power Consumption	Stop:	5W	
	Rear position:	1W	
	Rear direction indicator:	4W	
	Reverse:	3W	
Protection	Reverse polarity and 5000 watt Transient Voltage Suppressor (TVS). IP 6K7 (Protection against dust and temporary water immersion) IP 6K9K (Protection against dust and high-pressure/steam jet cleaning)		
Accessory	4963-P	6 pole DT plug, wedge and 6 contacts.	
Lens Material	Grilamid®		
Compliance	ADR 1/00 ECE R6/01	ADR 6/00: Cat 2a ECE R7/02	ADR 49/00 ECE R23/00

E24

5870

## DuraLED® Combi Stop/Rear Position/Rear Direction Indicator/Reversing Lamp with DT Connector

DuraLED combination lamp featuring modern clear lens design. Low power consumption and long life equates to economical running costs. Ideal for trucks and utes.



Rear view showing DT connector that allows application of self-adhesive heat shrink.



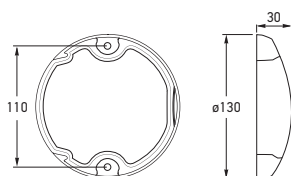
P/N 4963-P  
Not included with lamp.

## EuroLED® Stop/Rear Position Lamp

EuroLED® stop, rear position lamp with red lens. The use of precision optics enable a single high intensity LED to be used in a commercial vehicle lamp, resulting in low power consumption. Features HELLA Ultra Wide Visibility Optics for significantly improved side visibility.



P/N 2366-BL

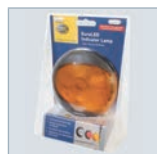
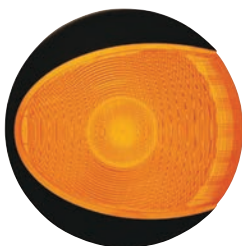


Part Number	<b>2366</b>	
	<b>2366-BL</b>	<b>BLISTER PACK</b>
	<b>2366-BULK</b>	<b>PACK OF 12</b>
Mounting	Two hole surface mount with mounting bushes supplied.	
Voltage	Multivolt™ for optimum brightness at input voltages from 9 to 33 volts.	
Power Consumption	Stop: 2.5W Rear position: 0.5W	
Protection	Reverse polarity and 1500 watt Transient Voltage Suppressor (TVS) IP 6K6 (Protection against dust and high-pressure water jets) IP 6K7 (Protection against dust and temporary water immersion)	
Cable Length	Pre-wired with 2.5m of sheathed multi-core cable.	
Compliance	ADR 49/00    E4 10208    ECE R7/02	

See page 68 for EuroLED® accessories.

## EuroLED® Rear Direction Indicator Lamp

EuroLED® rear direction indicator lamp with amber lens and single LED. Features HELLA Ultra Wide Visibility Optics for significantly improved side visibility.



P/N 2133-BL

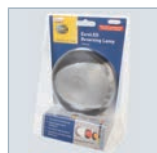


Part Number	<b>2133</b>	
	<b>2133-BL</b>	<b>BLISTER PACK</b>
	<b>2133-BULK</b>	<b>PACK OF 12</b>
	<b>2133-CS</b>	<b>HCS TECHNOLOGY</b>
Mounting	Two hole surface mount with mounting bushes supplied.	
Voltage	Multivolt™ for optimum brightness at input voltages from 9 to 33 volts.	
Power Consumption	2.5W	
Protection	As per P/N 2366.	
Cable Length	Pre-wired with 2.5m of sheathed multi-core cable.	
Compliance	ADR 6/00: Cat 2a    E4 10208    ECE R6/01    ISO 13207-1 (2133-CS only)	

See page 210 for further information on HCS Technology and ISO 13207-1.

## EuroLED® Reversing Lamp

EuroLED® reversing lamp with clear lens and single LED.



P/N 1433-BL

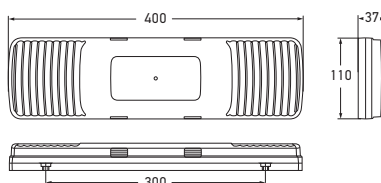


Part Number	<b>1433</b>	
	<b>1433-BL</b>	<b>BLISTER PACK</b>
	<b>1433-BULK</b>	<b>PACK OF 12</b>
Mounting	Two hole surface mount with mounting bushes supplied.	
Voltage	Multivolt™ for optimum brightness at input voltages from 9 to 33 volts.	
Power Consumption	2.5W	
Protection	As per P/N 2366.	
Cable Length	Pre-wired with 2.5m of sheathed multi-core cable.	
Compliance	ADR 1/00    E4 10208    ECE R23/00	

Reversing lamps are not designed for continuous operation.

## LED COMBINATION LAMPS

### MARKER AND SIGNAL LAMPS



Part Number	2391	HCS TECHNOLOGY
Mounting	Two bolt surface mount with mounting accessories supplied. Suitable for horizontal mounting.	
Voltage	Multivolt™ for optimum brightness in 12 and 24 volt systems.	
Power Consumption	Stop: 5W Rear position: <2W Rear direction indicator: 6W Reverse: 5W	
Protection	Reverse polarity and 5000 watt Transient Voltage Suppressor (TVS). IP 6K7 (Protection against dust and temporary water immersion) IP 6K9K (Protection against dust and high-pressure/steam jet cleaning)	
Cable Length	Pre-wired with 2.5m of sheathed multi-core cable.	
Spare Part	9.2391.08	Mounting pack
Compliance	ADR 1/00	ADR 6/00: Cat 2a    ADR 47/00    ADR 49/00    ISO 13207-1
See page 210 for further information on HCS Technology and ISO 13207-1.		

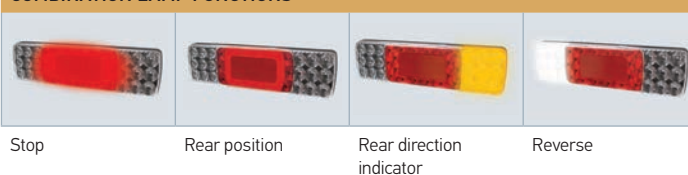
### LED Stop/Rear Position/Rear Direction Indicator/Reversing Lamp with Retro Reflector

LED combination lamp with 64cm² red retro reflector. Modern clear lens design with black mounting base. Features HCS Technology with ISO 13207-1 compliance. Shockproof and fully sealed to withstand water submersion and high-pressure washing. Direction indicator optic appears clear until illuminated.



P/N 2391

#### COMBINATION LAMP FUNCTIONS



Part Number	2392L	LEFT HAND SIDE
	2392R	RIGHT HAND SIDE
Mounting	Two bolt surface mount with mounting accessories supplied. Suitable for horizontal mounting.	
Voltage	Multivolt™ for optimum brightness in 12 and 24 volt systems.	
Power Consumption	Stop: 5W Rear position/number plate: <2W Rear direction indicator: 6W Reverse: 5W	
Protection	Reverse polarity and 5000 watt Transient Voltage Suppressor (TVS). IP 6K7 (Protection against dust and temporary water immersion) IP 6K9K (Protection against dust and high-pressure/steam jet cleaning)	
Cable Length	Pre-wired with 2.5m of sheathed multi-core cable.	
Spare Part	9.2391.08	Mounting pack
Compliance	ADR 1/00   ADR 6/00: Cat 2a   ADR 47/00   ADR 48/00   ADR 49/00   ISO 13207-1	
See page 210 for further information on HCS Technology and ISO 13207-1.		

### LED Stop/Rear Position/Rear Direction Indicator/Reversing Lamp with Retro Reflector and Number Plate Function

LED combination lamp with 64cm² red retro reflector and number plate function. Modern clear lens design with black mounting base. Features HCS Technology with ISO 13207-1 compliance. Shockproof and fully sealed to withstand water submersion and high-pressure washing. Direction indicator optic appears clear until illuminated.



P/N 2392L

#### COMBINATION LAMP FUNCTIONS





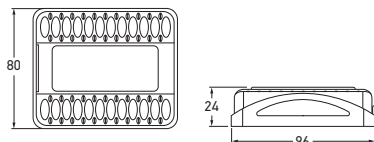
## LED Stop/Rear Position/ Rear Direction Indicator Lamp

LED stop, rear position and rear direction indicator lamp with 18cm<sup>2</sup> red retro reflector. Modern clear lens design with black mounting base. Low power consumption and long life equates to economical running costs. Convenient mounting base with multiple fixing points allow easy fitment to most trailers/vehicles. The lamp is fully sealed against dust and moisture ingress. Optic appears clear until illuminated.



P/N 9.2394.09  
Mounting spacer  
(not included)

P/N 2394



Part Number	2394			
	2394-BULK			PACK OF 18
	2394-6M			
	2394-6MBULK			PACK OF 10
Mounting	Surface mount with choice of mounting holes. Lamp clips into mounting base. Suitable for horizontal or vertical mounting.			
Voltage	Multivolt™ for optimum brightness in 12 and 24 volt systems.			
Power Consumption	Stop:	2W		
	Rear position:	1W		
	Rear direction indicator:	2W		
Protection	Reverse polarity and transient spike circuit protection. IP 6K7 (Protection against dust and temporary water immersion) IP 6K9K (Protection against dust and high-pressure/steam jet cleaning)			
Cable Length	2394	Pre-wired with 0.5m of sheathed multi-core cable.		
	2394-6M	Pre-wired with 6m of sheathed multi-core cable.		
Spare Parts	9.2394.08	Mounting base		
	9.2394.09	Mounting spacer (not included)		
Lens Material	Grilamid®			
Compliance	ADR 6/00: Cat 2a ECE R6/01	ADR 47/00 ECE R7/02	ADR 49/00 ECE R3/02	E24 5860

### TRAILER LAMP FUNCTIONS

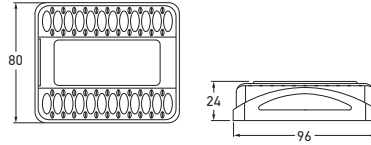


Stop

Rear direction  
indicator

Rear position





Part Number	2395				
	2395-BULK				PACK OF 18
	2395-6M				
	2395-6MBULK				PACK OF 10
Mounting	Surface mount with choice of mounting holes. Lamp clips into mounting base. Suitable for horizontal or vertical mounting.				
Voltage	Multivolt™ for optimum brightness in 12 and 24 volt systems.				
Power Consumption	Stop:	2W			
	Rear position/number plate:	1W			
	Rear direction indicator:	2W			
Protection	Reverse polarity and transient spike circuit protection. IP 6K7 (Protection against dust and temporary water immersion) IP 6K9K (Protection against dust and high-pressure/steam jet cleaning)				
Cable Length	2395	Pre-wired with 0.5m of sheathed multi-core cable.			
	2395-6M	Pre-wired with 6m of sheathed multi-core cable.			
Spare Parts	9.2394.08	Mounting base			
	9.2394.09	Mounting spacer (not included)			
Lens Material	Grilamid®				
Compliance	ADR 6/00: Cat 2a ECE R6/01	ADR 47/00 ECE R7/02	ADR 48/00 ECE R3/02	ADR 49/00 ECE R4/00	E24 5860

## LED Stop/Rear Position/Rear Direction Indicator Lamp with Number Plate Function

LED stop, rear position and rear direction indicator lamp with 18cm<sup>2</sup> red retro reflector and number plate function. Modern clear lens design with black mounting base. Low power consumption and long life equates to economical running costs. Convenient mounting base with multiple fixing points allow easy fitment to most trailers/vehicles. The lamp is fully sealed against dust and moisture ingress. Optic appears clear until illuminated.



P/N 9.2394.08  
Mounting spacer  
(not included)

P/N 2395

### TRAILER LAMP FUNCTIONS



Stop

Rear direction  
indicator

Rear position/  
Number plate



Part Number	2395-TP		
Lens Material	Grilamid®		
Kit Contents	Each trailer lamp kit contains:		
	1 x 2394	Stop/rear position/rear direction indicator lamp with reflex reflector.	
	1 x 2395	Stop/rear position/rear direction indicator/number plate lamp function with reflex reflector.	
	8 x Connectors (P/N 8231S)	Crimp connectors with heat shrink insulation.	

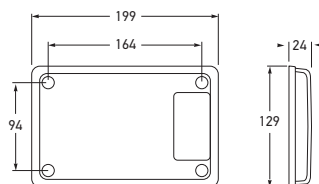
## LED Combination Lamp Trailer Kit

LED trailer lamp incorporating a modern clear lens design with an 18cm<sup>2</sup> red retro reflector. The optic in the lamp appears clear until illuminated.



### Jumbo-S LED Stop/ Rear Position Lamp

Jumbo-S LED stop, rear position lamp with inbuilt 23cm<sup>2</sup> red retro reflector, featuring Enhanced Definition Technology (EDT) for the stop signal function. New low profile design allows surface mounting with no additional housing. Shockproof and fully sealed to withstand temporary water submersion and high-pressure washing.



Part Number	2361
Mounting	Surface mount with mounting gasket and screws supplied. Suitable for horizontal or vertical mounting.
Voltage	Multivolt™ for optimum brightness in 12 and 24 volt systems.
Power Consumption	Stop: 5W Rear position: 1W
Protection	Reverse polarity and 5000 watt Transient Voltage Suppressor (TVS) IP 6K7 (Protection against dust and temporary water immersion) IP 6K9K (Protection against dust and high-pressure/steam jet cleaning)
Cable Length	Pre-wired with 200mm of cable.
Compliance	ADR 47/00      ADR 49/00

See page 69 for Jumbo-S accessories.

### Jumbo-S LED Rear Direction Indicator Lamp

Jumbo-S LED rear direction indicator lamp with inbuilt 23cm<sup>2</sup> red retro reflector. New low profile design allows surface mounting with no additional housing. Features HCS Technology with ISO 13207-1 compliance. Shockproof and fully sealed to withstand temporary water submersion and high-pressure washing.



Part Number	2161	
	2161-CS	HCS TECHNOLOGY
Mounting	Surface mount with mounting gasket and screws supplied. Suitable for horizontal or vertical mounting.	
Voltage	Multivolt™ for optimum brightness in 12 and 24 volt systems.	
Power Consumption	6W	
Protection	Reverse polarity and 5000 watt Transient Voltage Suppressor (TVS) IP 6K7 (Protection against dust and temporary water immersion) IP 6K9K (Protection against dust and high-pressure/steam jet cleaning)	
Cable Length	Pre-wired with 200mm of cable.	
Compliance	ADR 6/00: Cat 2a      ADR 47/00      ISO 13207-1 (2161-CS only)	

See page 210 for further information on HCS Technology and ISO 13207-1.

### Jumbo-S LED Reversing Lamp

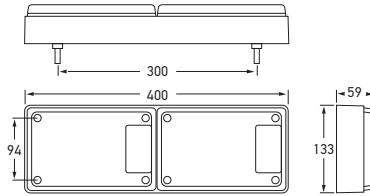
Jumbo-S LED reversing lamp with inbuilt 23cm<sup>2</sup> red retro reflector. New low profile design allows surface mounting with no additional housing. Shockproof and fully sealed to withstand temporary water submersion and high-pressure washing.



Part Number	1461
Mounting	Surface mount with mounting gasket and screws supplied. Suitable for horizontal or vertical mounting.
Voltage	Multivolt™ for optimum brightness in 12 and 24 volt systems.
Power Consumption	4W
Protection	Reverse polarity and transient spike circuit protection. IP 6K7 (Protection against dust and temporary water immersion) IP 6K9K (Protection against dust and high-pressure/steam jet cleaning)
Cable Length	Pre-wired with 200mm of cable.
Compliance	ADR 1/00      ADR 47/00

Reversing lamps are not designed for continuous operation.





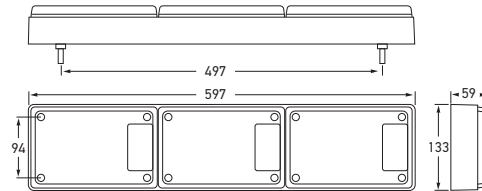
### Jumbo-S LED Double Module Stop/Rear Position/Rear Direction Indicator Lamp

Jumbo-S LED stop, rear position, rear direction indicator lamp with 23cm<sup>2</sup> red retro reflectors. Lamps are pre-assembled and wired into housing for easy installation. Features HCS Technology with ISO 13207-1 compliance. Shockproof and fully sealed to withstand temporary water submersion and high-pressure washing.



Part Number	2429-CS	HCS TECHNOLOGY
Mounting	Surface mount with mounting bolts supplied. Suitable for horizontal or vertical mounting.	
Voltage	Multivolt™ for optimum brightness in 12 and 24 volt systems.	
Power Consumption	Stop: 5W Rear position: 1W Rear direction indicator: 6W	
Protection	Reverse polarity and 5000 watt Transient Voltage Suppressor (TVS) IP 6K7 (Protection against dust and temporary water immersion) IP 6K9K (Protection against dust and high-pressure/steam jet cleaning)	
Cable Length	Pre-wired with 2m of sheathed multi-core cable.	
Compliance	ADR 6/00: Cat 2a    ADR 47/00    ADR 49/00    ISO 13207-1	

See page 210 for further information on HCS Technology and ISO 13207-1.  
See page 69 for Jumbo-S and Designline accessories.



### Jumbo-S LED Triple Module Stop/Rear Position/Rear Direction Indicator Lamp

Jumbo-S LED stop, rear position, rear direction indicator lamp with 23cm<sup>2</sup> red retro reflectors. Lamps are pre-assembled and wired into housing for easy installation. Features HCS Technology with ISO 13207-1 compliance. Shockproof and fully sealed to withstand temporary water submersion and high-pressure washing.



Part Number	2430-CS	HCS TECHNOLOGY
Mounting	Surface mount with mounting bolts supplied. Suitable for horizontal or vertical mounting.	
Voltage	Multivolt™ for optimum brightness in 12 and 24 volt systems.	
Power Consumption	Stop: 5W x 2 Rear position: 1W x 2 Rear direction indicator: 6W	
Protection	As per P/N 2429-CS.	
Cable Length	Pre-wired with 2m of sheathed multi-core cable.	
Compliance	ADR 6/00: Cat 2a    ADR 47/00    ADR 49/00    ISO 13207-1	

See page 210 for further information on HCS Technology and ISO 13207-1.



Part Number	2431-CS	HCS TECHNOLOGY
Mounting	Surface mount with mounting bolts supplied. Suitable for horizontal or vertical mounting.	
Voltage	Multivolt™ for optimum brightness in 12 and 24 volt systems.	
Power Consumption	Stop: 5W Rear position: 1W Rear direction indicator: 6W Reversing: 4W	
Protection	As per P/N 2429-CS.	
Cable Length	Pre-wired with 2m of sheathed multi-core cable.	
Compliance	ADR 1/00    ADR 6/00: Cat 2a    ADR 47/00 ADR 49/00    ISO 13207-1	

See page 210 for further information on HCS Technology and ISO 13207-1.

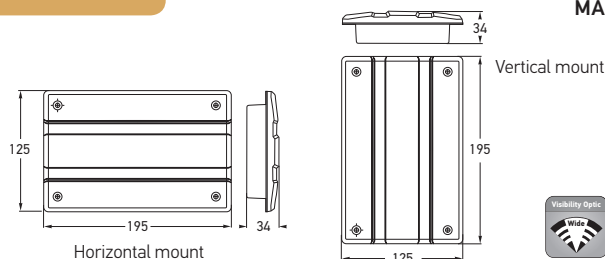
### Jumbo-S LED Triple Module Stop/Rear Position/Rear Direction Indicator/Reversing Lamp

Jumbo-S LED stop, rear position, rear direction indicator and reversing lamp with 23cm<sup>2</sup> red retro reflectors. Lamps are pre-assembled and wired into housing for easy installation. Features HCS Technology with ISO 13207-1 compliance. Shockproof and fully sealed to withstand temporary water submersion and high-pressure washing.



## Designline LED Module Stop/Rear Position Lamp

Designline LED Multivolt™ module designed to update existing bulb type Jumbo or Designline lamps. Features HELLA Ultra Wide Visibility Optics for significantly improved side visibility.



Part Number	2332-H24	HORIZONTAL
	2332-V24	VERTICAL
Mounting	Four point recess mount.	
Voltage	Multivolt™ for optimum brightness at input voltages from 9 to 33 volts.	
Power Consumption	Stop: 6W Rear position: 2W	
Protection	Reverse polarity and 5000 watt Transient Voltage Suppressor (TVS).	
Cable Length	Pre-wired with 200mm of cable.	
Compliance	ADR 49/00	

See page 69 for Designline accessories.

## Designline LED Module Rear Direction Indicator Lamp

Designline LED Multivolt™ module designed to update existing bulb type Jumbo or Designline lamps. Features HELLA Ultra Wide Visibility Optics for significantly improved side visibility.



Part Number	2146-H24	HORIZONTAL
	2146-V24	VERTICAL
	2146-HCS (Incorporates HCS Technology)	HORIZONTAL
	2146-VCS (Incorporates HCS Technology)	VERTICAL
Mounting	Four point recess mount.	
Voltage	Multivolt™ for optimum brightness at input voltages from 9 to 33 volts.	
Power Consumption	P/Ns 2146-H24/2146-V24: 6W P/Ns 2146-HCS/2146-VCS: 4W	
Protection	Reverse polarity and 5000 watt Transient Voltage Suppressor (TVS).	
Cable Length	Pre-wired with 200mm of cable.	
Compliance	ADR 6/00: Cat 2a ISO 13207-1 (2146-HCS or 2146-VCS only)	

See page 210 for further information on HCS Technology and ISO 13207-1.

## Designline LED Module Reversing Lamp

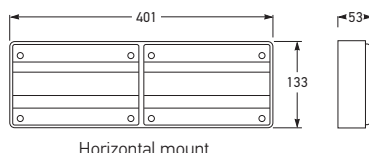
Designline LED Multivolt™ module designed to update existing Designline lamps. The high performance module features 36 High Efficacy LEDs that more than triples the raw lumen output over the standard module. High precision optics ensure ADR compliance by focusing the majority of light down ensuring wide illumination and improved safety when reversing.



Part Number	1446-H	HORIZONTAL
	1447L (High performance - Left hand side)	
	1447R (High performance - Right hand side)	
	1446-V	VERTICAL
Mounting	Four point recess mount.	
Voltage	Multivolt™ for optimum brightness at input voltages from 9 to 33 volts.	
Power Consumption	P/Ns 1446-H/1446-V: 4W P/Ns 1447L/1447R: 7W	
Protection	Reverse polarity and 5000 watt Transient Voltage Suppressor (TVS).	
Cable Length	Pre-wired with 200mm of cable.	
Compliance	ADR 1/00	

Reversing lamps are not designed for continuous operation.

## MARKER AND SIGNAL LAMPS

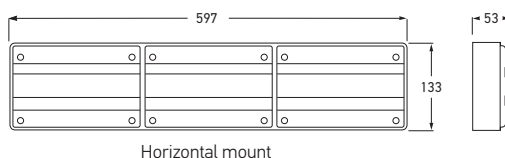


Part Number	2426-H	HORIZONTAL
	2426-V	VERTICAL
Mounting	Two bolt surface mount.	
Voltage	Multivolt™ for optimum brightness at input voltages from 9 to 33 volts.	
Power Consumption	Stop: 6W Rear position: 2W Rear direction indicator: 6W	
Cable Length	Pre-wired with 2m of multi-core cable.	
Spare Part	9.2422.09	Double housing
Compliance	ADR 6/00: Cat 2a	ADR 49/00

See page 69 for Designline accessories.

### Designline LED Double Module Stop/Rear Position/Rear Direction Indicator Lamp

Double Designline LED module pre-assembled and wired for easy installation. Features a 2m wiring loom and encapsulated bolts so lamp does not have to be disassembled to mount. Features HELLA Ultra Wide Visibility Optics for significantly improved side visibility.



Part Number	2427-H	HORIZONTAL
	2427-V	VERTICAL
Mounting	Two bolt surface mount.	
Voltage	Multivolt™ for optimum brightness at input voltages from 9 to 33 volts.	
Power Consumption	Stop: 6W x 2 Rear position: 2W x 2 Rear direction indicator: 6W	
Cable Length	Pre-wired with 2m of multi-core cable.	
Spare Part	9.2423.09	Triple housing
Compliance	ADR 6/00: Cat 2a	ADR 49/00

### Designline LED Triple Module Stop/Rear Position/Rear Direction Indicator Lamp

Triple Designline LED module pre-assembled and wired for easy installation. Features a 2m wiring loom and encapsulated bolts so lamp does not have to be disassembled to mount. Features HELLA Ultra Wide Visibility Optics for significantly improved side visibility.



Part Number	2428-H	HORIZONTAL
	2428-V	VERTICAL
Mounting	Two bolt surface mount.	
Voltage	Multivolt™ for optimum brightness at input voltages from 9 to 33 volts.	
Power Consumption	Stop: 6W Rear position: 2W Rear direction indicator: 6W Reverse: 4W	
Cable Length	Pre-wired with 2m of multi-core cable.	
Spare Part	9.2423.09	Triple housing
Compliance	ADR 1/00	ADR 6/00: Cat 2a ADR 49/00

Reversing lamps are not designed for continuous operation.

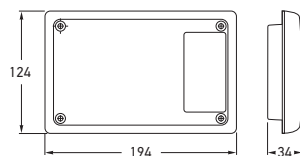
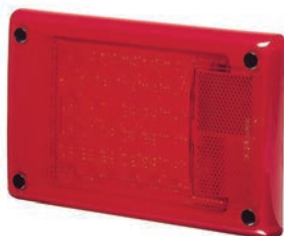
### Designline LED Triple Module Stop/Rear Position/Rear Direction Indicator/Reversing Lamp





### Jumbo LED Module Stop/ Rear Position Lamp with Red Retro Reflector

Jumbo LED Multivolt™ module designed to update existing Jumbo or Designline lamps with Enhanced Definition Technology (EDT). Reflector area 33cm<sup>2</sup>.



Part Number	2317
Mounting	Four point recess mount. Suitable for horizontal or vertical mounting.
Voltage	Multivolt™ for optimum brightness at input voltages from 9 to 33 volts.
Power Consumption	Stop: 6W Rear position: 1W
Protection	Reverse polarity and 5000 watt Transient Voltage Suppressor (TVS).
Cable Length	Pre-wired with 200mm of cable.
Compliance	ADR 47/00      ADR 49/00

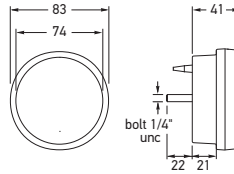
See page 69 for Designline accessories.

### Jumbo LED Module Rear Direction Indicator Lamp with Red Retro Reflector

Jumbo LED Multivolt™ module designed to update existing Jumbo or Designline lamps. Reflector area 33cm<sup>2</sup>.



Part Number	2138
Mounting	Four point recess mount. Suitable for horizontal or vertical mounting.
Voltage	Multivolt™ for optimum brightness at input voltages from 9 to 33 volts.
Power Consumption	9W
Protection	Reverse polarity and 5000 watt Transient Voltage Suppressor (TVS).
Cable Length	Pre-wired with 200mm of cable.
Compliance	ADR 6/00: Cat 2a      ADR 47/00



### 83mm Round LED Safety DayLights™/Front Position/ Front Direction Indicator Lamp

This LED combination lamp features an integrated Safety DayLight™, front position indicator and front position function. The lamp features a traditional round lens that illuminates with a distinctive ring of white LEDs when used as a Safety DayLight™. This lamp eliminates the need for installation of multiple lamps.

Part Number	2108-GMD			12 VOLT
	2108-GMD24V			24 VOLT
Mounting	Flush mount. Single bolt 1/4" stainless UNC thread. Nut and washer supplied.			
Power Consumption		P/N 2108-GMD	P/N 2108-GMD24V	
	Safety DayLights™:	4W	4W	
	Front position:	1W	1W	
	Front direction indicator:	3W	4W	
Protection	Reverse polarity and transient spike circuit protection. IP 6K7 (Protection against dust and temporary water immersion) IP 6K9K (Protection against dust and high-pressure/steam jet cleaning)			
Cable Length	Pre-wired with 2.5m of sheathed multi-core cable.			
Lens Material	Grilamid®			
Compliance	ADR 6/00: Cat 1a ECE R6/01	ADR 49/00 ECE R7/02	ADR 76/00 ECE R87/00	E24 5854

See page 69 for mounting accessories.



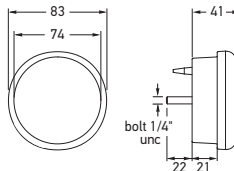
#### 83MM LAMP FUNCTIONS



LED Safety DayLights™

Front position

Front direction indicator



### 83mm Round LED Front Direction Indicator Lamp

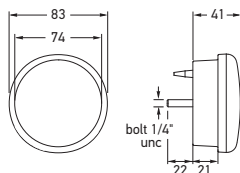
Compact, low profile LED front direction indicator fitted with amber polycarbonate lens. Fully sealed to withstand high-pressure washing.

Part Number	2107
Mounting	Flush mount. Single bolt 1/4" stainless UNC thread. Nut and washer supplied.
Voltage	Multivolt™ for optimum brightness at input voltages from 9 to 33 volts.
Power Consumption	4W
Protection	Reverse polarity and 5000 watt Transient Voltage Suppressor (TVS) IP 6K7 (Protection against dust and temporary water immersion) IP 6K9K (Protection against dust and high-pressure/steam jet cleaning)
Cable Length	Pre-wired with 2.5m of sheathed multi-core cable.
Compliance	ADR 6/00: Cat 1a



### 83mm Round LED Stop/Rear Position Lamp

83mm diameter LED stop, rear position lamp with single bolt mount, featuring Enhanced Definition Technology (EDT). Features HELLA Ultra Wide Visibility Optics for significantly improved side visibility.



P/N 2390 Rear position P/N 2390-BL

Part Number	2390	
	2390-BL	BLISTER PACK
	2390-BULK	PACK OF 10
Mounting	Flush mount. Single bolt 1/4" stainless UNC thread. Nut and washer supplied.	
Voltage	Multivolt™ for optimum brightness at input voltages from 9 to 33 volts.	
Power Consumption	Stop: 3W Rear position: 1W	
Protection	Reverse polarity and 5000 watt Transient Voltage Suppressor (TVS) IP 6K7 (Protection against dust and temporary water immersion) IP 6K9K (Protection against dust and high-pressure/steam jet cleaning)	
Cable Length	Pre-wired with 2.5m of sheathed multi-core cable.	
Compliance	ADR 49/00 E4 11391 ECE R7/02	

See page 69 for mounting accessories.

### 83mm Round LED Rear Direction Indicator Lamp

83mm diameter LED rear direction indicator lamp with single bolt mount. Features HELLA Ultra Wide Visibility Optics for significantly improved side visibility.



P/N 2130-BL

Part Number	2130	
	2130-BL	BLISTER PACK
	2130-BULK	PACK OF 10
Mounting	Flush mount. Single bolt 1/4" stainless UNC thread. Nut and washer supplied.	
Voltage	Multivolt™ for optimum brightness at input voltages from 9 to 33 volts.	
Power Consumption	2W	
Protection	As per P/N 2390.	
Cable Length	Pre-wired with 2.5m of sheathed multi-core cable.	
Compliance	ADR 6/00: Cat 2a E4 11391 ECE R6/01	

Contact HELLA for 24 volt HCS version.

### 83mm Round LED Reversing Lamp

83mm diameter LED reversing lamp with single bolt mount.

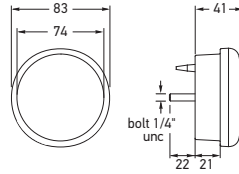


P/N 1490-BL

Part Number	1490	
	1490-BL	BLISTER PACK
	1490-BULK	PACK OF 10
Mounting	Flush Mount. Single bolt 1/4" stainless UNC thread. Nut and washer supplied.	
Voltage	Multivolt™ for optimum brightness at input voltages from 9 to 33 volts.	
Power Consumption	4W	
Protection	As per P/N 2390.	
Cable Length	Pre-wired with 2.5m of sheathed multi-core cable.	
Compliance	ADR 1/00 E4 11391 ECE R23/00	

Reversing lamps are not designed for continuous operation.





### 83mm Round LED Stop/ Rear Position/Rear Direction Indicator Lamp

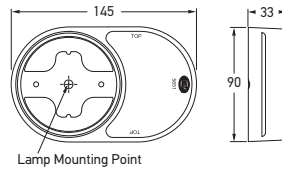
83mm diameter LED stop, rear position and rear direction indicator lamp with single bolt mount.

Part Number	2399	
	2399-BL	BLISTER PACK
	2399-BULK	PACK OF 10
Mounting	Flush mount. Single bolt 1/4" stainless UNC thread. Nut and washer supplied.	
Voltage	Multivolt™ for optimum brightness in 12 and 24 volt systems.	
Power Consumption	Stop: 3W Rear position: 1W Rear direction indicator: 3W	
Protection	Reverse polarity and 5000 watt Transient Voltage Suppressor (TVS) IP 6K7 (Protection against dust and temporary water immersion) IP 6K9K (Protection against dust and high-pressure/steam jet cleaning)	
Cable Length	Pre-wired with 2.5m of sheathed multi-core cable. Bulk pack pre-wired with 6m of sheathed multi-core cable.	
Compliance	ADR 6/00: Cat 2a ECE R6/01	ADR 49/00 ECE R7/02 E9 1538

Contact HELLA for 24 volt HCS version. See page 69 for mounting accessories.



P/N 2399-BL



### Red Retro Reflector Base

Red retro reflector to suit 83mm round lamps.  
Reflector area 31.7cm<sup>2</sup>.

Part Number	2934H	HORIZONTAL
	2934V	VERTICAL
Mounting	Utilises bolt mount from 83mm round lamps.	
Compliance	ADR 47/00	



### LED Lighting Trailer Conversion Kit

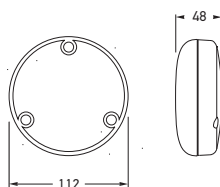
A complete Fit and Forget solution for small trailers.

Part Number	2399-TP	
Kit Contents	Each trailer lamp kit contains:  2 x 2399                      Combination stop/rear position and rear direction indicator lamp with 6m cable 2 x 2934H                    Red retro reflector base – horizontal mount 1 x 2559                      LED number plate lamp 1 x 4921                      7 pole flat plug	



## 110mm Round LED Front Direction Indicator Lamp

LED front direction indicator specifically designed for trucks, buses and motor homes.



Part Number	2135LED
Mounting	Mount only with lens engraving "TOP" located correctly.
Voltage	Multivolt™ for optimum brightness at input voltages from 9 to 33 volts.
Power Consumption	4W
Protection	Reverse polarity and 1500 watt Transient Voltage Suppressor (TVS) IP 6K6 (Protection against dust and high-pressure water jets) IP 6K7 (Protection against dust and temporary water immersion)
Cable Length	Pre-wired with 200mm of cable.
Compliance	ADR 6/00: Cat 1a

## 110mm Round LED Front Position/ Front Direction Indicator Lamp with Clear Lens

LED front direction indicator and front position lamp specifically designed for commercial transport, buses, caravans and trailers. Direction indicator optic appears clear until illuminated.



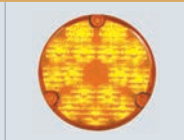
Part Number	2131-CS		HCS TECHNOLOGY
Mounting	Mount only with lens engraving "TOP" located correctly.		
Voltage	Multivolt™ for optimum brightness at input voltages from 9 to 33 volts.		
Power Consumption	Front position:	<1W	
	Front direction indicator:	3W	
Protection	Reverse polarity and 5000 watt Transient Voltage Suppressor (TVS) IP 6K7 (Protection against dust and temporary water immersion) IP 6K9K (Protection against dust and high-pressure/steam jet cleaning)		
Cable Length	Pre-wired with 200mm of cable.		
Compliance	ADR 6/00: Cat 1a	ADR 49/00	ECE R6/01
	ECE R7/02	E24 5851	ISO 13207-1

See page 210 for further information on HCS Technology and ISO 13207-1.

### LAMP FUNCTIONS



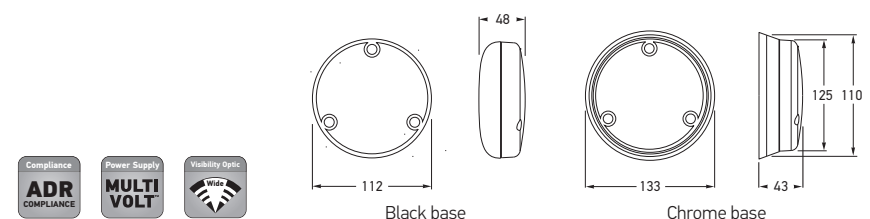
Front position



Direction indicator



## MARKER AND SIGNAL LAMPS



Part Number	2359	CHROME BASE
	2367	BLACK BASE
	2365	MODULE
Mounting	Mount only with lens engraving "TOP" located correctly.	
Voltage	Multivolt™ for optimum brightness at input voltages from 9 to 33 volts.	
Power Consumption	Stop: 3W Rear position: 1W	
Protection	Reverse polarity and 1500 watt Transient Voltage Suppressor (TVS) IP 6K6 (Protection against dust and high-pressure water jets) IP 6K7 (Protection against dust and temporary water immersion)	
Cable Length	Pre-wired with 200mm of cable.	
Compliance	ADR 49/00	

### 110mm Round LED Stop/Rear Position Lamp

110mm round LED stop, rear position lamp specifically designed for commercial transport, buses, caravans and trailers. Features low power consumption, impact resistant acrylic lens and HELLA's Ultra Wide Visibility Optics for significantly improved side visibility.



P/N 2367

P/N 2365



Part Number	2159	CHROME BASE
	2167	BLACK BASE
	2165	MODULE
Mounting	Mount only with lens engraving "TOP" located correctly.	
Voltage	Multivolt™ for optimum brightness at input voltages from 9 to 33 volts.	
Power Consumption	3W	
Protection	As per P/N 2359.	
Cable Length	Pre-wired with 200mm of cable.	
Compliance	ADR 6/00: Cat 2a	

### 110mm Round LED Rear Direction Indicator Lamp



P/N 2167

P/N 2165



Part Number	1459	CHROME BASE
	1467	BLACK BASE
	1465	MODULE
Mounting	Mount only with lens engraving "TOP" located correctly.	
Voltage	Multivolt™ for optimum brightness at input voltages from 9 to 33 volts.	
Power Consumption	5W	
Protection	As per P/N 2359.	
Cable Length	Pre-wired with 200mm of cable.	
Compliance	ADR 1/00	
Reversing lamps are not designed for continuous operation.		

### 110mm Round LED Reversing Lamp



P/N 1467

P/N 1465

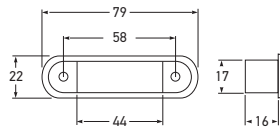


### LED Flush Mount Front Position/ End Outline Lamp

White front position or front end outline  
LED lamp (FEOL).



P/N 2055



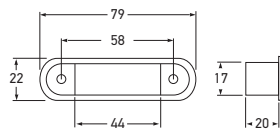
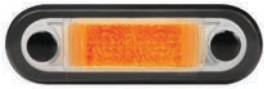
Part Number	2055		
	2055-BULK		PACK OF 4
Mounting	Two hole recess mount. Suitable for horizontal or vertical mounting.		
Voltage	Multivolt™ for optimum brightness in 12 and 24 volt systems.		
Power Consumption	<1W		
Protection	Reverse polarity protection. IP 6K6 (Protection against dust and high-pressure water jets) IP 6K7 (Protection against dust and temporary water immersion)		
Cable Length	Pre-wired with 0.5m of sheathed multi-core cable. Bulk pack pre-wired with 2.5m of sheathed multi-core cable.		
Compliance	ADR 49/00	E4 0054	ECE R7/02

See page 70 for spare parts and accessories.

See page 70 for spare parts and accessories.

### LED Flush Mount Front End Outline Lamp

Amber front end outline LED lamp (FEOL)  
for trailers only. Optic appears clear  
until illuminated.

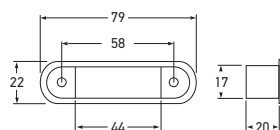


Part Number	2056	
	2056-BULK	PACK OF 4
Mounting	Suitable for horizontal mounting.	
Compliance	ADR 49/00	
Other specifications as per P/N 2055. See page 70 for spare parts and accessories.		

Other specifications as per P/N 2055. See page 70 for spare parts and accessories.

### LED Flush Mount Cab Marker Lamp

Amber cab marker LED lamp. Optic appears  
clear until illuminated.

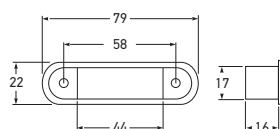


Part Number	2057	
	2057-BULK	PACK OF 4
Mounting	Suitable for horizontal mounting.	
Compliance	ADR 45/01	
Other specifications as per P/N 2055. See page 70 for spare parts and accessories.		

Other specifications as per P/N 2055. See page 70 for spare parts and accessories.

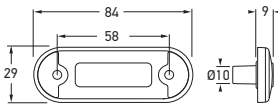
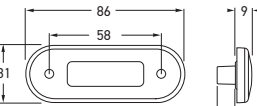
### LED Flush Mount Rear Position/ End Outline Lamp

Red rear end outline lamp (REOL) or rear position  
LED lamp. Optic appears clear until illuminated.



Part Number	2308		
	2308-BULK	PACK OF 4	
Compliance	ADR 49/00	E4 02 7597	ECE R7/02

Other specifications as per P/N 2055. See page 70 for spare parts and accessories.

<div>Compliance</div> <div>ADR COMPLIANCE</div>	<div>Power Supply</div> <div>MULTI VOLT</div>	<div>Lens Material</div> <div>GMD</div>		
<b>Part Number</b>			2059	
			2059-BULK (Pack of 16)	
			2059S	
			2059S-BULK (Pack of 16)	
			POLISHED STAINLESS STEEL RIM	
Mounting			Surface mount. Suitable for horizontal or vertical mounting.	
Voltage			Multivolt™ for optimum brightness in 12 and 24 volt systems.	
Power Consumption			<0.5W	
Protection			Reverse polarity protection. IP 6K7 (Protection against dust and temporary water immersion) IP 6K9K (Protection against dust and high-pressure/steam jet cleaning)	
Cable Length			Pre-wired with 0.5m of sheathed multi-core cable. Bulk pack pre-wired with 2.5m of sheathed multi-core cable.	
Spare Parts			9.2310.09-BULK 95968500 Black screw caps (Pack of 4) Stainless steel rim - Polished	
Lens Material			Grilamid®	
Compliance			ADR 49/00	
See page 67 for DuraLED® marker lamp accessories.				

## DuraLED® Flush Mount Front Position/End Outline Lamp

White surface mount front position or front end outline LED lamp (FEOL) with optional stainless steel rim. Featuring a low profile ultra durable Grilamid® nylon lens for extreme impact, UV, chemical and stress resistance. Optic appears clear until illuminated.



P/N 2059S

P/N 2059



Ultra slim design  
Featuring a thickness of just 9mm

Compliance

ADR COMPLIANCE

Power Supply

MULTI VOLT

Lens Material

GMD

Part Number	2060	
	2060-BULK (Pack of 16)	
	2060S	POLISHED STAINLESS STEEL RIM
	2060S-BULK (Pack of 16)	

Other specifications as per P/N 2059.



P/N 2060S



Compliance

ADR COMPLIANCE

Power Supply

MULTI VOLT

Lens Material

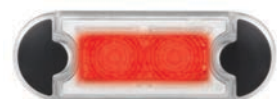
GMD

Part Number	2310	
	2310-BULK (Pack of 16)	
	2310S	POLISHED STAINLESS STEEL RIM
	2310S-BULK (Pack of 16)	

Other specifications as per P/N 2059.



P/N 2310S



## DuraLED® Flush Mount Rear Position/End Outline Lamp

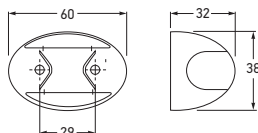
Red surface mount rear position or rear end outline LED lamp (REOL) with optional stainless steel rim. Featuring a low profile ultra durable Grilamid® nylon lens for extreme impact, UV, chemical and stress resistance. Optic appears clear until illuminated.

**DuraLED® Side Marker Lamp**

Red/amber side marker LED lamp.  
Optic appears clear until illuminated.



P/N 2053



Part Number	2053	
	2053-BULK	PACK OF 4
Mounting	Surface mount.	
Voltage	Multivolt™ for optimum brightness in 12 and 24 volt systems.	
Power Consumption	<1W	
Protection	Reverse polarity protection. IP 6K6 (Protection against dust and high-pressure water jets) IP 6K7 (Protection against dust and temporary water immersion)	
Cable Length	Pre-wired with 0.5m of sheathed multi-core cable. Bulk pack pre-wired with 2.5m of sheathed multi-core cable.	
Spare Part	9.2053.08	Black nylon housing
Compliance	ADR 45/01	
See page 67 for DuraLED® marker lamp accessories.		

**DuraLED® Side Marker Lamp**

Red/amber ultra high impact resistant side marker LED lamp featuring Grilamid® lens and nylon housing. Optic appears clear until illuminated.



Part Number	2053-GMD	
	2053-GMDBULK	PACK OF 4
Mounting	Surface mount.	
Voltage	Multivolt™ for optimum brightness in 12 and 24 volt systems.	
Power Consumption	<1W	
Protection	As per P/N 2053.	
Cable Length	Pre-wired with 0.5m of sheathed multi-core cable. Bulk pack pre-wired with 2.5m of sheathed multi-core cable.	
Spare Part	9.2053.08	Black nylon housing
Lens Material	Grilamid®	
Compliance	ADR 45/01	

**DuraLED® Cab Marker/Supplementary Side Direction Indicator Lamp (Cat. 5)**

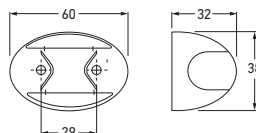
Amber cab marker or supplementary side indicator LED lamp. Optic appears clear until illuminated.



Part Number	2026	
	2026-BULK (Pack of 4)	PACK OF 4
Mounting	Surface mount.	
Voltage	Multivolt™ for optimum brightness in 12 and 24 volt systems.	
Power Consumption	<1W	
Protection	As per P/N 2053.	
Cable Length	Pre-wired with 0.5m of sheathed multi-core cable. Bulk pack pre-wired with 2.5m of sheathed multi-core cable.	
Spare Part	9.2053.08	Black nylon housing
Compliance	ADR 6/00: Cat 5	ADR 45/01
See page 59 for function category details.		



## MARKER AND SIGNAL



Part Number	2051	
	2051-BULK	PACK OF 4
Mounting	Surface mount. Suitable for horizontal mounting.	
Voltage	Multivolt™ for optimum brightness in 12 and 24 volt systems.	
Power Consumption	<1W	
Protection	Reverse polarity protection. IP 6K6 (Protection against dust and high-pressure water jets) IP 6K7 (Protection against dust and temporary water immersion)	
Cable Length	Pre-wired with 0.5m of sheathed multi-core cable. Bulk pack pre-wired with 2.5m of sheathed multi-core cable.	
Spare Part	9.2053.08	Black nylon housing
Lens Material	Grilamid®	
Compliance	ADR 49/00	

See page 67 for DuraLED® marker lamp accessories.

## DuraLED® Front End Outline Lamp

Amber ultra high impact resistant front end outline (FEOL) LED lamp for trailers featuring Grilamid® lens and nylon housing. Optic appears clear until illuminated.



Part Number	2054	
	2054-BULK	PACK OF 4
Mounting	Surface mount. Suitable for horizontal mounting.	
Voltage	Multivolt™ for optimum brightness in 12 and 24 volt systems.	
Power Consumption	<1W	
Protection	As per P/N 2051.	
Cable Length	Pre-wired with 0.5m of sheathed multi-core cable. Bulk pack pre-wired with 2.5m of sheathed multi-core cable.	
Spare Part	9.2053.08	Black nylon housing
Lens Material	Grilamid®	
Compliance	ADR 49/00	

## DuraLED® Front Position/End Outline Lamp

White ultra high impact resistant front end outline (FEOL) or front position LED lamp featuring Grilamid® lens and nylon housing.



Part Number	2307	
	2307-BULK	PACK OF 4
Mounting	Surface mount. Suitable for horizontal mounting.	
Voltage	Multivolt™ for optimum brightness in 12 and 24 volt systems.	
Power Consumption	<1W	
Protection	As per P/N 2051.	
Cable Length	Pre-wired with 0.5m of sheathed multi-core cable. Bulk pack pre-wired with 2.5m of sheathed multi-core cable.	
Spare Part	9.2053.08	Black nylon housing
Lens Material	Grilamid®	
Compliance	ADR 49/00	

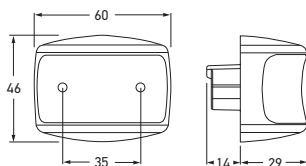
## DuraLED® Rear Position/End Outline Lamp

Red ultra high impact resistant rear end outline (REOL) or rear position LED lamp featuring Grilamid® lens and nylon housing. Optic appears clear until illuminated.



### DuraLED® Heavy Duty Side Marker Lamp with DT Connector - Red/Amber

Heavy duty red/amber LED side marker lamp with DT connector and nylon housing. Featuring ultra durable Grilamid® nylon lens for extreme impact, UV, chemical and stress resistance. Optic appears clear until illuminated.



Rear view showing DT connector that allows application of self-adhesive heat shrink.



P/N 4960-P  
Not included with lamp.

Part Number	2073	
	2073-BULK	PACK OF 8
Mounting	Surface mount. Suitable for horizontal mounting.	
Voltage	Multivolt™ for optimum brightness in 12 and 24 volt systems.	
Power Consumption	<1W	
Protection	Reverse polarity protection. Fully sealed against dust, high-pressure washing and temporary water immersion.	
Spare Parts	4960-P 9.2073.09	2 pole DT plug, wedge and 2 contacts. Black nylon housing
Lens Material	Grilamid®	
Compliance	ADR 45/01	

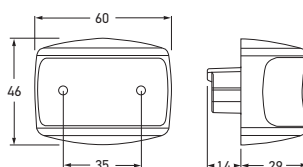
### DuraLED® Heavy Duty Cab Marker/ Supplementary Side Direction Indicator Lamp with DT Connector

Heavy duty amber LED cab marker or supplementary side direction indicator lamp with DT connector and nylon housing. Featuring ultra durable Grilamid® nylon lens for extreme impact, UV, chemical and stress resistance. Optic appears clear until illuminated.



Part Number	2076	
	2076-BULK	PACK OF 8
Mounting	Surface mount. Suitable for horizontal mounting.	
Voltage	Multivolt™ for optimum brightness in 12 and 24 volt systems.	
Power Consumption	<1W	
Protection	Reverse polarity protection. Fully sealed against dust, high-pressure washing and temporary water immersion.	
Spare Parts	4960-P 9.2073.09	2 pole DT plug, wedge and 2 contacts. Black nylon housing
Lens Material	Grilamid®	
Compliance	ADR 45/01	ADR 6/00: Cat 5

## MARKER AND SIGNAL



Part Number	2071	
	2071-BULK	PACK OF 8
Mounting	Surface mount. Suitable for horizontal mounting.	
Voltage	Multivolt™ for optimum brightness in 12 and 24 volt systems.	
Power Consumption	<1W	
Protection	Reverse polarity protection. Fully sealed against dust, high-pressure washing and temporary water immersion.	
Spare Parts	4960-P 9.2073.09	2 pole DT plug, wedge and 2 contacts. Black nylon housing
Lens Material	Grilamid®	
Compliance	ADR 49/00	

## DuraLED® Heavy Duty Front End Outline Lamp with DT Connector

Heavy duty amber front end outline LED lamp (FEOL) with DT connector and nylon housing. Featuring ultra durable Grilamid® nylon lens for extreme impact, UV, chemical and stress resistance. Optic appears clear until illuminated.



Part Number	2074	
	2074-BULK	PACK OF 8
Mounting	Surface mount. Suitable for horizontal mounting.	
Voltage	Multivolt™ for optimum brightness in 12 and 24 volt systems.	
Power Consumption	<1W	
Protection	Reverse polarity protection. Fully sealed against dust, high-pressure washing and temporary water immersion.	
Spare Parts	4960-P 9.2073.09	2 pole DT plug, wedge and 2 contacts. Black nylon housing
Lens Material	Grilamid®	
Compliance	ADR 49/00	

## DuraLED® Heavy Duty Front Position/End Outline Lamp with DT Connector

Heavy duty white front position or end outline LED lamp (FEOL) with DT connector and nylon housing. Featuring ultra durable Grilamid® nylon lens for extreme impact, UV, chemical and stress resistance. Optic appears clear until illuminated.



Part Number	2312	
	2312-BULK	PACK OF 8
Mounting	Surface mount. Suitable for horizontal mounting.	
Voltage	Multivolt™ for optimum brightness in 12 and 24 volt systems.	
Power Consumption	<1W	
Protection	Reverse polarity protection. Fully sealed against dust, high-pressure washing and temporary water immersion.	
Spare Parts	4960-P 9.2073.09	2 pole DT plug, wedge and 2 contacts. Black nylon housing
Lens Material	Grilamid®	
Compliance	ADR 49/00	

## DuraLED® Heavy Duty Rear Position/End Outline Lamp with DT Connector

Heavy duty red rear position or end outline LED lamp (REOL) with DT connector and nylon housing. Featuring ultra durable Grilamid® nylon lens for extreme impact, UV, chemical and stress resistance. Optic appears clear until illuminated.





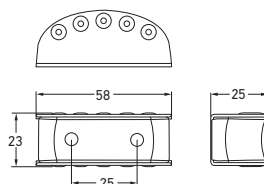
## DuraLED® Heavy Duty Side Marker Lamp - Red/Amber

Heavy duty red/amber LED side marker lamp with stainless steel housing. Featuring ultra durable Grilamid® nylon lens for extreme impact, UV, chemical and stress resistance. Optic appears clear until illuminated.



P/N 2058

P/N 2058P



Part Number	2058		MATT FINISH
	2058-BULK (Pack of 15)		
	2058P		POLISHED FINISH
	2058P-BULK (Pack of 15)		
Mounting	Surface mount. Suitable for horizontal mounting.		
Voltage	Multivolt™ for optimum brightness in 12 and 24 volt systems.		
Power Consumption	<1W		
Protection	Reverse polarity protection. Fully sealed against dust, high-pressure washing and temporary water immersion.		
Cable Length	Pre-wired with 0.5m of sheathed multi-core cable. Bulk pack pre-wired with 2.5m of sheathed multi-core cable.		
Spare Parts	9.2058.09 9.2058.10	Stainless steel housing Polished stainless steel housing	
Lens Material	Grilamid®		
Compliance	ADR 45/01		

The industrial polishing process utilised on the housings may not always be 100% blemish free.

## DuraLED® Heavy Duty Cab Marker/ Supplementary Side Direction Indicator Lamp

Heavy duty LED cab marker or supplementary side direction indicator lamp with stainless steel housing. Featuring ultra durable Grilamid® nylon lens for extreme impact, UV, chemical and stress resistance. Optic appears clear until illuminated.



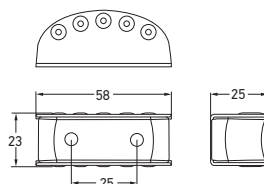
P/N 2058



Part Number	2027		MATT FINISH
	2027-BULK (Pack of 15)		
	2027P		POLISHED FINISH
	2027P-BULK (Pack of 15)		
Mounting	Surface mount. Suitable for horizontal mounting.		
Voltage	Multivolt™ for optimum brightness in 12 and 24 volt systems.		
Power Consumption	<1W		
Protection	Reverse polarity protection. Fully sealed against dust, high-pressure washing and temporary water immersion.		
Cable Length	Pre-wired with 0.5m of sheathed multi-core cable. Bulk pack pre-wired with 2.5m of sheathed multi-core cable.		
Spare Parts	9.2058.09 9.2058.10	Stainless steel housing Polished stainless steel housing	
Lens Material	Grilamid®		
Compliance	ADR 45/01	ADR 6/00: Cat 5	

The industrial polishing process utilised on the housings may not always be 100% blemish free.

## MARKER AND SIGNAL

**DuraLED® Heavy Duty Front Position/End Outline Lamp**

Heavy duty white front position/end outline LED lamp (FEOL) with stainless steel housing. Featuring ultra durable Grilamid® nylon lens for extreme impact, UV, chemical and stress resistance. Optic appears clear until illuminated.



Part Number	2061		MATT FINISH
	2061-BULK (Pack of 15)		
	2061P		POLISHED FINISH
	2061P-BULK (Pack of 15)		
Mounting	Surface mount. Suitable for horizontal mounting.		
Voltage	Multivolt™ for optimum brightness in 12 and 24 volt systems.		
Power Consumption	<1W		
Protection	Reverse polarity protection. Fully sealed against dust, high-pressure washing and temporary water immersion.		
Cable Length	Pre-wired with 0.5m of sheathed multi-core cable. Bulk pack pre-wired with 2.5m of sheathed multi-core cable.		
Spare Parts	9.2058.09 9.2058.10	Stainless steel housing Polished stainless steel housing	
Lens Material	Grilamid®		
Compliance	ADR 49/00		

The industrial polishing process utilised on the housings may not always be 100% blemish free.

**DuraLED® Heavy Duty Front End Outline Lamp**

Heavy duty amber front end outline LED lamp (FEOL) with stainless steel housing. Featuring ultra durable Grilamid® nylon lens for extreme impact, UV, chemical and stress resistance. Optic appears clear until illuminated.



Part Number	2062	MATT FINISH
	2062-BULK (Pack of 15)	
	2062P	POLISHED FINISH
	2062P-BULK (Pack of 15)	

Other specifications as per P/N 2061.

**DuraLED® Heavy Duty Rear Position/End Outline Lamp**

Heavy duty red rear position/end outline LED lamp (REOL) with stainless steel housing. Featuring ultra durable Grilamid® nylon lens for extreme impact, UV, chemical and stress resistance. Optic appears clear until illuminated.



Part Number	2311	MATT FINISH
	2311-BULK (Pack of 15)	
	2311P	POLISHED FINISH
	2311P-BULK (Pack of 15)	

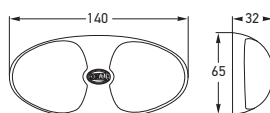
Other specifications as per P/N 2061.

### DuraLED® Supplementary Side Direction Indicator Lamp (Cat. 5)

LED supplementary side direction indicator featuring amber impact resistant polycarbonate lens and HELLA's Ultra Wide Visibility Optics for significantly improved side visibility. See page 59 for function category details.



P/N 2031-BL



Part Number	2031	
	2031-BL	BLISTER PACK
Mounting	Two hole surface mount with mounting bushes supplied. Suitable for horizontal mounting.	
Voltage	Multivolt™ for optimum brightness in 12 and 24 volt systems.	
Power Consumption	3W	
Protection	Reverse polarity and 5000 watt Transient Voltage Suppressor (TVS) Fully sealed against dust, high-pressure washing and temporary water immersion.	
Cable Length	Pre-wired with 2.5m of sheathed multi-core cable.	
Projected Luminous Area	51cm <sup>2</sup>	
Spare Part	9.2366.17	Screw boss kit
Lens Material	Polycarbonate.	
Compliance	ADR 6/00: Cat 5	

### DuraLED® Side Marker Lamp with Clear Lens

LED side marker featuring clear impact resistant polycarbonate lens and HELLA's Ultra Wide Visibility Optics for significantly improved side visibility. Optic appears clear until illuminated.



P/N 2033-BL



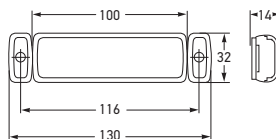
Part Number	2033	
	2033-BL	BLISTER PACK
Mounting	Two hole surface mount with mounting bushes supplied.	
Voltage	Multivolt™ for optimum brightness in 12 and 24 volt systems.	
Power Consumption	3W	
Protection	Reverse polarity and 5000 watt Transient Voltage Suppressor (TVS) Fully sealed against dust, high-pressure washing and temporary water immersion.	
Cable Length	Pre-wired with 2.5m of sheathed multi-core cable.	
Spare Part	9.2366.17	Screw boss kit
Lens Material	Polycarbonate.	
Compliance	ADR 45/01	

### DuraLED® Rear Position/End Outline Lamp

LED rear position/rear end outline lamp featuring red impact resistant polycarbonate lens and HELLA's Ultra Wide Visibility Optics for significantly improved side visibility.

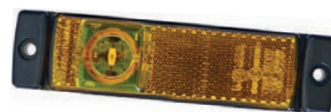


Part Number	2309	
Mounting	Two hole surface mount with mounting bushes supplied. Suitable for horizontal mounting.	
Voltage	Multivolt™ for optimum brightness in 12 and 24 volt systems.	
Power Consumption	3W	
Protection	Reverse polarity and 5000 watt Transient Voltage Suppressor (TVS) Fully sealed against dust, high-pressure washing and temporary water immersion.	
Cable Length	Pre-wired with 2.5m of sheathed multi-core cable.	
Spare Part	9.2366.17	Screw boss kit
Lens Material	Polycarbonate.	
Compliance	ADR 49/00	

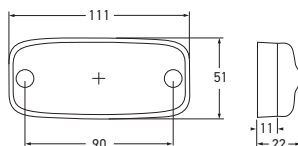


### LED Side Marker Lamp - Amber

Side marker lamp with reflex reflector for horizontal mounting. Reverse polarity protection.



Part Number	2PS 008 645-011			12 VOLT
	2PS 008 645-001			24 VOLT
Power Consumption	12V 24V	0.5W 1W		
Cable Length	Pre-wired with 1.5m of sheathed multi-core cable.			
Compliance	(Ei) 1395	(Ei) 1396	ECE R3/02	ECE R91/00

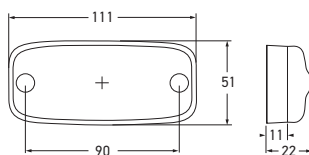


### LED Side Marker Lamp - Amber

LED side marker with inbuilt amber retro reflector. Bridge circuit for protection against polarity reversal.



Part Number	2PS 963 639-007			12 VOLT
	2PS 963 639-017			24 VOLT
Power Consumption	12V	0.7W		
	24V	1.3W		
Cable Length	Pre-wired with 0.5m of sheathed multi-core cable.			
Compliance	(E17) 9605	ECE R3/02	ECE R91/00	



### LED Rear Position Lamp - Red

LED rear position lamp with inbuilt red retro reflector. Bridge circuit for protection against polarity reversal.

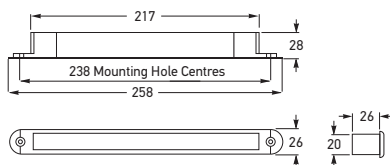


Part Number	2305		12 VOLT
	2306		24 VOLT
Power Consumption	12V 24V	0.5W 1W	
Cable Length	Pre-wired with 5m of sheathed multi-core cable.		
Compliance	(E17) 9808	ECE R3/02	ECE R7/02



### LED Stop/Rear Position Lamp

Red LED strip lamp suitable for coaches and buses, featuring Enhanced Definition Technology (EDT).



Part Number	2334-12V	12 VOLT
	2334-24V	24 VOLT
Mounting	Two hole recess mount. Suitable for horizontal or vertical mounting.	
Power Consumption	Stop: 2W Rear position: 0.3W	
Protection	Reverse polarity protection.	
Cable Length	Pre-wired with 300mm of cable.	
Spare Part	9.5243.05	Gasket
Compliance	ADR 49/00	

### LED Rear Direction Indicator Lamp

Amber LED strip lamp suitable for coaches and buses.



Part Number	2156-12V	12 VOLT
	2156-24V	24 VOLT
Mounting	Two hole recess mount. Suitable for horizontal or vertical mounting.	
Power Consumption	2W	
Protection	Reverse polarity protection.	
Cable Length	Pre-wired with 0.5m of sheathed multi-core cable.	
Spare Part	9.5243.05	Gasket
Compliance	ADR 6/00: Cat 2a	

### LED High Level Brake Lamp

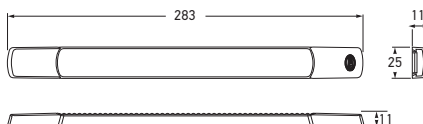
Strip LED lamp designed for rear spoiler applications. Clear lens version optic appears clear until illuminated.



P/N 5243-CLEAR



Part Number	RED LENS	CLEAR LENS	
	5243	5243-CLEAR	12 VOLT
	5243-24V	5243-24VCLEAR	24 VOLT
Mounting	Two hole recess mount. Suitable for horizontal or vertical mounting.		
Power Consumption	2W		
Protection	Reverse polarity protection. IP 6K7 (Protection against dust and temporary water immersion) IP 6K9K (Protection against dust and high-pressure/steam jet cleaning)		
Cable Length	Pre-wired with 2.5m of multi-core cable.		
Spare Part	9.5243.05	Gasket	
Compliance	ADR 49/00: Cat S3	Ⓔ4 02 7547	ECE R7/02



Part Number	5245	12 VOLT
	5245-24V	24 VOLT
Mounting	Suitable for horizontal or vertical mounting.	
Power Consumption	3W	
Protection	Reverse polarity protection. IP 6K7 (Protection against dust and temporary water immersion) IP 6K9K (Protection against dust and high-pressure/steam jet cleaning)	
Cable Length	Pre-wired with 2.5m of sheathed multi-core cable.	
Lens Material	Grilamid®	
Accessories	9.2652.09 9.1009.09	White screw caps (Pack of 4) Charcoal screw caps (Pack of 4)
Compliance	ADR 49/00: Cat S3	

## LED High Level Brake Lamp - Surface Mount

Surface mount LED high level brake lamp that is designed with an ultra wide visibility optic to suit a wide range of mounting positions and angles. Featuring a low profile, ultra durable Grilamid® nylon lens for extreme impact, UV, chemical and stress resistance. Optic appears clear until illuminated.



Ultra slim height of only 11mm. Lamp shown active.



Part Number	5237 (Coupe)			12 VOLT
	5238 (Sedan)			
	5239 (Wagon)			
Mounting	Adhesive mounting tape. Window angles for Coupe are 20° - 36°, Sedan 37° - 56° and Wagon 57° - 80°.			
Voltage	12V			
Power Consumption	3W			
Cable Length	Pre-wired with 2.5m of multi-core cable.			
Spare Parts		LED insert 12V	Housing kit & decal	
	P/N 5237	9.5237.01	9.5237.09	
	P/N 5238	9.5237.01	9.5238.09	
	P/N 5239	9.5237.01	9.5239.09	
Compliance	ADR 49/00: Cat S3			

## LED High Level Brake Lamp

Designed for rear windows of angles from 20° (Coupe) to 80° (Wagon). Supplied with installation kit and instruction sheet. Optic appears clear until illuminated.

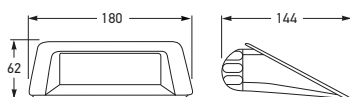


P/N 5237  
Shown illuminated

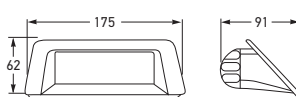


P/N 5238

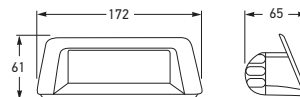
P/N 5239



P/N 5237



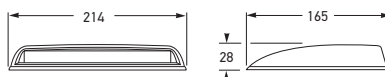
P/N 5238



P/N 5239

### External Mount High Level Brake Lamp

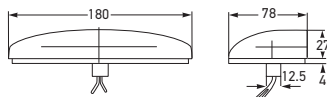
Designed to mount externally on boot lid.  
Die-cast metal housing with grey powder coat finish. May be painted to match vehicle.



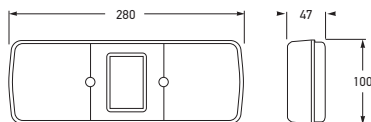
Part Number	5242
Mounting	External on boot lid.
Bulb to Suit	W1221
Compliance	ADR 49/00: Cat S3

### External Mount High Level Brake Lamp

Designed to mount externally on boot lid.  
May be painted to match vehicle.



Part Number	2DA 007 541-001	
Mounting	External on boot lid.	
Bulbs to Suit	12V 24V	W125 x 4 W245 x 4
Compliance	(E) 2343	ECE R7/02

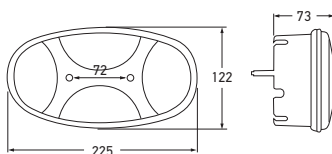


### Stop/Rear Position/Rear Direction Indicator Lamp with Retro Reflector

Suitable for insulated earth circuits.  
Shallow body. Retro reflector area 32cm<sup>2</sup>.



Part Number	2397			12 VOLT
	2397-BULK (Pack of 10)			
	2397-24V			24 VOLT
	2397-24VBULK (Pack of 10)			
Mounting	Surface mount.			
Bulbs to Suit		12V	24V	
	Stop:	K1221	K2421	
	Rear position:	L125	L245	
	Rear direction indicator:	K1221	K2421	
Spare Part	9.2397.01	Lens		
Compliance	ADR 6/00: Cat 2a	ADR 47/00	ADR 49/00	



### Stop/Rear Position/Rear Direction Indicator/Reversing Lamp

Suitable for light trailer, agricultural and construction vehicles.

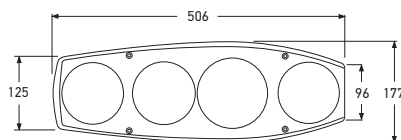


Part Number	2VP 343 640-027			RIGHT HAND SIDE
	2VP 343 640-037			LEFT HAND SIDE
Mounting	Surface mount. Suitable for horizontal or vertical mounting.			
Bulbs to Suit	12V	24V		
	Stop:	R1221	R2421	
	Rear position:	G1210	G2410	
	Rear direction indicator:	R1221	R2421	
	Reversing:	R1221	R2421	
Compliance	E17 0303	ECE R6/01	ECE R7/02	ECE R23/00



## Stop/Rear Position/Rear Direction Indicator/Reversing Lamp

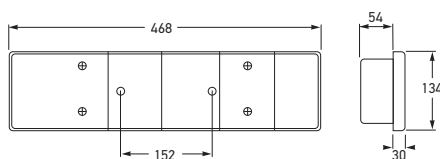
For mobile homes. With reversing light and round reflector.



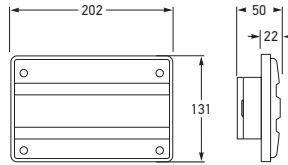
Part Number	2VP 341 419-127	RIGHT HAND SIDE
	2VP 341 419-137	LEFT HAND SIDE
Mounting	Horizontal flush mount into body.	
Bulbs to Suit	12V	24V
	Stop/Rear position: S1221/5V	S2421/5V
	Rear direction indicator: R1221	R2421
	Reversing: R1221	R2421
Compliance	(E4) 9836	ECE R6/01 ECE R7/02 ECE R23/00 ECE R3/02

## Rear Combination Lamp to suit MAN 93-00/Scania 88-96

Combination rear lamp with stop, rear position, reversing, rear direction indicator, rear fog functions and reflex reflector.



Part Number	2VP 008 204-061				
Mounting	Two bolt mount (bolts supplied).				
Bulbs to Suit	12V	24V			
	Stop: R1221	R2421			
	Rear position: G125 x 3	G245 x 3			
	Rear direction indicator: R1221	R2421			
	Reversing: R1221	R2421			
Spare Part	9EL 152 889-001	Lens and gasket			
Compliance	(E4) 9808	(E4) 9810	(E4) 3178	(E4) 4060	
	ECE R6/01	ECE R7/02	ECE R 23/00	ECE R3/02	ECE R38/00



### Designline Stop/Rear Position Lamp with Retro Reflector

Single bulb holder. Suitable for insulated earth circuits. Reflector area 35cm<sup>2</sup>.



Part Number	2321	12 VOLT
	2321-24V	24 VOLT
Mounting	Recess mount with 78 x 145mm opening. Suitable for horizontal or vertical mounting.	
Bulbs to Suit	12V	S1221/5V
	24V	S2421/5V
Compliance	ADR 47/00	ADR 49/00



### Designline Rear Direction Indicator Lamp

Single bulb holder. Suitable for insulated earth circuits.



Part Number	2145	12 VOLT
	2145-24V	24 VOLT
Mounting	Recess mount with 78 x 145mm opening. Suitable for horizontal or vertical mounting.	
Bulbs to Suit	12V	R1221
	24V	R2421
Compliance	ADR 6/00: Cat 2a	



### Designline Reversing Lamp

Single bulb holder. Suitable for insulated earth circuits.



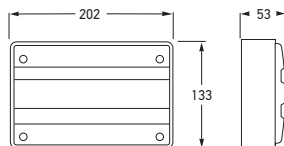
Part Number	2046	12 VOLT
	2046-24V	24 VOLT
Mounting	Recess mount with 78 x 145mm opening. Suitable for horizontal or vertical mounting.	
Bulbs to Suit	12V	R1221
	24V	R2421
Compliance	ADR 1/00	

#### SPARE PARTS FOR DESIGNLINE RECESS MOUNT LAMPS

9.2320.01	Red lens
9.2144.01	Amber lens
9.2041.01	Clear lens
9.2043.05	Lens or base gasket
9.2046.09-BULK	Housing
9.2320.08	Double contact bulb holder (includes 12V bulb)
9.2320.08-24V	Double contact bulb holder (includes 24V bulb)

### Designline Stop/Rear Position Lamp with Retro Reflector

Single bulb holder. Suitable for insulated earth circuits. Reflector area 35cm<sup>2</sup>.



Part Number	2320	12 VOLT
	2320-24V	24 VOLT
Mounting	Two bolt surface mount. Suitable for horizontal or vertical mounting.	
Bulbs to Suit	12V 24V	S1221/5V S2421/5V
Compliance	ADR 47/00	ADR 49/00

### Designline Rear Direction Indicator Lamp

Single bulb holder. Suitable for insulated earth circuits.



Part Number	2144	12 VOLT
	2144-24V	24 VOLT
Mounting	Two bolt surface mount. Suitable for horizontal or vertical mounting.	
Bulbs to Suit	12V 24V	R1221 R2421
Compliance	ADR 6/00: Cat 2a	

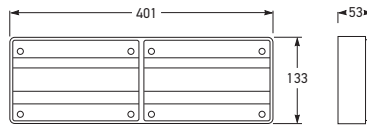
### Designline Reversing Lamp

Single bulb holder. Suitable for insulated earth circuits.



Part Number	2041	12 VOLT
	2041-24V	24 VOLT
Mounting	Two bolt surface mount. Suitable for horizontal or vertical mounting.	
Bulbs to Suit	12V 24V	R1221 R2421
Compliance	ADR 1/00	

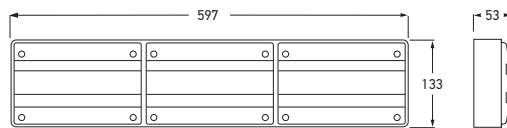
## MARKER AND SIGNAL



Part Number	2422		12 VOLT
	2422-24V		24 VOLT
Mounting	Two bolt surface mount. Suitable for horizontal or vertical mounting.		
Bulbs to Suit	12V	24V	
	Stop/rear position: S1221/5V Rear direction indicator: R1221	S2421/5V R2421	
Compliance	ADR 6/00: Cat 2a	ADR 47/00	ADR 49/00

Designline Stop/Rear Position/  
Rear Direction Indicator Lamp  
with Retro Reflector

Suitable for insulated earth circuits.



Part Number	2423		12 VOLT
	2423-24V		24 VOLT
Mounting	Two bolt surface mount. Suitable for horizontal or vertical mounting.		
Bulbs to Suit	12V	24V	
	Stop/rear position: S1221/5V Rear direction indicator: R1221	S2421/5V R2421	
Compliance	ADR 6/00: Cat 2a	ADR 47/00	ADR 49/00

Designline Stop/Rear Position/  
Rear Direction Indicator Lamp  
with Retro Reflector

Suitable for insulated earth circuits.



Part Number	2424		12 VOLT
	2424-24V		24 VOLT
Mounting	Two bolt surface mount. Suitable for horizontal or vertical mounting.		
Bulbs to Suit	12V	24V	
	Stop/rear position: S1221/5V Rear direction indicator: R1221 Reversing: R1221	S2421/5V R2421 R2421	
Compliance	ADR 1/00	ADR 6/00: Cat 2a	ADR 47/00 ADR 49/00

Designline Stop/Rear Position/  
Rear Direction Indicator/Reversing  
Lamp with Retro Reflector

Suitable for insulated earth circuits.



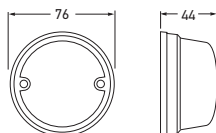
## SPARE PARTS FOR DESIGNLINE SURFACE MOUNT LAMPS

9.2320.01	Red lens
9.2144.01	Amber lens
9.2041.01	Clear lens
9.2043.05	Lens gasket
9.2041.09-BULK	Single Module Housing
9.2422.09	Double Module Housing
9.2423.09	Triple Module Housing
9.2041.08	Single contact bulb holder (includes 12V bulb)
9.2041.08-24V	Single contact bulb holder (includes 24V bulb)
9.2320.08	Double contact bulb holder (includes 12V bulb)
9.2320.08-24V	Double contact bulb holder (includes 24V bulb)



## Stop Lamp

Single bulb holder.



Part Number	2303	
Bulbs to Suit	12V 24V	K1221 K2421
Spare Parts	2.2459.01 2.0423.03	Red lens Rubber back plate
Compliance	ADR 49/00	

## Front Direction Indicator Lamp

Single bulb holder.



Part Number	2100	
Bulbs to Suit	12V 24V	K1221 K2421
Spare Parts	2.6830.01 2.0423.03	Amber lens Rubber back plate
Compliance	ADR 6/00: Cat 1a	

## Front Position/End Outline Lamp

Single bulb holder.



Part Number	2000	
Bulbs to Suit	12V 24V	L125 L245
Spare Parts	2.6856.01 2.0423.03	Clear lens Rubber back plate
Compliance	ADR 49/00	

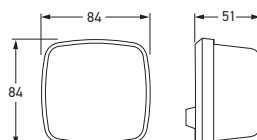
## Reversing Lamp

Single bulb holder.



Part Number	1407	
Bulbs to Suit	12V 24V	K1221 K2421
Spare Parts	1.5147.01 2.0423.03	Clear lens Rubber back plate
Compliance	ADR 1/00	

## MARKER AND SIGNAL



## Stop/Rear Position/Number Plate Lamp

Suitable for insulated earth circuits.



Part Number	2384			
Bulbs to Suit		12V	24V	
	Stop:	R1221	R2421	
	Rear position/Number plate:	L125	L245	
Spare Part	9.2384.01	Red lens		
Compliance	ADR 48/00 ECE R4/00	ADR 49/00 ECE R7/02	(E) 31 453	(E) 53 210



## Rear Direction Indicator Lamp



Part Number	2147			
Bulbs to Suit	12V	R1221		
	24V	R2421		
Spare Part	9.2147.01	Amber lens		
Compliance	ADR 6/00: Cat 2a	(E) 32 619	ECE R6/01	



## Front Direction Indicator Lamp



Part Number	2148			
Bulbs to Suit	12V	R1221		
	24V	R2421		
Spare Part	9.2148.01	Amber lens		
Compliance	ADR 6/00: Cat 1a	(E) 32 661	ECE R6/01	



## Front Position/End Outline Lamp



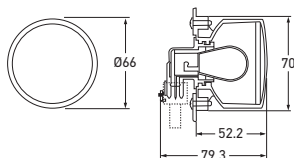
Part Number	2064			
Bulbs to Suit	12V	L125		
	24V	L245		
Spare Part	9.2064.01	Clear lens		
Compliance	ADR 49/00	(E) 11 793	ECE R7/02	



## Reversing Lamp



Part Number	1405			
Bulbs to Suit	12V	R1221		
	24V	R2421		
Spare Part	9.1405.01	Clear lens		
Compliance	ADR 1/00	(E) 8703	ECE R23/00	



The lamp features a reflector with a high quality facet pattern and a clear lens. Optimised light output, making applications behind outer cover lenses possible.

#### Mounting

Mounting depth of 80mm. The standard version is designed to be mounted with a screw fitting from the rear. If required the lamp can be fitted from the front using an optional mounting plate. Simplified electrical connection via a two or three pin plug (not supplied).

### Stop/Rear Position Lamp



Part Number	2SB 009 001-061	
Bulb to Suit	12V	S1221/5V
	24V	S2421/5V
Compliance	Ⓔ4 7613	ECE R7/02

### Rear Direction Indicator Lamp



Part Number	2BA 009 001-001	
Bulb to Suit	12V	RY1221
	24V	RY2421
Compliance	Ⓔ4 6546	ECE R6/01

### Front Direction Indicator Lamp



Part Number	2BA 009 001-071	
Bulb to Suit	12V	RY1221
	24V	RY2421
Compliance	Ⓔ4 6546	ECE R6/01

### Front Position Lamp

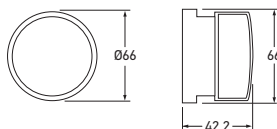


Part Number	2PF 009 001-081	
Bulb to Suit	12V	S1221/5V
	24V	S2421/5V
Compliance	Ⓔ4 7613	ECE R7/02

### Reversing Lamp



Part Number	2ZR 009 001-011	
Bulb to Suit	12V	R1221
	24V	R2421
Compliance	Ⓔ4 23 255	ECE R23/00



Part Number	8RA 009 001-031	
Mounting	Mounting depth of 43mm. The standard version is for screw fitting from behind. If required the reflector can be fitted from the front using an optional mounting plate.	
Compliance	E4 3189	ECE R3/02

### Rear Reflex Reflector

This reflector is designed to match the clear glass lamps. All the accessories and holders can be used.



### 60mm Accessories

Accessories to suit 60mm lamps.

Part Number	DESIGN RING FOR 60MM MODULES (OPTIONAL)	
	9HB 161 122-007	SILVER
Mounting	Pushes over front of 60mm lamp and locks into place.	



P/N 9HB 161 122-007

Part Number	MOUNTING PLATE	
	9XD 161 119-007	BLACK
Mounting	For front mounting of 60mm lamps.	



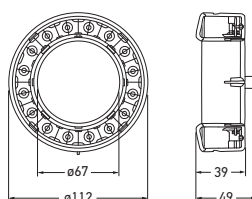
P/N 9XD 161 119-007

Part Number	TWO POLE PLUG (WITH TERMINALS AND SEALS)	
	8JD 156 150-807	



P/N 8JD 156 150-807

Part Number	THREE POLE PLUG (WITH TERMINALS AND SEALS)	
	8JD 162 581-802	



Part Number	2SB 009 362-021		12 VOLT
	DESIGN RING FOR LED RING LAMP (OPTIONAL)		
	9HB 163 085-012		CHROME
Mounting	Screw mount from rear. Design ring pushes over front of 112mm lamp and locks into place.		
Voltage	12V		
Current Draw	Stop:	2.3W	
	Rear position:	0.1W	
Cable Length	Pre-wired with 2.5m of cable.		
Compliance	Ⓔ4 7746	ECE R7/02	

### LED Ring Stop/Rear Position Lamp - 12 Volt

LED ring lamp suitable for use with 60mm lamps, 16 LEDs for rear position function and 8 LEDs for stop function. Clear lens.

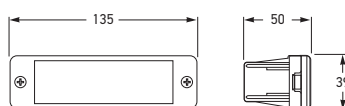


P/N 9HB 163 085-012



## Front Direction Indicator Lamp

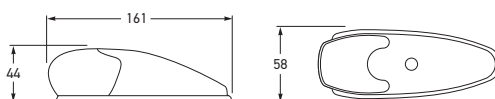
Universal flush mount front direction indicator lamp ideal for coach or bull-bar applications.



Part Number	2101	
Mounting	Flush mount. Suitable for left and right hand mounting.	
Bulbs to Suit	12V 24V	R1221 R2421
Spare Part	9.2101.01	Amber lens
Compliance	ADR 6/00: Cat 1	

## Supplementary Side Direction Indicator or Cab Marker Lamp (Cat. 5)

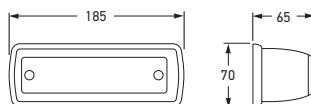
Supplied with flat mounting gasket.



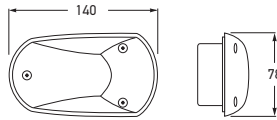
Part Number	2123	
Bulbs to Suit	12V 24V	G125 G245
Spare Parts	2.0965.02 2.0957.04 2.1872.01	Amber lens Flat rubber back plate Contoured gasket for curved surfaces
Compliance	ADR 6/00: Cat 1	ADR 45/01

## Supplementary Side Direction Indicator Lamp (Cat. 6)

Single bulb holder.



Part Number	2142	
Bulbs to Suit	12V 24V	R1221 R2421
Additional Function	Supplementary side direction indicator lamp (Cat. 5) where 12V (G125) or 24V (G245) bulbs are used.	
Spare Part	9.2142.01	Amber lens
Compliance	ADR 6/00: Cat 6	



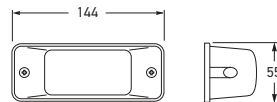
### Supplementary Side Direction Indicator Lamp (Cat. 6)

Side mounted direction lamp suitable for either left or right hand mounting.



P/N 2155-24V

Part Number	2155 (Clear lens)		12 VOLT
	2155-24V (Amber lens)		24 VOLT
Bulbs to Suit	12V 24V	RY1221 R2421	
Spare Part	9.2155.05	Wiring harness set	
Compliance	ADR 6/00: Cat 6		
Arrow on lens must face direction of travel.			



### Supplementary Side Direction Indicator Lamp (Cat. 6)

Side mounted direction indicator lamp with rubber base. Suitable for insulated earth circuits.



Part Number	2153		LEFT HAND SIDE
	2154		RIGHT HAND SIDE
Mounting	Surface mount.		
Bulbs to Suit	12V 24V	R1221 R2421	
Compliance	ADR 6/00: Cat 6		
Arrow on lens must face direction of travel.			

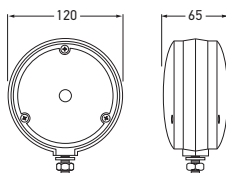
#### ADR CATEGORIES OF DIRECTION INDICATORS

ADR compliant indicators are categorised according to their intended function.

Category 1	Direction indicators for the front of the vehicle.
Category 2	Direction indicators for the rear of the vehicle.
Category 5	Supplementary side direction indicators for use on a vehicle also equipped with categories 1 and 2 direction indicators.
Category 6	Supplementary side direction indicators for use on a heavy vehicle also equipped with categories 1 and 2 direction indicators.

### Front Direction Indicator/ Supplementary Side Direction Indicator Lamp (Cat.1 and 5)

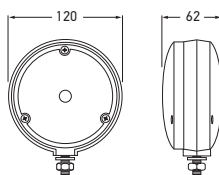
Double-sided direction indicator lamp.



Part Number	2127	
Mounting	Single bolt mount.	
Bulbs to Suit	12V 24V	R1221 R2421
Additional Function	Supplementary side direction indicator lamp where 12V (G125) or 24V (G245) bulbs are used.	
Spare Part	2.9800.09	Amber lens
Compliance	ADR 6/00: Cat 1	ADR 6/00: Cat 5
See page 59 for function category details.		

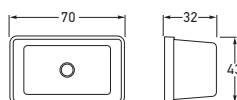
### LED Front Direction Indicator Lamp (Cat.1)

Single-sided LED front direction indicator fitted with high-intensity LED insert and black housing. Fully sealed to withstand high-pressure washing.



Part Number	2128LED
Mounting	Single bolt mount.
Voltage	Multivolt™ for optimum brightness at input voltages from 9 to 33 volts.
Power Consumption	4W
Protection	Reverse polarity and 1500 watt Transient Voltage Suppressor (TVS) IP 6K6 (Protection against dust and high-pressure water jets) IP 6K7 (Protection against dust and temporary water immersion)
Compliance	ADR 6/00: Cat 1
See page 59 for function category details.	

## MARKER AND SIGNAL

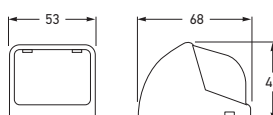


## Side Marker Lamp

Suitable for insulated earth circuits.



Part Number	2042		12 VOLT
	2042-BULK (Pack of 24)		
	2042-24V		24 VOLT
Bulb to Suit	12V 24V	M123 x 2 M243 x 2	
Spare Parts	9.2042.01	Red/Amber lens	
Compliance	ADR 45/01		

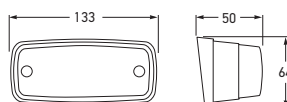


## Front Position/Front End Outline Lamp

Fitted with polycarbonate lens and single bulb holder.



Part Number	2066		
Bulbs to Suit	12V 24V	G1210 G2410	
Compliance	ADR 49/00	(E1) 32 1691	ECE R7/02



## Reversing Lamp

Single bulb holder.

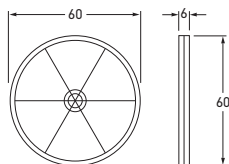


Part Number	1413		
Bulbs to Suit	12V 24V	R1221 R2421	
Spare Part	9.1413.02	Lens	
Compliance	ADR 1/00	(E1) 8708	ECE R23/00



## Retro Reflectors

60mm diameter complete with mounting screw, 22cm<sup>2</sup>. Reflectors with self adhesive are ECE certified.



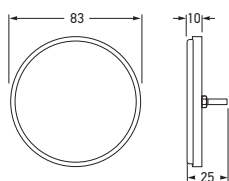
P/N 2916

P/N 2917

Part Number	2915	RED
	2915-1 (Self adhesive)	
	2915-BL (Blister pack - Pack of 2)	
	2916	AMBER
	2916-1 (Self adhesive)	
	2917	WHITE
	2917-1 (Self adhesive)	
Compliance	ADR 47/00	E13 02 3535 ECE R3/02

## Retro Reflector - Red

83mm diameter red acrylic retro reflector with black rim, 48cm<sup>2</sup>.



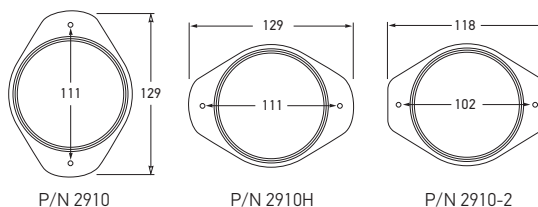
Part Number	2902
Mounting	Single bolt mount.
Compliance	ADR 47/00

## Retro Reflector

83mm diameter acrylic retro reflector with plastic or metal surround, 48cm<sup>2</sup>.



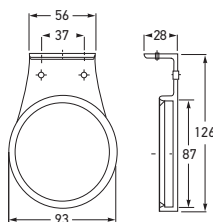
P/N 2910



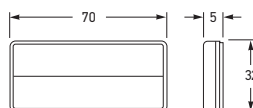
Part Number	2910 (Red)	VERTICAL
	2910H (Red)	HORIZONTAL
	2910-2 (Red - Metal surround)	VERTICAL OR HORIZONTAL
Mounting	Two hole surface mount.	
Compliance	ADR 47/00	

## Retro Reflector - Red

83mm diameter red acrylic retro reflector with plastic surround, 48cm<sup>2</sup>.



Part Number	2930	
	2930-BULK	PACK OF 32
Mounting	Right angled base with two holes for optional surface mount.	
Compliance	ADR 47/00	



Part Number	2919	AMBER
	2920	RED
	2920-BL (Blister pack - Pack of 2)	
	2920-BULK (Pack of 20)	
	2921	WHITE
Compliance ADR 47/00		

### Retro Reflectors

70 x 31.5mm self adhesive, 18cm<sup>2</sup>.



P/N 2920

P/N 2921



P/N 2922-2 - Two bolt holes

Part Number	2922	AMBER
	2922-2 (Two bolt holes)	RED
	2923	
	2923-BL (Blister pack - Pack of 2)	
	2923-BULK (Pack of 20)	
	2923-2 (Two bolt holes)	
	2923-2BL (Two bolt holes, Blister pack - Pack of 2)	
	2923-2BULK (Two bolt holes - Pack of 20)	
2924		WHITE
Compliance ADR 47/00 (E1) 02 21395 ECE R3/02		

### Retro Reflectors

94 x 44mm self adhesive (except two bolt hole version), 33cm<sup>2</sup>.



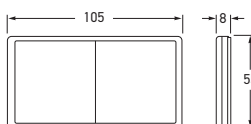
P/N 2922-2  
Two bolt holes



P/N 2922

P/N 2923

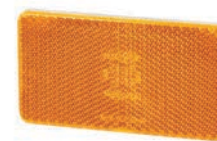
P/N 2924



Part Number	2925	AMBER
	2926	RED
	2926-BL (Blister pack - Pack of 2)	
	2927	WHITE
Compliance ADR 47/00		

### Retro Reflectors

105 x 55mm self adhesive, 50cm<sup>2</sup>.



P/N 2926

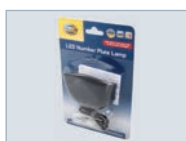
P/N 2927

## LED Number Plate Lamp

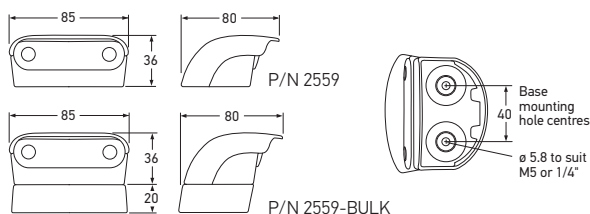
White LED number plate lamp. Bulk version includes 20mm mounting spacer. One lamp required for ADR compliance.



Mounting spacer  
P/N 9.2559.08

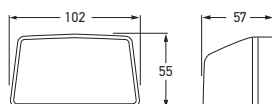


P/N 2559



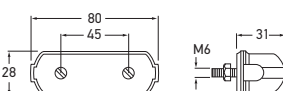
Part Number	2559	
	2559-BULK	PACK OF 8
Mounting	Surface mount.	
Voltage	Multivolt™ for optimum brightness in 12 and 24 volt systems.	
Protection	Reverse polarity protection. IP 6K6 (Protection against dust and high-pressure water jets) IP 6K7 (Protection against dust and temporary water immersion)	
Cable Length	Pre-wired with 0.5m of multi-core cable. Bulk pack pre-wired with 2.5m of multi-core cable.	
Spare Parts	9.2559.08 9.2559.02 9.2559.09 9.2559.19	Mounting spacer - black LED insert Mounting kit - black Mounting kit - white
Compliance	ADR 48/00	ECE R4/00

## Number Plate Lamp



Part Number	2553		12 VOLT
	2553-24V		24 VOLT
Bulbs to Suit	12V 24V	G1210 G2410	
Spare Part	9.2553.01	Lens	
Compliance	ADR 48/00	(E) 22819	ECE R4/00

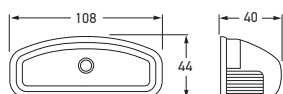
## Number Plate Lamp



Part Number	2555		
Mounting	Two bolt mount.		
Bulbs to Suit	12V 24V	L125 L245	
Compliance	ADR 48/00	(E) 12815	ECE R4/00
Two lamps required for ADR compliance.			

## Number Plate Lamp

Fitted with two bulb holders.



Part Number	2557		12 VOLT
	2557-24V		24 VOLT
Bulbs to Suit	12V 24V	HL124 x 2 HL244 x 2	
Spare Part	9.2557.01	Lens	
Compliance	ADR 48/00		

## MARKER AND SIGNAL

Part Number	JUMBO LAMP SPARE PARTS	
	9.2319.01	RED LENS
	9.2143.01	AMBER LENS
	9.2043.01	CLEAR LENS
	9.2043.05	LENS GASKET



To suit P/N 2143

To suit P/N 2043

Part Number	STOP/REAR POSITION/REAR DIRECTION INDICATOR/ NUMBER PLATE LAMP SPARE PART	
	9.2396.01	RED/AMBER LENS



To suit P/N 2319



To suit P/N 2396

Part Number	STOP/REAR POSITION/REAR DIRECTION INDICATOR SPARE PART	
	9.2368.01	RED LENS



To suit P/N 2368

Part Number	SIDE MARKER LAMP SPARE PARTS	
	9.2006.01	RED LENS
	9.2006.02	AMBER LENS



To suit P/N 2006

Part Number	MARKER LAMP SPARE PARTS	
	9.2045.01	RED LENS
	9.2044.01	AMBER LENS



To suit P/N 2045



To suit P/N 2044

Part Number	MARKER LAMP SPARE PARTS	
	9.2304.01	RED LENS
	9.2140.01	AMBER LENS
	9.2141.01	CLEAR LENS



To suit P/N 2304



To suit P/N 2140

To suit P/N 2141



## DuraLED® Accessories

Spare screw caps or screw bosses for the DuraLED® lamp range. Two screw caps and two screw bosses are required per lamp.



P/N 9.2330.15

SCREW CAPS - DURALED®		
Part Number	Colour	Quantity
9.2330.10	RED	PACK OF 4
9.2330.11	WHITE	
9.2330.12	BLUE	
9.2330.13	GREEN	
9.2330.14	YELLOW	
9.2330.15	BLACK	
9.2330.16	AMBER	



P/N 9.2330.10

P/N 9.2330.11

P/N 9.2330.12

P/N 9.2330.13

P/N 9.2330.14

P/N 9.2330.16



P/N 9.2378.10-BULK

SCREW CAPS - DURALED® COMBI-S/COMBI-R		
Part Number	Colour	Quantity
9.2378.10-BULK	RED	PACK OF 4
9.2378.11-BULK	WHITE	
9.2378.12-BULK	BLUE	
9.2378.13-BULK	GREEN	
9.2378.14-BULK	YELLOW	
9.2378.15-BULK	BLACK	
9.2378.16-BULK	AMBER	



P/N 9.2378.11-BULK

P/N 9.2378.12-BULK

P/N 9.2378.13-BULK

P/N 9.2378.14-BULK

P/N 9.2378.15-BULK

P/N 9.2378.16-BULK



P/N 9.2330.17

SCREW BOSS	
9.2330.17	PACK OF 4



P/N 98071900



P/N 98071901

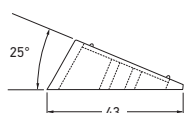
MOUNTING SPACERS - DURALED® COMBI	
98071900	BLACK
98071901	WHITE

Mounting spacer allows lamps to be surface mounted with the cable exiting any side of the spacer, or through the centre.

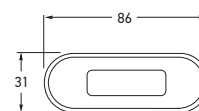
SHROUDS - DURALED® SURFACE MOUNT		
Part Number	Colour	Quantity
9.2053.08 (Nylon)	BLACK	SINGLE
9.2053.10-BULK	RED	PACK OF 4
9.2053.11-BULK	WHITE	
9.2053.12-BULK	BLUE	
9.2053.13-BULK	GREEN	
9.2053.14-BULK	YELLOW	
9.2053.15-BULK	AMBER	



P/N 9.2053.10-BULK P/N 9.2053.12-BULK P/N 9.2053.13-BULK P/N 9.2053.14-BULK P/N 9.2053.15-BULK



ANGLE MOUNT - DURALED® SURFACE MOUNT		
9.2053.07	BLACK	SINGLE



RIMS - DURALED® FLUSH MOUNT		
Part Number	Colour	Material
95968500	POLISHED	316 STAINLESS STEEL
95968502	GOLD PLATED	
95968506	SATIN CHROME PLATED	

To suit marker and signal lamps with 29mm wide rim.



P/N 95968500

SCREW CAPS - DURALED® FLUSH MOUNT		
Part Number	Colour	Quantity
9.2310.09-BULK	BLACK	PACK OF 4
9.2310.10-BULK	RED	
9.2310.11-BULK	WHITE	
9.2310.12-BULK	BLUE	
9.2310.13-BULK	GREEN	
9.2310.14-BULK	YELLOW	
9.2310.15-BULK	AMBER	
9.2310.16-BULK	GREY	

Pack sizes of 50 available upon request.



P/N 9.2310.10-BULK P/N 9.2310.12-BULK P/N 9.2310.13-BULK P/N 9.2310.14-BULK P/N 9.2310.15-BULK P/N 9.2310.16-BULK

## DuraLED® Marker Lamp Accessories

Spare mounting shrouds for the surface mount marker and surface mount courtesy lamp range. One mounting shroud is required per lamp.



P/N 9.2053.08



P/N 9.2053.11-BULK

## LED Combination Lamp Mounting Pack

Mounting pack to suit LED combination lamp P/Ns 2391, 2392L and 2392R.



### Part Number

9.2391.08

## EuroLED® Accessories

Spare covers or screw bosses for the EuroLED® range of lamps. One cover and two screw bosses are required per lamp.



P/N 9.2366.08

P/N 95995201



P/N 9.2366.11

P/N 95995200

P/N 9.2366.17

### COVERS

Part Number	Colour	Quantity
9.2366.08	BLACK	SINGLE
9.2366.11	WHITE	

### MOUNTING SPACER

95995200	BLACK	SINGLE
95995201	WHITE	

### SCREW BOSS

9.2366.17	WHITE	PACK OF 4
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## DuraLED® Heavy Duty Marker Lamp Accessories



P/N 9.2058.10

P/N 9.2058.10

### STAINLESS STEEL HOUSING

9.2058.09	POLISHED	SINGLE
9.2058.10		

## DuraLED® DT Lamp Accessories



P/N 9.2073.09



P/N 4963-P

### HOUSING

9.2073.09	PACK OF 4
-----------	-----------

### DT PLUG, WEDGE AND CONTACTS

4960-P	2 POLE
4963-P	6 POLE



P/N 4960-P

## MARKER AND SIGNAL

Part Number	
9.2394.08	FRAME
9.2394.09	15MM SPACER
Mounting spacer allows lamps to be surface mounted with the cable exiting any side of the spacer, or through the centre.	

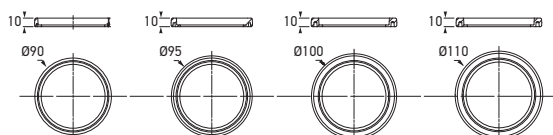
## LED Combination Trailer Lamp Accessories

To suit LED combination lamp P/Ns 2394 and 2395.



P/N 9.2394.09

P/N 9.2394.08



Part Number	Diameter
98069600	90MM O.D
98069620	95MM O.D
98069640	100MM O.D
98069660	110MM O.D

## 83mm Round Lamps - Mounting Rings

Mounting rings to suit 83mm round lamp range. Allows retro-fitting of lamp into existing applications with mounting holes larger than a diameter of 83mm.



## Jumbo-S Accessories

Accessories for the Jumbo-S LED lamp range.



MOUNTING GASKET BASE	
Part Number	Quantity
9.2361.08	SINGLE

SCREW CAPS AND SCREWS	
9.2361.09	SET OF 4

## Designline Accessories

Housings and screw caps for the Designline lamp range.



HOUSING - SINGLE, DOUBLE AND TRIPLE MODULE	
Part Number	
9.2041.09-BULK	SINGLE
9.2422.09	DOUBLE
9.2423.09	TRIPLE

SCREW CAPS		
9.5240.30	BLACK	50 PACK

### Number Plate Lamp Accessories

Mounting kit for number plate lamp P/N 2559.  
Includes a housing, cover, and screw bosses.  
One mounting kit is required per lamp.



Plastic screw caps

MOUNTING KIT		
Part Number	Colour	Quantity
9.2559.09	BLACK	SINGLE
9.2559.19	WHITE	

MOUNTING SPACER AND EXTENDED SCREW BOSSES		
9.2559.08	BLACK	SINGLE

BLACK PLASTIC SCREW CAPS		
9.5240.30		50 PACK

### Surface Mount Strip Lamp Screw Caps



Part Number	Colour	Quantity
9.2652.09	WHITE	PACK OF 4
9.1009.09	CHARCOAL	

### Marker and Courtesy Lamp Gaskets

Gaskets for narrow and wide rim LED courtesy lamps. Curved mount gasket (P/N 9GD 959 515-207) is designed to suit 64mm (2.5") pipes. Flexibility allows this particular gasket to suit a variety of curve radii.



P/N 9GD 959 515-127 (Rubber)



P/N 9GD 959 517-007 (Foam)

NARROW RIM (LAMP WIDTH 22MM)		
Part Number		Quantity
9GD 959 515-127		PACK OF 4
9GD 959 515-207 (Curved mount)		



P/N 9GD 959 515-207

WIDE RIM (LAMP WIDTH 29MM)		
9GD 959 517-007		PACK OF 4

### Strip Lamp Gaskets

Gaskets for narrow and wide rim strip lamps.



P/N 9.5243.05 (Rubber)



P/N 9GD 959 155-507 (Foam)

NARROW RIM (LAMP WIDTH 26MM)		
Part Number		Quantity
9.5243.05		SINGLE

WIDE RIM (LAMP WIDTH 33MM)		
9GD 959 155-507		PACK OF 10



DESIGN RING FOR 60MM MODULES (OPTIONAL)	
Part Number	Colour
9HB 161 122-007	SILVER

MOUNTING PLATE	
Part Number	Colour
9XD 161 119-007	BLACK

TWO POLE PLUG (WITH TERMINALS AND SEALS)	
Part Number	
8JD 156 150-807	

THREE POLE PLUG (WITH TERMINALS AND SEALS)	
Part Number	
8JD 162 581-802	

DESIGN RING FOR LED RING LAMP (OPTIONAL)	
Part Number	Colour
9HB 163 085-012	CHROME

## 60mm Accessories

Accessories to suit 60mm lamps.



P/N 9HB 161 122-007  
Pushes over front of 60mm lamp and locks into place.



P/N 9XD 161 119-007  
For front mounting of 60mm lamps.



P/N 8JD 156 150-807



P/N 9HB 163 085-012  
Design ring pushes over front of 112mm lamp and locks into place.



# LED Safety DayLights™

Safety DayLights™ are signal lamps that significantly enhance the visibility of your vehicle during daylight hours to prevent vehicle crashes by 'accidental oversight'.



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# HELLA LED SAFETY DAYLIGHTS™

## BE SAFE BE SEEN

Failure to see another road user in time (or at all) is a contributing factor in over 50% of all daytime accidents. For daytime intersection accidents this increases to as much as 80%.

Source: The Safety Effects of Daytime Running Lights, SWOV, 1997

### Why Install HELLA Safety DayLights™?

You might ask yourself "can't I just switch on my headlamps?", since the use of dipped beam headlamps during daylight hours has long been promoted as a Road Safety Initiative around the country.

Dipped beam headlamps are designed to effectively light up the road in front of the vehicle during darkness, whilst causing as little glare as possible to oncoming traffic.



Hence during daytime, dipped beam headlamps 'waste' most of their light directed to the road in front of the vehicle but provide very little as a signal to other road users in bright daylight. Using your Dipped Beam Headlamps during daylight hours has only a marginal added safety effect.

Safety DayLights™ on the other hand are designed to significantly enhance the conspicuity of your vehicle during daylight hours because precision optics direct all the light towards the other road users.

### HELLA LED Safety DayLights™

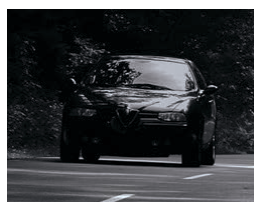
Safety DayLights™ are forward facing signal lamps that significantly enhance the visibility of your vehicle during daylight hours to prevent vehicle crashes by 'accidental oversight'.

As road users we have all experienced the 'fright second' of a near miss by being overlooked by another car, van or truck.

Equally frightening is almost not noticing another vehicle approaching due to an inconspicuous vehicle colour, the low sun casting harsh shadows or sun strike.

Any single one of these 'fright seconds' has the potential to end in a tragic outcome and become a number in the road toll statistics.

Safety DayLights™ are a "never forget" safety enhancement. They automatically switch ON when the ignition is switched ON and automatically switch OFF when the headlamps are turned ON in order not to dazzle other road users at night.



Headlamps Off



Low Beam Headlamps



HELLA LED Safety DayLights™

#### Low Beam Headlamps

approx 200cd at driver's sight of vision

Designed to light the road at night without causing glare to other road users.

#### HELLA LED Safety DayLights™

minimum legal requirement of 800cd

Designed to increase the visibility (conspicuity) of your vehicle during daylight hours.





# SETTING A STANDARD IN ROAD SAFETY

New Zealand's extensive roading network is used by millions of Kiwis every day. Statistically the risk of being harmed in a road accident is one of the highest severe injury risks we face every day.

Data from New Zealand's Ministry of Transport shows that thousands of crashes occur each year resulting in injury and fatalities. In 2012 there were 201 fatalities on our roads as well as 31,691 traffic related ACC claims.

The economic cost of road accidents to New Zealand has been calculated at some 3.14 Billion Dollars in 2011\*, the majority occurring during daylight hours when visibility and conspicuity should be at its peak.

\*source: Motor Vehicle Crashes in New Zealand. Ministry of Transport, 2011, 2012 / ACC Claims Statistic 2012.

## Worldwide Studies

The effectiveness of Safety DayLights™ (DRLs) has been studied extensively worldwide and their mandatory use being adopted into legislation in most European countries.

## Benefits of LED Safety DayLights™

- Low power consumption.
- Advanced UV resistant material.
- 5 year warranty.
- Approved for use in New Zealand and Australia.



P/N 5636 shown.

## SAFETY DAYLIGHTS™ SMART CONTROLLER DESIGNED TO SIMPLIFY INSTALLATION

HELLA's Safety DayLights™ Smart Controller is designed to simplify the installation of Safety DayLights™ by eliminating the need to connect the lamp, or changeover relay, to ignition terminal 15. The vehicle's ignition feed is typically used as a signal to turn Safety DayLights™ ON. Correctly identifying terminal 15 (Ignition) in the engine bay can be a difficult task on some vehicles, requiring specialised tools and in some cases the only solution is to route the wiring back through the fire wall into the vehicle cabin. This procedure can greatly increase the time and cost it takes to install Safety DayLights™. It can also be a daunting experience for the DIY-er not familiar with the electronic complexity of the modern vehicle.

The Safety DayLights™ Smart Controller reduces the installation complexity as it is directly connected to the positive terminal of the battery where it will sense that the vehicle engine has been activated.

The Safety DayLights™ Smart Controller uses advanced electronics that constantly monitor the voltage of the battery and other tell tale signs that the engine has been started. It will automatically switch the Safety DayLights™ ON. It will deactivate the Safety DayLights™ when the headlamps are turned ON or the engine is turned OFF (after a small delay).

# MINIMISING ENVIRONMENTAL IMPACT

HELLA LED Safety DayLights™ are a durable, environmentally-friendly investment into road safety.

## Energy Efficiency

HELLA LED Safety DayLights™ use less than 5 watts per pair, equating to 95% less energy than the Dipped Headlamps of your vehicle.

**Q:** Why is a safer light using so much less energy?

**A:** LED Safety DayLights™ are designed to direct light at other road users and not onto the road in front of the vehicle as Dipped Beam Headlamps do.

**Q:** Will this save me petrol compared to using my headlamps?

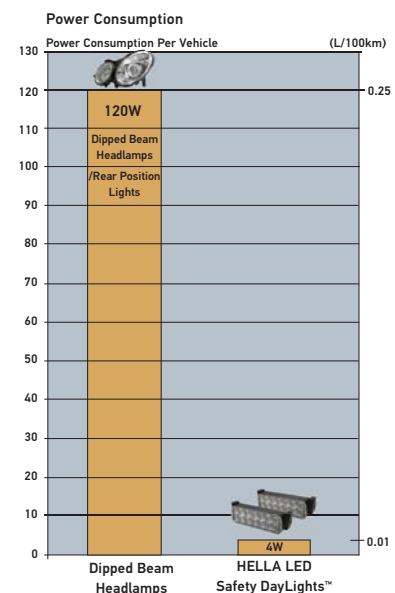
**A:** Studies have shown that the average family car will save as much as 0.2 litres of petrol per 100km. For the entire New Zealand fleet this equates to a reduced environmental impact of over 100,000 tons per year of CO<sub>2</sub> emissions.

**Q:** What about my headlamp bulbs?

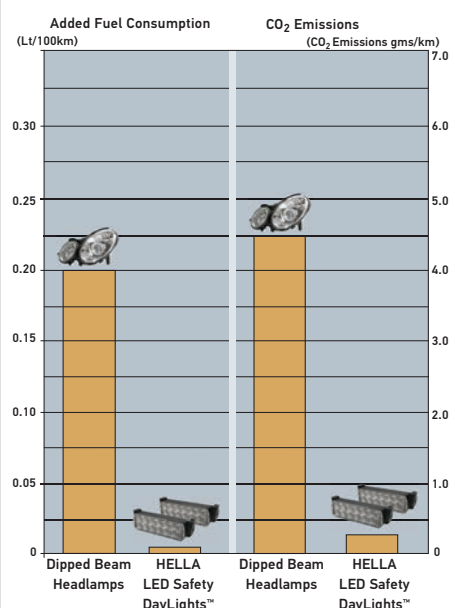
**A:** Using highly effective Safety DayLights™ instead of your Dipped Beam Headlamps, will of course also extend the life of your valuable headlamp bulbs.



## Dipped Headlamps Versus High Efficacy LED Safety DayLights™



## Power and Fuel Consumption and CO<sub>2</sub> Emissions

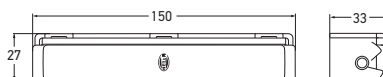


## LED Safety DayLights™ Kit - Easy-Fit

Forward facing signal lamps, designed to be mounted on vehicles with flat fronts, or on motorbikes. The lamps are an Easy-Fit installation, usually requiring no extra parts. Once the wiring is complete and the bracket is fitted, the LED lamp easily clips into place and installation is complete.



P/N 5636-BL



Part Number	5636	12 VOLT
	5636-BL (Blister pack)	
	5636-24V	24 VOLT
Mounting	Suitable for horizontal mounting.	
Power Consumption	2W	
Protection	Reverse polarity protection. IP 6K7 (Protection against dust and temporary water immersion) IP 6K9K (Protection against dust and high-pressure/steam jet cleaning)	
Cable Length	Pre-wired with 2.5m of sheathed multi-core cable.	
Spare Parts	1013 1013-24V	Single lamp 12V Single lamp 24V
Lens Material	High impact acrylic.	
Compliance	ADR 76/00    E24 5875    ECE R87/00	
Kit Contents	2 x LED Safety DayLights™ 2 x Mounting brackets 1 x Changeover relay 1 x Instruction sheet	

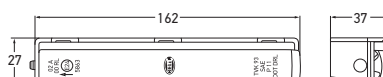
See page 83 for front position relay option.

## LED Safety DayLights™ Kit - 15°

A lens angle of 15 degrees allows installation as close as possible to the corners of a modern motor vehicle. These lamps were designed to fit the curved bumpers of modern vehicles to give the look of Original Equipment fitment. The lamps have extremely low power consumption at 2W per lamp and high impact acrylic lenses to protect against impact damage.



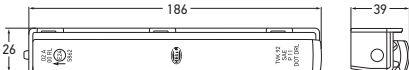


P/N 5630-BL



Part Number	5630	12 VOLT
	5630-BL (Blister pack)	
	5630-24V	24 VOLT
	5630-24VBL (Blister pack)	
Mounting	Suitable for horizontal mounting.	
Power Consumption	2W	
Protection	Reverse polarity protection. IP 6K7 (Protection against dust and temporary water immersion) IP 6K9K (Protection against dust and high-pressure/steam jet cleaning).	
Cable Length	Pre-wired with 2.5m of sheathed multi-core cable.	
Lens Material	High impact acrylic.	
Compliance	E24 5863                      ECE R87/00	
Kit Contents	2 x LED Safety DayLights™ 2 x Mounting brackets 1 x Changeover relay 1 x Instruction sheet	

See page 83 for front position relay option.





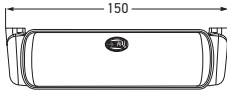
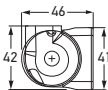

				
Part Number	5631		12 VOLT	
	5631-BL (Blister pack)			
	5631-24V			
Mounting	Suitable for horizontal mounting.			
Power Consumption	2W			
Protection	Reverse polarity protection. IP 6K7 (Protection against dust and temporary water immersion) IP 6K9K (Protection against dust and high-pressure/steam jet cleaning).			
Cable Length	Pre-wired with 2.5m of sheathed multi-core cable.			
Lens Material	High impact acrylic.			
Compliance	E24 5862 ECE R87/00			
Kit Contents	2 x LED Safety DayLights™ 2 x Mounting brackets 1 x Changeover relay 1 x Instruction sheet			
See page 83 for front position relay option.				

## LED Safety DayLights™ Kit - 30°

A lens angle of 30 degrees allows installation as close as possible to the corners of a modern motor vehicle. These lamps were designed to fit the curved bumpers of modern vehicles to give the look of Original Equipment fitment. The lamps have extremely low power consumption at 2W per lamp and high impact acrylic lenses to protect against impact damage.



P/N 5631-BL

					
Part Number	5617				
	5617-OE				
Mounting	Suitable for horizontal mounting.				
Voltage	Multivolt™ for optimum brightness at input voltages from 9 to 33 volts.				
Power Consumption	<2W each				
Protection	Reverse polarity and transient spike circuit protection. IP 6K7 (Protection against dust and temporary water immersion) IP 6K9K (Protection against dust and high-pressure/steam jet cleaning)				
Spare Part	1004	Single lamp (with 0.5m of multi-core cable)			
Cable Length	5617	Pre-wired with 0.5m of multi-core cable.			
	5617-OE	Pre-wired with 2.5m of multi-core cable.			
Lens Material	Grilamid®				
Compliance	ADR 76/00		ECE R87/00		
Kit Contents	P/N 5617 kit contains: 2 x LED Safety DayLights™ 1 x Professional wiring harness and super seal connectors 4 x Mounting brackets 1 x Instruction sheet		P/N 5617-OE kit contains: 2 x LED Safety DayLights™ with 2.5m sheathed multi-core cable. 4 x Mounting brackets 1 x Instruction sheet		

LED Safety DayLights™ Kit  
- Rectangular

Rectangular shaped ultra light lamps offering maximum visibility in road traffic during the day. Features lightweight housing, universal mounting bracket and ultra-durable Grilamid® nylon lens for extreme impact, UV and chemical resistance. Easy wiring requiring only 3 connections, earth (-), ignition (+) and position lamps (+).

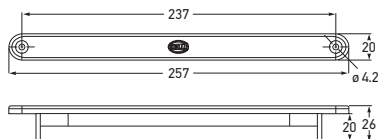
P/N 5617  
Wiring harness and  
super seal connectors.

P/N 5617

P/N 5617-OE

## LED Safety DayLights™ Kit - Recess Mount

Recess mount strip lamp, flush mounted for a professional finish. Features low power consumption, reverse polarity protection, and a durable Grilamid® lens to protect against impact damage.



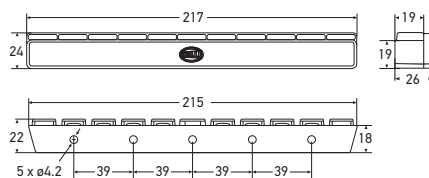
Part Number	5618	12 VOLT
	5618-24V	24 VOLT
Mounting	Two hole recess mount. Suitable for horizontal mounting.	
Power Consumption	2W	
Protection	Reverse polarity protection. IP 6K7 (Protection against dust and temporary water immersion) IP 6K9K (Protection against dust and high-pressure/steam jet cleaning)	
Cable Length	Pre-wired with 2.5m of multi-core cable.	
Spare Parts	1005 Single lamp 12V 1005-24V Single lamp 24V	
Lens Material	Grilamid®	
Compliance	(E24) 0001 ECE R87/00	
Kit Contents	2 x LED Safety DayLights™ 1 x Changeover relay 1 x Instruction sheet	

## LED Safety DayLights™ - Compact Mount

Strip lamp which clips into a separate mounting bracket for ease of installation. This lamp is ECE certified and is supplied with a mounting bracket and screws. The lens is made of durable Grilamid® to protect against impact damage, and the lamps feature reverse polarity protection.


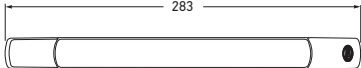




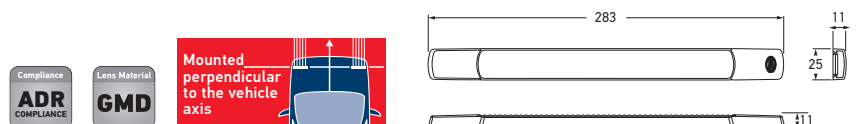
Mounting bracket



Part Number	1008	12 VOLT
	1008-24V	24 VOLT
Mounting	Suitable for horizontal mounting.	
Power Consumption	2W	
Protection	Reverse polarity protection. IP 6K7 (Protection against dust and temporary water immersion) IP 6K9K (Protection against dust and high-pressure/steam jet cleaning)	
Cable Length	Pre-wired with 2.5m of sheathed multi-core cable.	
Lens Material	Grilamid®	
Compliance	(E24) 0001 ECE R87/00	



<div><div><div>Compliance</div><div>ADR COMPLIANCE</div></div><div><div>Lens Material</div><div>GMD</div></div></div> <div><div>Mounted perpendicular to the vehicle axis</div><div></div></div>		<div><div></div><div></div></div>	
Part Number	5619 (Horizontal mount)	12 VOLT	
	5619-24V (Horizontal mount)	24 VOLT	
	5619V (Vertical mount)	12 VOLT	
	5619V-24V (Vertical mount)	24 VOLT	
Power Consumption	3W		
Protection	Reverse polarity protection. IP 6K7 (Protection against dust and temporary water immersion) IP 6K9K (Protection against dust and high-pressure/steam jet cleaning)		
Cable Length	Pre-wired with 2.5m of sheathed multi-core cable.		
Spare Parts	1009 1009-24V 1009V 1009V-24V 9.2652.09 9.1009.09	Single lamp 12V (Horizontal mount) Single lamp 24V (Horizontal mount) Single lamp 12V (Vertical mount) Single lamp 24V (Vertical mount) White screw caps (Pack of 4) Charcoal screw caps (Pack of 4)	
Lens Material	Grilamid®		
Compliance	ADR 76/00	 5869	ECE R87/00
Kit Contents	2 x LED Safety DayLights™ 4 x Mounting screws 4 x Screw caps 1 x Changeover relay 1 x Instruction sheet		
See page 83 for front position relay option.			



### LED Safety DayLights™ Kit - Surface Mount

Surface mount LED Safety DayLights™ designed to fit flat-fronted vehicles. Comes either as a single lamp, or as a kit. The lamp is ADR compliant and features a Grilamid® lens to protect against impact damage.



Ultra slim height of only 11mm. Lamp shown active.

Part Number	1003
	Mounting
	Two hole recess mount with mounting bushes supplied. Suitable for horizontal mounting.
	Voltage
	Multivolt™ for optimum brightness at input voltage from 9 to 33 volts.
Power Consumption	3W
Protection	Reverse polarity and transient spike circuit protection. IP 6K6 (Protection against dust and high-pressure water jets) IP 6K7 (Protection against dust and temporary water immersion)
Cable Length	Pre-wired with 2.5m of sheathed multi-core cable.
Lens Material	Grilamid®
Compliance	ADR 76/00
See page 66 for DuraLED® accessories.	



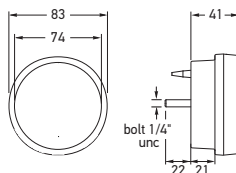
### DuraLED® Safety DayLights™

LED DuraLED® Safety DayLights™ for trucks, commercial vehicles and buses.



## 83mm Round LED Safety DayLights™

This LED lamp features an integrated Safety DayLight™ and front position function. The lamp features a traditional round lens that illuminates with a distinctive ring of white LEDs when used as a Safety DayLight™.



## 83MM LAMP FUNCTIONS

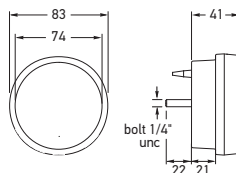
LED Safety  
DayLights™Front position  
(P/N 1007-24V only)

Part Number	1006	12 VOLT
	1007-24V (Includes front position lamp)	24 VOLT
Mounting	Flush mount. Single bolt 1/4" stainless UNC thread. Nut and washer supplied.	
Power Consumption	Safety DayLights™: 4W Front position: 1W (P/N 1007-24V only)	
Protection	Reverse polarity and transient spike circuit protection. IP 6K7 (Protection against dust and temporary water immersion) IP 6K9K (Protection against dust and high-pressure/steam jet cleaning)	
Cable Length	Pre-wired with 2.5m of sheathed multi-core cable.	
Lens Material	Grilamid®	
Compliance	E24 5854	ECE R87/00 ECE R7/02 (1007-24V)

See page 69 for mounting accessories.

## 83mm Round LED Safety DayLights™/Front Position/ Front Direction Indicator Lamp

This LED combination lamp features an integrated Safety DayLight™, front position and front direction indicator function. The lamp features a traditional round lens that illuminates with a distinctive ring of white LEDs when used as a Safety DayLight™. This lamp eliminates the need for installation of multiple lamps.



## 83MM LAMP FUNCTIONS

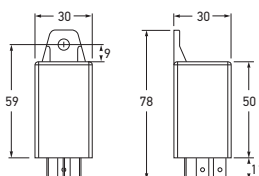
LED Safety  
DayLights™

Front position

Front direction  
indicator

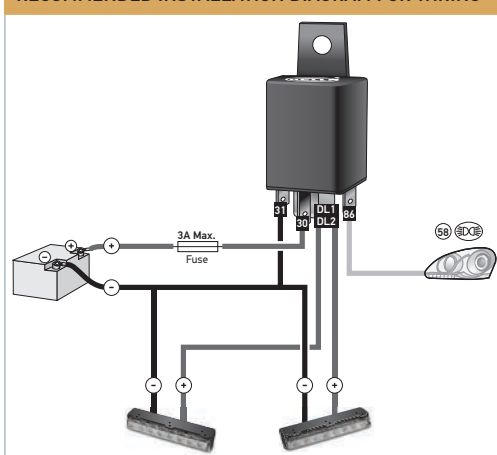
Part Number	2108-GMD	12 VOLT												
	2108-GMD24V	24 VOLT												
Mounting	Flush mount. Single bolt 1/4" stainless UNC thread. Nut and washer supplied.													
Power Consumption	<table border="1"> <thead> <tr> <th></th><th>P/N 2108-GMD</th><th>P/N 2108-GMD24V</th></tr> </thead> <tbody> <tr> <td>Safety DayLights™:</td><td>3W</td><td>4W</td></tr> <tr> <td>Front position:</td><td>1W</td><td>1W</td></tr> <tr> <td>Front indicator:</td><td>4W</td><td>4W</td></tr> </tbody> </table>			P/N 2108-GMD	P/N 2108-GMD24V	Safety DayLights™:	3W	4W	Front position:	1W	1W	Front indicator:	4W	4W
	P/N 2108-GMD	P/N 2108-GMD24V												
Safety DayLights™:	3W	4W												
Front position:	1W	1W												
Front indicator:	4W	4W												
Protection	Reverse polarity and transient spike circuit protection. IP 6K7 (Protection against dust and temporary water immersion) IP 6K9K (Protection against dust and high-pressure/steam jet cleaning)													
Cable Length	Pre-wired with 2.5m of sheathed multi-core cable.													
Lens Material	Grilamid®													
Compliance	ADR 6/00: Cat 1a ECE R6/01	ADR 49/00 ECE R7/02 ADR 76/00 ECE R87/00 E24 5854												

See page 69 for mounting accessories.



Part Number	3090
Voltage	Multivolt™, suitable for 12 and 24 volt systems.
Maximum Continuous Load	20W
To Suit	HELLA LED Safety DayLights™ range.
Features a Safety DayLights™ OFF delay of approximately 10 seconds.	

## RECOMMENDED INSTALLATION DIAGRAM FOR WIRING



## WIRING SPECIFICATIONS

Terminal Number	Connect to
30	Battery (+)
31	Earth return (-)
86	Front position or headlamps (+)
DL1 & DL2	Safety DayLights™ (+)

## Safety DayLights™ Smart Controller

This smart controller is designed to simplify the installation of HELLA's LED Safety DayLights™ range by eliminating the need to wire the lamp, or changeover relay to ignition terminal 15.

The Safety DayLights™ Smart Controller can be wired directly to the positive terminal of the battery, which saves the difficult and often time consuming task of finding the ignition feed. The smart controller monitors the voltage supply from the battery and will automatically switch the Safety DayLights™ ON when the engine is started, and automatically switch them OFF when the headlamps are activated, or the engine is turned OFF.

Safety DayLights™ Smart Controller may not function on hybrid vehicles or vehicles with stop/start systems.

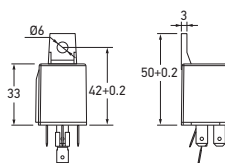


## Dual Function Safety DayLights™ Controller

This controller is designed to turn your HELLA Safety DayLights™ into front position lamps at night. The dual function controller is connected and activated by the headlamp of the vehicle.

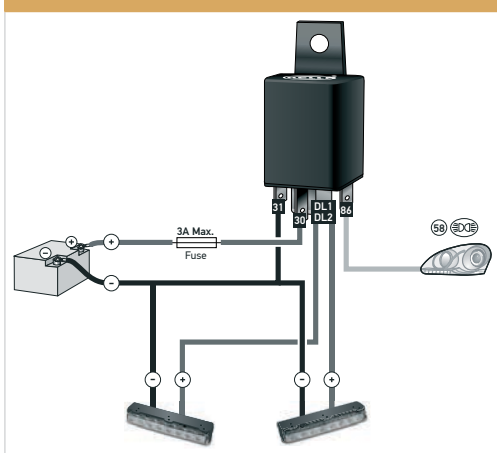
The dual function controller reduces the current to the Safety DayLights™ thus turning them into road legal\* front position lamps. Only one controller is required for a pair of HELLA Safety DayLights™.

\* Please note legally required spacing of front position lamps and only one pair of front position lamps is legally permitted.



Part Number	9.5630.03	12 VOLT
	9.5636.03	
	9.5630.04	
	9.5636.04	24 VOLT
To Suit	P/N 9.5630.03 P/N 9.5636.03 P/N 9.5630.04 P/N 9.5636.04	P/Ns 1009, 5619, 5630, 5631 P/N 5636 P/Ns 1009-24V, 5619-24V, 5630-24V, 5631-24V P/N 5636-24V

## RECOMMENDED INSTALLATION DIAGRAM FOR WIRING



## WIRING SPECIFICATIONS

Terminal Number	Connect to
30	Ignition (+)
85	Earth return (-)
86	Front position or headlamps (+)
87A	Safety DayLights™ (+)







# Headlamps and Inserts

HELLA has manufactured headlamp systems for more than 100 years. The durability and reliability of HELLA products has made HELLA a world leader in headlamp technology.



# Contents

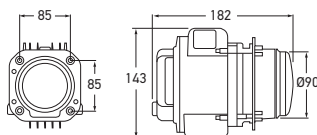
## Headlamps and Inserts

90mm Universal Headlamps .....	86-87
Semi Sealed Headlamps and Housings	
- 7" Round .....	88-89
Semi Sealed Headlamps - 5 ¾" Round .....	90-91
Semi Sealed Headlamps and Housings	
- Rectangular .....	92-93
BMW 3 Series Lamps .....	94
BMW 3 and 5 Series Lamps .....	95
BMW 5 Series Lamps .....	96
BMW 3, 5, and 7 Series Headlamps .....	97
Universal Headlamps/VW Golf MK III-MK IV .....	98
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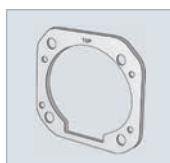


## Bi-LED 90mm Premium LED Module - 12/24 Volt

LED dipped/main beam headlamp featuring a generous spread of light and strong main beam for the open road. Low power consumption and ultra long life equates to economical running costs compared to a bulb lamp. Exceptional white light output and extremely homogeneous illumination for reduced driver strain which means greater safety.



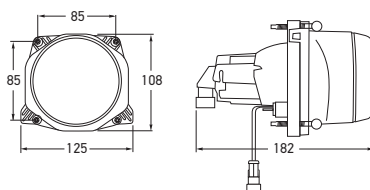
Part Number	1032	
Voltage	Multivolt™ for optimum brightness in 12 and 24 volt systems.	
Power Consumption	Dipped beam:	30W
	Main beam:	60W
Spare Parts	9.1029.11 4983	Mounting frame 3 pole super seal plug set
Compliance	(E1) 3159	(E1) 6189



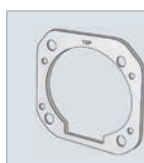
P/N 9.1029.11

## H7 Bi-Halogen Headlamp

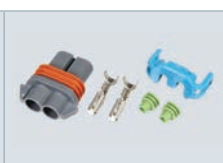
Compact H7 dipped/main beam headlamp. Pattern-free hardened glass lens and Free-Form (FF) cast aluminium reflector. Excellent light output and extremely homogeneous illumination with virtually no scatter. Straight-forward installation with 3 pre-mounted adjustment screws on the vehicle body.



Part Number	1LL 009 998-011		12 VOLT
	1LL 009 998-051		24 VOLT
Bulbs to Suit	12V 24V	CA1255 CA2470	
Spare Parts	9.1029.11 9.1534.05	Mounting frame Bulb connector	
Compliance	(E1) 2484		



P/N 9.1029.11



P/N 9.1534.05

## Headlamp Adjusters

Adjuster to suit 90mm headlamps.



Part Number	15297700 (Pack of 3)		H7 HEADLAMPS
	25416300 (Pack of 3)		H1 HEADLAMPS
To Suit	P/N 15297700 P/N 25416300	H7 P/Ns 1029-24V and 1030-24V P/Ns 1029H1-24V and 1030H1-24V	



P/N 25416300

HEADLAMPS AND INSERTS

Certified

ECE

CERTIFIED

Bulb Included

24V

BULB INC

85

114

85

160

92

90

P/N 1029H1-24V

113

85

85

96

113

90

P/N 1030H1-24V

Part Number	1029H1-24V	DIPPED BEAM	
	1030H1-24V	MAIN BEAM	
Bulbs to Suit	Dipped/Main beam:	12V	24V
	Position:	C1255 HL124	C2470 HL244
Spare Parts	9GH 152 654-007	Rear cap	
	8JD 156 150-807	Two pole plug with terminals and seals	
	9.1029.10	Mounting frame	
Compliance	(E) 2397		

H1 Headlamp - 24 Volt

H1 headlamps with die cast aluminium reflector and hardened glass lens.



Certified

ECE

CERTIFIED

Bulb Included

24V

BULB INC

103

85

119

85

165

151

90

1029-24V

103

85

85

120

104

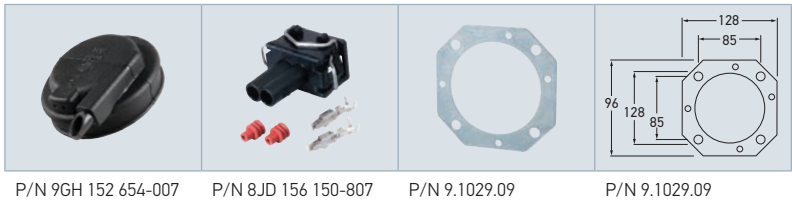
90

1030-24V

Part Number	1029-24V	DIPPED BEAM	
	1030-24V	MAIN BEAM	
Bulbs to Suit	Dipped/Main beam:	12V	24V
	Position:	CA1255 HL124	CA2470 HL244
Spare Parts	9GH 152 654-007	Rear cap	
	8JD 156 150-807	Two pole plug with terminals and seals	
	9.1029.09	Mounting frame	
Compliance	(E) 917		

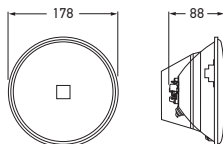
H7 Headlamp - 24 Volt

Compact H7 headlamps with glass lens for buses, coaches and mobile homes. Includes headlamp adjusters.



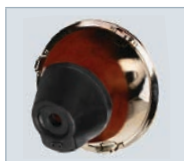
**178mm H4 Halogen  
High/Low Beam Insert**

Semi-sealed headlamp with sealing cap.



Part Number	1056		
Bulbs to Suit	Headlamp:	12V XD1260/55	24V XD2475/70
Compliance	E4 53		

Where front position lamp is required, use P/N 1058.



Rear view

**178mm H4 Halogen  
High/Low Beam Insert**

Semi-sealed headlamp with front position lamp bulb holder (includes P/N HL124 bulb) and sealing boot.



Part Number	1058		
Bulbs to Suit	Headlamp:	12V XD1260/55	24V XD2475/70
	Front position:	HL124	HL244
Compliance	E4 53		



Rear view

**178mm H4 Halogen High/Low  
Beam Insert - Hardened Glass**

High performance Halogen headlamp insert fitted with extremely robust hardened glass lens providing maximum resistance when subjected to high operating temperatures and thermal shock. Ideal for 24 volt and high wattage bulb applications. Supplied complete with sealing boot and front position lamp bulb holder assembly.



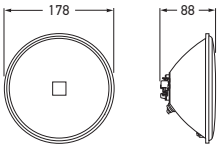
Part Number	1058HD		
Bulbs to Suit	Headlamp:	12V XD1260/55	24V XD2475/70
	Front position:	HL124	HL244
Compliance	E4 53		



Rear view



Part Number	9.1358.01	
Bulbs to Suit	12V	YC1255
	24V	YC2470
Compliance	E1 14529	



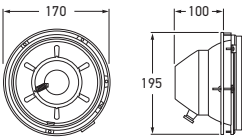
178mm Halogen Driving Lamp Insert

Suitable for use as high beam headlamp in most 178mm round headlamp carriers (eg. P/N 1016).



HEADLAMPS & INSERTS

Part Number	1016	HEADLAMP HOUSING
	1017	CHROME RIM



178mm Headlamp Housing

Headlamp housing and chrome rim for halogen or conventional sealed beams and inserts 178mm in diameter. Fully sealed steel cowl, complete with adjusting mechanism for vertical and horizontal alignment, sealing gasket, stainless steel retaining rim and 3 pin wiring harness with separate park lamp connection. Ideal for truck, bus or body builders. Suits Mercedes, Kenworth, Mack, White etc. Outer chrome rim (P/N 1017) to suit headlamp housing P/N 1016.

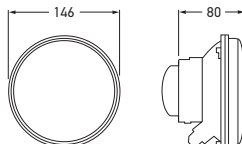


P/N 1016  
Headlamp housing

P/N 1017  
Chrome rim

### 146mm H4 Halogen High/Low Beam Insert

Semi-sealed headlamp with front position lamp bulb holder (includes P/N HL124 bulb) and sealing boot. Suitable for dual headlamp systems.



Part Number	1055		
Bulbs to Suit		12V	24V
	Headlamp:	XD1260/55	XD2475/70
	Front position:	HL124	HL244
Spare Parts	13839700	Front position bulb holder	
	9GH 126 647-011	Sealing boot	
Compliance	(E1) 17031		



Rear view

Sealing boot

### 146mm H4 Halogen High/Low Beam Insert - Hardened Glass

High performance Halogen headlamp insert fitted with extremely robust hardened glass lens, providing maximum resistance when subjected to high operating temperatures and thermal shock. Ideal for 24 volt and high wattage bulb applications. Supplied complete with sealing boot and front position lamp bulb holder assembly.



Part Number	1055HD		
Bulbs to Suit	Headlamp:	12V	24V
	Front position:	XD1260/55 HL124	XD2475/70 HL244
Compliance	(E1) 17031		



Rear view

### 146mm H1 Halogen Low Beam Insert

Low beam insert with front position lamp bulb holder and sealing boot. Suitable for dual headlamp systems.

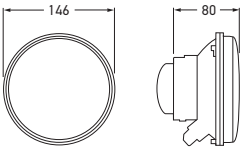


Part Number	1054		
Bulbs to Suit		12V	24V
	Headlamp:	C1255	C2470
	Front position:	HL124	HL244
Spare Part	9GH 113 763-001	Sealing boot	
Compliance	(E1) 7076		



Rear view





146mm H1 Halogen  
High Beam Insert

Semi-sealed headlamp, for high beam section of dual headlamp systems with sealing boot.



Part Number	1053		
Bulbs to Suit	Headlamp:	12V C1255	24V C2470
Spare Part	9GH 113 763-001	Sealing boot	
Compliance	(E1) 14464		
Earth terminal is a 'Post' (bullet) type connection.			



Rear view

Sealing boot

146mm H1 Halogen  
Long Range Driving Insert

Semi-sealed headlamp, for high beam section of dual headlamp systems and sealing boot.



Part Number	1040		
Bulbs to Suit	Headlamp:	12V	24V
		C1255	C2470
Spare Part	9GH 113 763-001	Sealing boot	

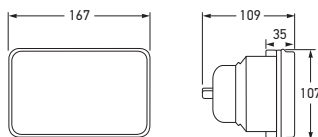


Rear view

Sealing boot

**165 x 100mm H4 Halogen High/Low Beam Insert**

Semi-sealed headlamp and front position lamp with sealing boot.



Part Number	1044		
Bulbs to Suit		12V	24V
	Headlamp:	XD1260/55	XD2475/70
	Front position:	HL124	HL244
Spare Part	9FF 126 444-001	Front position bulb holder	
Compliance	Ⓔ 7197		



Rear view

**165 x 100mm H4 Halogen High/Low Beam Insert**

Semi-sealed headlamp with sealing boot and wiring adaptor.



Part Number	1042		
Bulbs to Suit	Headlamp:	12V XD1260/55	24V XD2475/70
Spare Part	9GH 126 647-011	Sealing boot	
Compliance	(E) 7197		



Rear view



Sealing boot

**165 x 100mm H1 Halogen High Beam Insert**

Semi-sealed headlamp with sealing cap.



Part Number	1041		
Bulbs to Suit	Headlamp:	12V C1255	24V C2470
Compliance	(E1) 24504		



Rear view



Part Number	1043		
Bulbs to Suit	Headlamp:	12V	24V
	Front position:	XD1260/55 HL124	XD2475/70 HL244
Spare Parts	13839700 96H 126 647-011	Front position bulb holder Sealing boot	
Compliance	(E1) 17009	(E1) 17119	

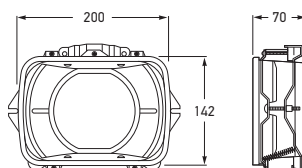
### 200 x 142mm H4 Halogen High/Low Beam Insert

Semi-sealed headlamp with front position lamp bulb holder (includes P/N HL124 bulb).



Rear view

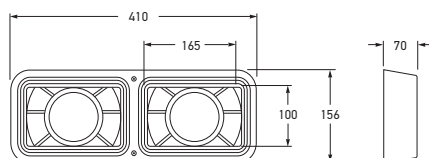
Sealing boot



### Rectangular Headlamp Housing

Suits 200 x 142mm rectangular headlamp units (P/N 1043). Ideal for truck, bus or body builders.

Part Number	1024		
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### Twin Rectangular Headlamp Housing

For most 165 x 100mm rectangular headlamp units. Chrome plated outer rim. Complete with adjusting mechanisms for vertical/horizontal alignment and wiring loom. Ideal for truck, bus or body builders.

Part Number	1025		
Spare Part	9.1025.07	Chrome plated outer rim	



### 3-Series (E36) Compact 03/94 - 08/00



Part Number	HEADLAMP (HB3/HB4) WITH ELECTRIC LEVELLER	
	1LJ 007 143-051	LH
	1LJ 007 143-061	RH
Bulbs to Suit	Dipped beam: CC1255 Main beam: CB1265 Position: W125	
Spare Parts	9ES 145 251-005 Cover lens LH 9ES 145 252-005 Cover lens RH	
Compliance	LH (E) 80 RH (E) 81	

### 3-Series (E36) 09/90 - 09/94



Part Number	HEADLAMP (H1)	
	1AL 007 045-011	LH
	1AL 007 045-021	RH
Bulbs to Suit	Headlamp: C1255 x 2 Position: W125	
Compliance	(E) 8026	

### 3-Series (E36) 12/90 - 08/00



Part Number	FOG LAMP (H1)	
	1NB 006 270-051	LH
	1NB 006 270-061	RH
Bulb to Suit	C1255	
Compliance	(E) 18236	

## 3-Series (E46) 02/98 - 09/01



Part Number	FOG LAMP (HB4)	
	1ND 007 646-011	LH
	1ND 007 646-021	RH
Bulb to Suit	CC1255	
Compliance	E13 305	



## 5-Series (E60) 07/03 - 12/04

BMW 5-Series E60/E61 headlamp featuring Bi-Xenon® and Celis technology.



Part Number	HEADLAMP (BI-XENON®)	
	1LL 160 695-001	LH
	1LL 160 696-001	RH
Bulbs to Suit	Dipped Beam:	D2S
	Main beam:	CA1255
	Indicator:	RY1221
Compliance	E1 1490	E1 1491



## 5-Series (E60) 07/03 - 03/07

Clear lens style tail lamps. Includes two tail lamp assemblies with instructions.



Part Number	2SK 008 679-811	SET
Compliance	E4 10139	





## 5-Series (E39) 09/00 - 06/04



HEADLAMP (H7/H7) WITH ELECTRIC LEVELLER		
Part Number	1LL 008 053-591	LH
	1LL 008 053-601	RH
Bulbs to Suit	Headlamp: CA1255 x 2 Indicator: RY1221 Position: YL1210	
Spare Part	9DX 153 746-011	Position lamp bulb holder
Compliance	(E1) 1182	

## Headlamp Adaptor Lead Set

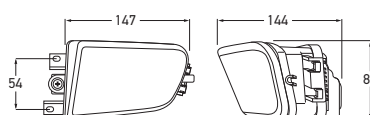
To adapt headlamp P/Ns 1LL 008 053-591/-601 to E39 from 12/95 to 09/00. One set required per car.



Part Number	8KB 157 198-801	SET
-------------	-----------------	-----

## 5-Series (E39) 09/97 - 08/00

Front fog lamps with H7 bulbs and Free-Form (FF) reflector.



FOG LAMP (H7)		
Part Number	1NA 009 026-011	LH
	1NA 009 026-021	RH
Bulb to Suit	CA1255	
Compliance	(E12) 19094	

## 5-Series (E39) 11/95 - 08/00

Innovative combination rear lamp with a brilliant appearance using the Celis light guide technology for the tail light function. The position light is produced by 8 red LEDs arranged in horizontal light guide strips.



Part Number	2VP 008 272-861	SET
Bulbs to Suit	Stop: R1221 Indicator: RY1221	
Compliance	(E1) 1070	(E1) 1071

5-Series (E34) 09/88 - 03/97  
and 7-Series (E32) 09/88 - 05/94



Part Number	DIPPED BEAM LENS	MAIN BEAM (H1)	
	9BG 135 927-011	1K3 132 253-011	LH
	9BG 135 928-011	1K3 132 266-011	RH
Bulb to Suit	C1255		
Compliance	Dipped beam: (E) 7407 Main beam: (E) 34572		



3-Series (E30) 01/83 - 08/87



Part Number	MAIN BEAM (H1)	
	1K3 126 046-001	LH
	1K3 126 680-001	RH
Bulb to Suit	C1255	
Compliance	(E) 14464	



3-Series (E30) 09/88 - 06/94

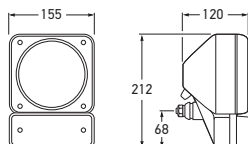


Part Number	DIPPED BEAM LENS	MAIN BEAM (H1)	
	9BG 135 941-011	1K3 134 855-011	LH
	9BG 135 942-011	1K3 134 856-011	RH
Bulb to Suit	C1255		
Compliance	Dipped beam: (E) 7407 Main beam: (E) 34572		



### Headlamp/Front Direction Indicator/Front Position Lamp

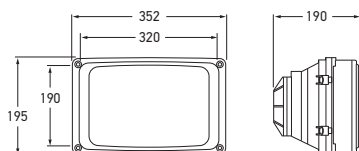
Housing made of black impact and chemical resistant material. Suitable for 146mm (5 ¾") H4 headlamp inserts.



Part Number	1001		
Mounting	Suitable for horizontal and vertical mounting.		
Bulbs to Suit		12V	24V
	Dipped/Main beam:	XD1260/55	XD2475/70
	Indicator:	R1221	R2421
	Position:	HL124	HL244
Spare Parts	1055 9.1001.01	Headlamp insert Lens - Indicator	
Compliance	Headlamp:	E1 17031	
	Indicator:	E12 016086	

### H4 Halogen High/Low Beam Headlamp Assembly

Lamp unit, lens dimensions 352 x 195mm, complete with mounting frame and adjusting mechanisms for vertical and horizontal alignment. Fully enclosed housing with removable rear sealing cap for bulb replacement access. Ideal for truck, bus or body builders.



Part Number	1027		
Mounting	Simple four point mounting.		
Bulbs to Suit	Headlamp: Front position:	12V XD1260/55 HL124	24V XD2475/70 HL244
Spare Parts	9.1027.01 9.1027.02 9.1027.04	Clear lens Reflector Sealing cap	
Compliance	Ⓔ 17016		

### Headlamp VW Golf III (11/91 - 8/97)

Headlamp for vehicles with or without headlamp leveller.



Part Number	1LJ 006 360-671		LH
	1LJ 006 360-681		RH
Bulbs to Suit	Headlamp:	CA1255 x 2 W125	
	Position:		
Compliance	LH:	E1 27001 E1 44468	RH: E1 27002 E1 44469

### Headlamp VW Golf III (11/91 - 8/97)

Headlamp for use with H4 bulb.

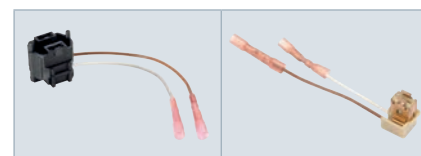


Part Number	1LJ 007 235-251		LH
	1LJ 007 235-261		RH
Bulbs to Suit	Headlamp:	XD1260/55 W125	
	Position:		
Compliance	LH:	E1 17191	RH: E1 17192

Part Number	4972-H1	H1
	4972-H4	H4
	4972-H7	H7

### Bulb Connectors

Plug with pre-installed leads and crimp connectors (H1 and H7). Adapts to original wiring by crimp connector and heat shrink insulator, H4 version with 200mm leads (no connectors).



P/N 4972-H7

P/N 4972-H1

Part Number	5DV 007 760-631	12 VOLT
	5DV 007 810-171	24 VOLT

To Suit Bulb P/Ns D2S and D2R.

See page 146 for HID work lamp power packs.

### HID Gas Discharge (G3) Power Pack



### HID Gas Discharge (G4) Power Pack

Part Number	5DV 008 855-001	12 VOLT
	5DV 008 856-001	24 VOLT

To Suit Bulb P/Ns D1S and D1R.

See page 146 for HID work lamp power packs.



### HID Gas Discharge Ignitor

Part Number	5DD 008 319-501	12 VOLT
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To Suit Bulb P/Ns D2S and D2R

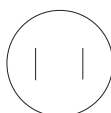


## SEALED BEAM CHART BY DIMENSION

146MM (5 3/4")				114MM (4 1/2")			
Part Number	Voltage/Wattage	Description	Trade No.	Part Number	Voltage/Wattage	Description	Trade No.
1078	12V-60W	Flood	4478	1085	12V-35W	Flood	4411
1080	24V-80/60W	High/low	4579-2	1087	12V-30W	Spot	4416
1094	12V-100W	Long range	4537-2	1089	12V-100W	Spot - long range	4509
1096	24V-60W	Flood	4578	1092	24V-50W	Spot	4505
				1098	12V-40/40W	High/low	4440X

## 146mm Flood Lamp Beam

Flood lamp beam to suit construction and industrial machinery.



2 contact lugs

Part Number	1078
Trade Part No.	4478
Voltage	12V
Power Consumption	60W

## 146mm High/Low Beam

High/low beam to suit construction and industrial machinery.

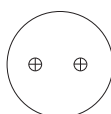


3 contact lugs

Part Number	1080
Trade Part No.	4579-2
Voltage	24V
Power Consumption	Dipped beam: 60W      Main beam: 80W
Not for road use as light pattern is for right-hand side traffic.	

## 146mm Long Range Beam

Search lamp/work lamp beam.

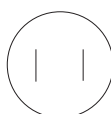


2 screw terminals

Part Number	1094
Trade Part No.	4537-2
Voltage	12V
Power Consumption	100W

## 146mm Flood Lamp Beam

Flood lamp beam to suit construction and industrial machinery.



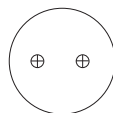
2 contact lugs

Part Number	1096
Trade Part No.	4578
Voltage	24V
Power Consumption	60W



**114mm Flood Lamp Beam**

Flood lamp beam to suit tractor applications.

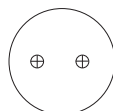


2 screw terminals

Part Number	1085
Trade Part No.	4411
Voltage	12V
Power Consumption	35W

**114mm Spot Lamp Beam**

Spot lamp beam to suit hand held spot lamp P/N 1521 and automotive applications.

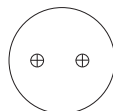


2 screw terminals

Part Number	1087
Trade Part No.	4416
Voltage	12V
Power Consumption	30W

**114mm Spot Lamp/Long Range Beam**

Spot lamp beam to suit hand held spot lamp P/N 1520.

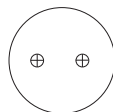


2 screw terminals

Part Number	1089
Trade Part No.	4509
Voltage	12V
Power Consumption	100W

**114mm Spot Lamp Beam**

Spot lamp beam to suit hand held spot lamp P/N 1525.

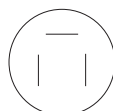


2 screw terminals

Part Number	1092
Trade Part No.	4505
Voltage	24V
Power Consumption	50W

**114mm Spot High/Low Beam**

High/low beam to suit tractor and automotive applications.



3 contact lugs

Part Number	1098
Trade Part No.	4440x
Voltage	12V
Power Consumption	Dipped/Low Beam: 40W





# Fog and Driving Lamps

Whether in the urban jungle, the early morning mist of a country road, autumn fog or off-road, superior lighting performance significantly enhances your driving safety.



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# FOG AND DRIVING LAMPS - INNOVATIVE LIGHTING TECHNOLOGY

HELLA Fog and Driving Lamps provide superior performance - both in distance and evenness of illumination, for enhanced On and Off-road safety.

For decades, professional drivers have chosen the superior performance of HELLA driving lights to increase the range and distance of their forward vision at night and in adverse weather conditions.

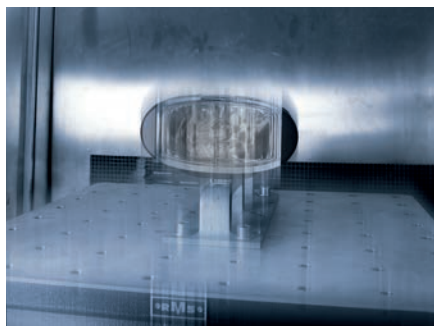
Driving for extended hours at night can be tiring. The use of good forward lighting has long been recognised as an effective approach to reduce driver fatigue and loss of concentration leading to dangerous situations for road users.

HELLA offers driving and fog lamps that suit even the most demanding applications, engineered to Original Equipment Manufacturer (OEM) standards and trusted by millions of motorists around the world.

The superior performance of HELLA auxiliary driving lamps is confirmed time and again in independent tests in major international automotive magazines.

## HELLA Quality Control

Before a new HELLA design is passed for production and sale, it has to pass stringent endurance tests. To ensure HELLA driving lights are fit for their purpose, tests are conducted with simulated real-life environments and driving conditions.



The following criteria must be passed before a new driving light is considered for production:

→ **Reliable performance in adverse conditions and extreme terrains.**

HELLA driving lamps are vigorously tested through mud and water spray tests simulating off-road and cross country driving.

→ **Harsh vibration and shock resistant.**

Vibration testing is performed with random as well as fixed frequencies, known to stress materials. This simulates unforgiving road conditions such as cobblestones and potholes.

→ **Optimal performance in freezing cold and fierce heat.**

The driving lamps are subjected to extreme temperature variations between -40 °C to +80 °C during testing to ensure they are capable in all weather extremes.

→ **Watertight even in extreme weather.**

The driving lamps are subjected to water spray at pressures of 4 bar to simulate driving through torrential rain.

## Tips For Safer Driving

- Ensure you always get a professional alignment after you change a headlamp, driving lamp, or bulb.
- Always use a bulb of the recommended wattage in your driving lamps. Using a higher wattage bulb than recommended will only minimally increase the light performance but will substantially increase the generated heat. This may cause damage to lamp components.
- Lights converted to Xenon discharge systems that are not designed for this technology is not recommended and can be illegal in certain on-road applications.
- If you are 'blowing' bulbs regularly, and/or your lights are not as bright as they used to be, try fitting a relay. A relay will both protect your switch and electrical system, as well as assist in applying the design voltage to the bulb.



## ELIVER The Online Comparison Tool

Eliver - our unique comparison tool helps you find the best possible fog or driving lamp for your application.

With Eliver, you can easily compare our best lamps online and get a realistic idea of performance.

**Get the right lights for your everyday work.**



Scan the QR Code for  
the Eliver home page.  
QR Code reader needed.

[www.hella.com/eliver](http://www.hella.com/eliver)





# SAFER DRIVING WITH HELLA'S ADVANCED TECHNOLOGY



“The use of good forward lighting has long been recognised as an effective approach to reduce driver fatigue”

## Lights with Parabolic Reflector Systems

These lights are designed with a reflector in the mathematically defined shape of a paraboloid. The reflector captures the luminous flux emitted by the bulb and projects this forward as an almost parallel light beam.

The specific light distribution is produced by optical lenses and prisms in the profiled cover lens which precisely directs the light to the area to be illuminated. Good optic design produces an even illumination whereas a spotty appearance is the result of poorly designed optics.

Efficient headlamps with parabolic reflector systems require a large reflector in order to capture the maximum luminous flux from the bulb.

## Lights with Free-Form (FF) Reflector Technology

Lights incorporating Free-Form (FF) technology are based on complex computer simulations. Over 50,000 (individual surfaces of the reflector are calculated and formed to precisely reflect the light to the road in front of the vehicle. The outer cover lens contains minimal optic elements.

A well designed headlight, based on Free-Form (FF) technology, produces an evenly lit area in front of the vehicle which significantly contributes to safer driving.

## Micro DE

The functional principle of a DE (Diaxial Ellipsoid) lamp is similar to that of a slide projector. An ellipsoid Free-Form (FF) reflector directs the light to a focused glass lens which bundles and projects it onto the road. A shield positioned between the reflector and the lens provide a very sharp cut-off resulting in a concentrated light beam with defined edges ensuring a smooth light distribution with very little stray light. DE technology allows smaller dimensions with a higher luminance compared to a parabolic lamp.

**Pencil Beam**

The pencil beam driving light is designed for maximum long-range illumination, providing improved visibility of objects and traffic situations at great distance. This beam type is recommended for off-road vehicles where objects at a far distance must be recognised early to give the driver time to decide on a course of action.

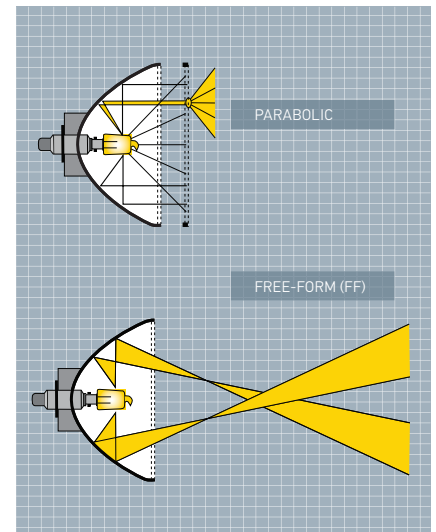
**Spread Beam**

The spread beam driving light provides effective illumination of both the area immediately in front of the vehicle and some distance ahead. This beam type is particularly suitable for road vehicles (e.g. trucks and buses) where fatigue-free driving is more important than recognising objects at a far distance.

**HELLA Fog Lamps**

Fog, rain or snow can reflect the light of standard driving lights into the driver's vision creating a dangerous glare which makes it difficult to recognise hidden hazards.

HELLA Fog Lamps are equipped with specially designed reflectors, which evenly illuminate the width of the road, providing you with a wide path of light for clearer visibility in close range to the vehicle. Particularly suitable for any vehicle driving through humid or moist areas where fog, rain or snow is common.



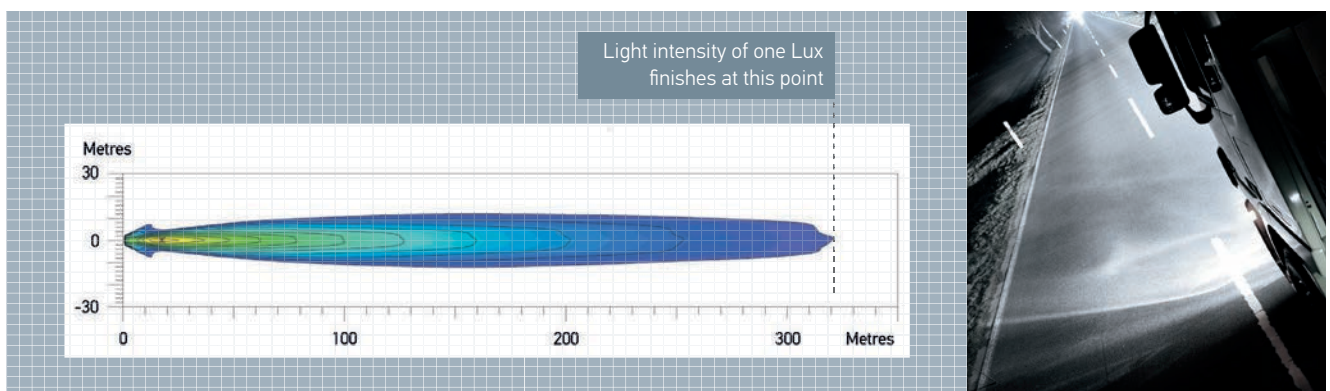
Lighting differences of the Parabolic and Free-Form (FF) lamps

## MEASURING DISTANCE IN LIGHT

Isolux charts represent the beam pattern and the distance illuminated on a flat road surface using a single lamp.

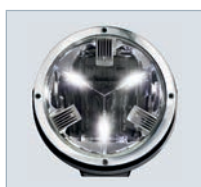
The colour shades represent the distance in metres from the lamp. The dark blue shade indicates an illumination level of one Lux (320 metres in the shown diagram).

One Lux represents the intensity of the light of a full moon (under clear atmospheric conditions) or just sufficient light by which to read a newspaper.

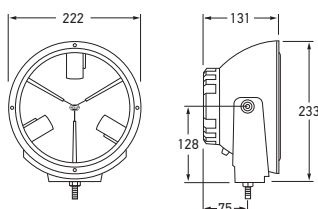


## LED Luminator Spread Beam Driving Lamp

Equipped with innovative triple high-boost reflectors and state-of-the-art LED technology for all lighting functions, Luminator LED driving lamps deliver long lasting and extremely powerful light output, achieving an intense and consistent long-range illumination that is very similar to daylight, without harsh contrasts. Complete with clear cover P/N 8141.

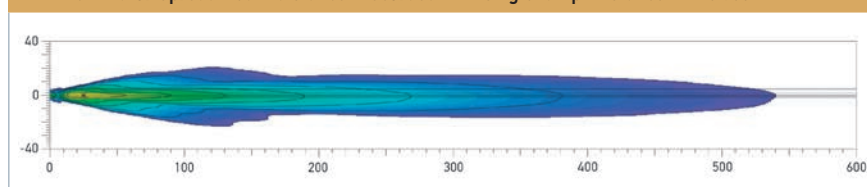


Front view showing position lamp

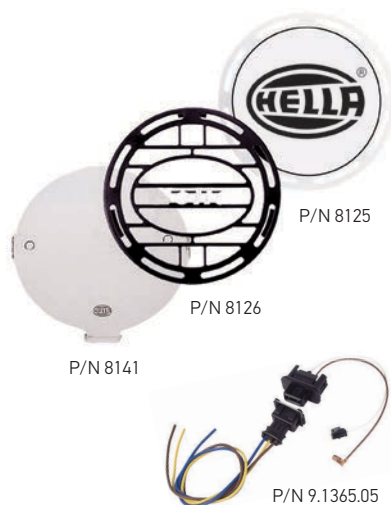


Part Number	1389	SPREAD BEAM
Mounting	Upright or pendant.	
Voltage	Multivolt™ for optimum brightness at input voltages from 9 to 33 volts.	
Power Consumption	Driving lamp: 30W Position lamp: 1W	
Protection	IP 5K9K (Protection against dust and high-pressure water jets). Not suitable for submersion	
Compliance	(E) 3161	
Spare Part	9.1389.01	Driving lamp lens, reflector and LED light source.

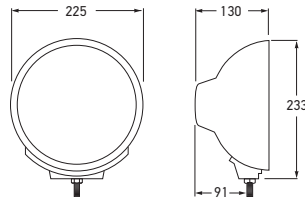
### LED Luminator Spread Beam distance. Recorded with single lamp. Distance in metres.



## Rallye 4000 Accessories



Part Number	8125	PROTECTIVE COVER
	8141	CLEAR PROTECTIVE COVER
	8126	PROTECTIVE GRILLE
Spare Parts	9.1165.01 9.1365.01 9.1366.01 9.1366.02 9.1365.05 9.1366C.01BL 9.1389.01 9.1365.06 9.1365.07 9.1366C.07	Fog lamp insert Pencil beam insert Spread beam insert (optic lens) Spread beam insert (clear lens) Wiring loom Spread beam insert (blue lens) LED lamp lens and reflector Knurled screw set (2) Black lens retaining rim Chrome lens retaining rim

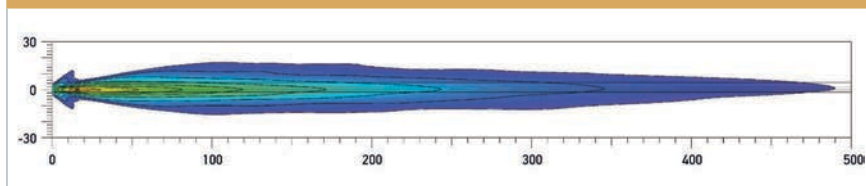


### Rallye 4000 Spread Beam Driving Lamp

The Rallye 4000 spread beam features a sturdy zinc die-cast metal body and bracket for excellent strength and vibration resistance. The bracket has a large contact surface making the lamp stable in rough conditions. Suitable for professional, commercial and off-road drivers. Complete with protective cover P/N 8125 and allen keys.

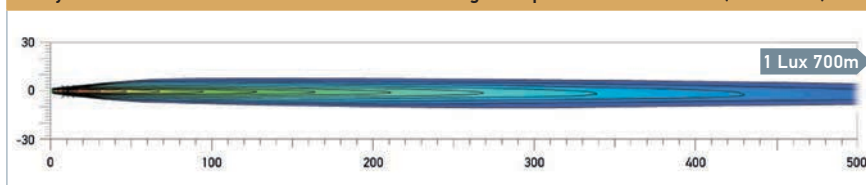
Part Number	1366	SPREAD BEAM
Mounting	Upright or pendant.	
Power Consumption	Driving lamp: 55W Position lamp: 5W	
Bulbs to Suit	Driving lamp: 12V C1255 Position lamp: W125	24V C2470 W245
Spare Part	9.1366.02	Spread beam insert (clear lens)
Compliance	(E) 44484	

Rallye 4000 Spread Beam distance. Recorded with single lamp. Distance in metres.



Part Number	1365	PENCIL BEAM
Mounting	Upright or pendant.	
Power Consumption	55W	
Bulbs to Suit	12V C1255 24V C2470	
Spare Part	9.1365.01	Pencil beam insert

Rallye 4000 Pencil Beam distance. Recorded with single lamp. Distance in metres. (100W Bulb)



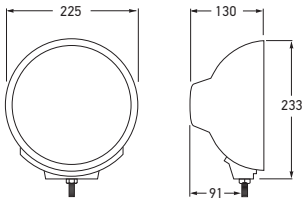
### Rallye 4000 Pencil Beam Driving Lamp

The Rallye 4000 pencil beam features a sturdy zinc die-cast metal body and bracket for excellent strength and vibration resistance. The lamp bracket has a large contact surface making the lamp stable in rough conditions. Suitable for professional, commercial and off-road drivers. Complete with protective cover P/N 8125 and allen keys.



Rallye 4000 Fog Lamp

The Rallye 4000 fog beam features a sturdy zinc die-cast metal body and bracket for excellent strength and vibration resistance. The bracket has a large contact surface making the lamp stable in rough conditions. Suitable for professional, commercial and off-road drivers. Complete with protective cover P/N 8125 and allen keys.



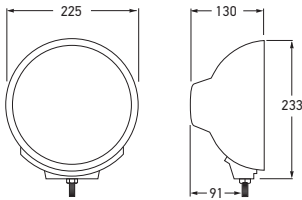
Part Number	1165		FOG BEAM
Mounting	Upright.		
Power Consumption	55W		
Bulbs to Suit	12V	YC1255	
	24V	YC2470	
Spare Part	9.1165.01	Fog lamp insert	
Compliance	Ⓔ1 18245		



P/N 8125  
Protective cover







Rallye 4000 Chrome Spread Beam Driving Lamp

The Rallye 4000 spread beam driving lamp features clear glass optics and chrome plated zinc die-cast metal housing. Complete with protective cover P/N 8125 and Allen keys.



Part Number	1366CHROME	SPREAD BEAM
Mounting	Upright.	
Power Consumption	Driving lamp: 55W Position lamp: 5W	
Bulbs to Suit	12V 24V Driving lamp: C1255CB C2470 Position lamp: W125 W245	
Spare Parts	9.1366.02 Spread beam insert 9.1366C.07 Chrome lens retaining rim	
Compliance	(E) 44484	



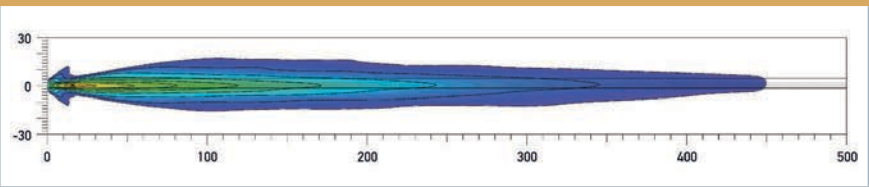
Rallye 4000 Chrome Spread Beam Driving Lamp

The Rallye 4000 spread beam driving lamp features blue clear glass optics and chrome plated zinc die-cast metal housing. Suitable for colourless bulbs only.



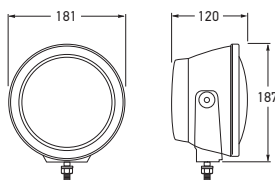
Part Number	1366C-BLUE	SPREAD BEAM
Mounting	Upright.	
Power Consumption	Driving lamp: 55W Position lamp: 5W	
Bulbs to Suit	12V 24V Driving lamp: C1255 C2470 Position lamp: W125 W245	
Spare Parts	9.1366C.01BL Spread beam insert with blue lens 9.1366C.07 Chrome lens retaining rim	
Compliance	(E) 44484	

Rallye 4000 Blue Spread Beam distance. Recorded with single lamp. Distance in metres.



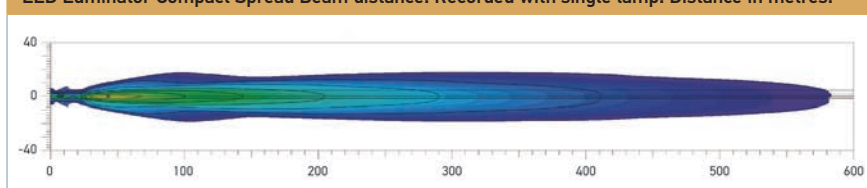
### LED Luminator Compact Spread Beam Driving Lamp

Compact Luminator LED lamp with high performance LEDs for long range illumination.



Part Number	1394	SPREAD BEAM
Mounting	Upright.	
Voltage	Multivolt™ for optimum brightness in 12 and 24 volt systems	
Power Consumption	Driving lamp:	11W
Compliance	(E1) 3738	
Spare Part	9.1394.01	Driving lamp lens, reflector and LED light source.

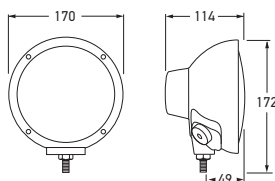
#### LED Luminator Compact Spread Beam distance. Recorded with single lamp. Distance in metres.



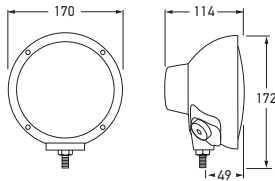
P/N 8120  
Protective cover

### Rallye 4000 Compact Fog Lamp

170mm compact version of the Rallye 4000 driving lamp, with clear Free-Form (FF) reflector lens design and sturdy zinc die-cast weatherproof black metal housing.



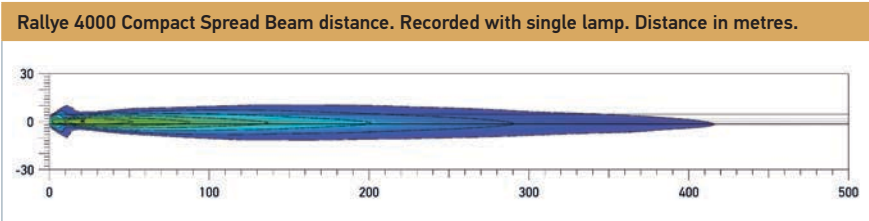
Part Number	1178	FOG BEAM
Mounting	Upright.	
Power Consumption	55W	
Bulbs to Suit	12V 24V	CA1255 CA2470
Spare Part	9.1178.01	Fog lamp insert
Compliance	(E1) 1901	



Rallye 4000 Compact Spread Beam Driving Lamp

170mm compact version of the Rallye 4000 driving lamp, with clear Free-Form (FF) reflector lens design and sturdy zinc die-cast weatherproof metal housing.

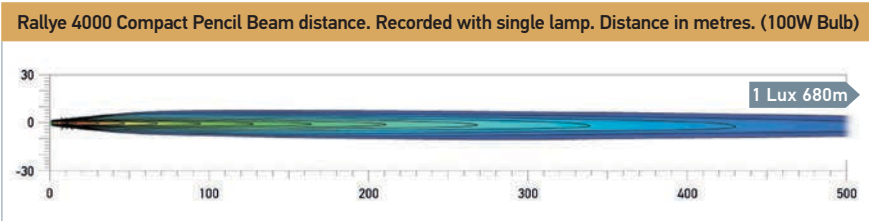
Part Number	1378		SPREAD BEAM
	1378CHROME		
Mounting	Upright.		
Power Consumption	55W		
Bulbs to Suit	12V	C1255	
	24V	C2470	
Spare Part	9.1378.01	Spread beam insert	
Compliance	(E) 1901		



P/N 1378CHROME



Part Number	1380	PENCIL BEAM
Mounting	Upright.	
Power Consumption	55W	
Bulbs to Suit	12V	C1255
	24V	C2470
Spare Part	9.1380.01	Pencil beam Insert



Rallye 4000 Compact Pencil Beam Driving Lamp

Pencil beam driving lamp with clear glass optics. Chrome plated zinc die-cast weatherproof metal housing.



Part Number	8155	CLEAR PROTECTIVE COVER
	8115	PROTECTIVE COVER
Spare Parts	9.1365.06	Knurled screw set (2)
	9.1378.01	Spread beam insert
	9.1380.01	Pencil beam Insert
	9.1394.01	LED lamp lens and reflector
	9.1178.01	Fog lamp insert

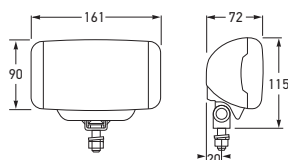


P/N 8155

P/N 8115

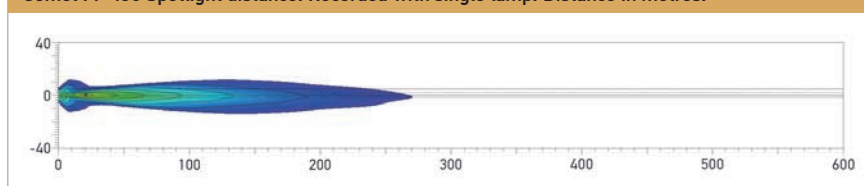
### Comet FF 450 Spread Beam Driving Lamp

H3 spotlight with black plastic housing.  
Complete with protective cover  
P/N 8XS 186 530-012.



Part Number	1324	SPREAD BEAM
Mounting	Upright or pendant.	
Power Consumption	55W	
Bulbs to Suit	12V 24V	YC1255 YC2470
Spare Part	9.1324.01	Driving lamp insert
Compliance	E1 3221	

Comet FF 450 Spotlight distance. Recorded with single lamp. Distance in metres.



### Comet FF 450 Fog Lamp

H3 fog lamp with black plastic housing.  
Complete with protective cover  
P/N 8XS 186 530-012.



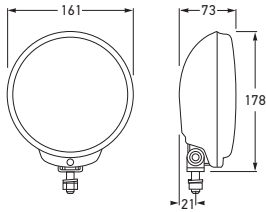
Part Number	1124	FOG BEAM
Mounting	Upright or pendant.	
Power Consumption	55W	
Bulbs to Suit	12V 24V	YC1255 YC2470
Spare Part	9.1124.01	Fog lamp insert
Compliance	E1 3221	

### Protective Covers



P/N 8156

Part Number	8XS 186 530-012	PROTECTIVE COVER
	8156	CLEAR PROTECTIVE COVER



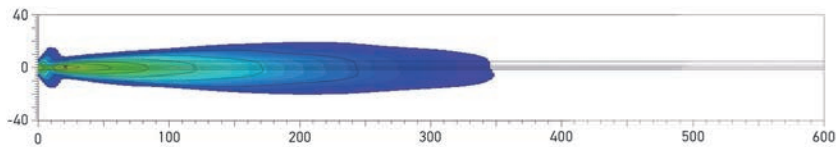
Comet FF 500 Spread Beam Driving Lamp

H3 spotlight with black plastic housing.  
Complete with protective cover  
P/N 8XS 186 531-012.



Part Number	1325	SPREAD BEAM
Mounting	Upright.	
Power Consumption	55W	
Bulbs to Suit	12V	YC1255
	24V	YC2470
Spare Part	9.1325.01	Driving lamp insert
Compliance	(E1) 3222	

Comet FF 500 Spotlight distance. Recorded with single lamp. Distance in metres.



Comet FF 500 Fog Lamp

H3 fog lamp with black plastic housing.  
Complete with protective cover  
P/N 8XS 186 531-012.



Part Number	1125	FOG BEAM
Mounting	Upright.	
Power Consumption	55W	
Bulbs to Suit	12V	YC1255
	24V	YC2470
Spare Part	9.1125.01	Fog lamp insert
Compliance	(E1) 3222	

Protective Covers

Part Number	8XS 186 531-012	PROTECTIVE COVER
	8157	CLEAR PROTECTIVE COVER

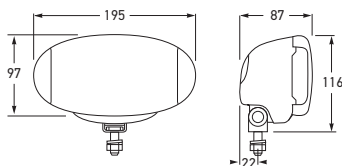


P/N 8157



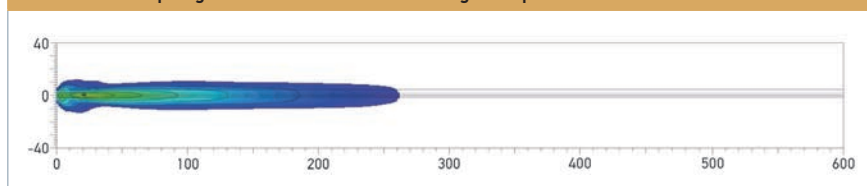
### Comet FF 550 Spread Beam Driving Lamp

H3 spotlight with black plastic housing.  
Complete with protective cover  
P/N 8XS 186 532-012.



Part Number	1326	SPREAD BEAM
Mounting	Upright or pendant.	
Power Consumption	55W	
Bulbs to Suit	12V 24V	YC1255 YC2470
Spare Part	9.1326.01	Driving lamp insert
Compliance	E1 3223	

Comet FF 550 Spotlight distance. Recorded with single lamp. Distance in metres.



### Comet FF 550 Fog Lamp

H3 fog lamp with black plastic housing.  
Complete with protective cover  
P/N 8XS 186 532-012.



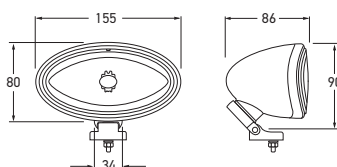
Part Number	1126	FOG BEAM
Mounting	Upright or pendant.	
Power Consumption	55W	
Bulbs to Suit	12V 24V	YC1255 YC2470
Spare Part	9.1126.01	Fog lamp insert
Compliance	E1 3223	

### Protective Covers



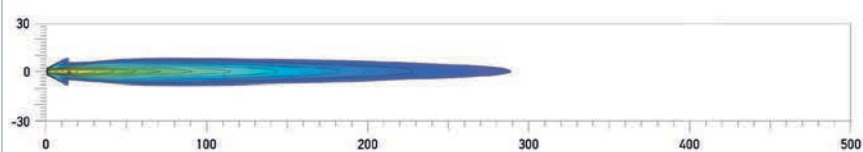
P/N 8158

Part Number	8XS 186 532-012	PROTECTIVE COVER
	8158	CLEAR PROTECTIVE COVER



Part Number	1312	SPREAD BEAM
Mounting	Upright or pendant.	
Power Consumption	55W	
Bulbs to Suit	12V 24V	YC1255 YC2470
Spare Part	9.1312.01	Driving lamp insert
Compliance	(E1) 651	

Comet 100 Spread Beam distance. Recorded with single lamp. Distance in metres.



### Comet 100 Spread Beam Driving Lamp

Spread beam driving lamp with modern clear hardened glass lens. The innovative Free-Form (FF) technology ensures concentrated light output. Complete with protective cover P/N 8100.



Part Number	1112	FOG BEAM
Mounting	Upright or pendant.	
Power Consumption	55W	
Bulbs to Suit	12V 24V	YC1255 YC2470
Spare Part	9.1112.01	Fog lamp insert
Compliance	(E1) 650	

### Comet 100 Fog Lamp

Fog beam lamp with modern clear hardened glass lens. The innovative Free-Form (FF) technology ensures concentrated light output. Complete with protective cover P/N 8100.



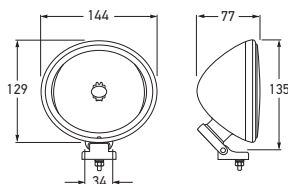
### Comet 100 Protective Covers

Part Number	8100	PROTECTIVE COVER
Part Number	8143	CLEAR PROTECTIVE COVER



### Comet 200 Spread Beam Driving Lamp

Spread beam driving lamp with modern clear hardened glass lens. The innovative Free-Form (FF) technology ensures concentrated light output. Complete with protective cover P/N 8101.



Part Number	1313	SPREAD BEAM
Mounting	Upright.	
Power Consumption	55W	
Bulbs to Suit	12V 24V	YC1255 YC2470
Spare Part	9.1313.01	Driving lamp insert
Compliance	(E1) 646	

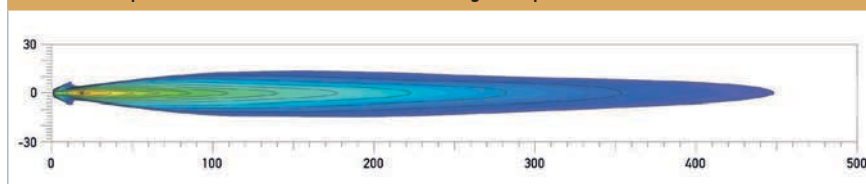
### Comet 200 Spread Beam Driving Lamp

Modern 'cool blue' lens design version of P/N 1313. The light colour remains white. Complete with protective cover P/N 8101.



Part Number	1313-BLUE	SPREAD BEAM
Mounting	Upright.	
Power Consumption	55W	
Bulb to Suit	YC1255	
Spare Part	9.1313.01B	Blue lens driving lamp insert
Compliance	(E1) 647	

Comet 200 Spread Beam distance. Recorded with single lamp. Distance in metres.



### Comet 200 Fog Lamp

Fog beam lamp with modern clear hardened glass lens. The innovative Free-Form (FF) technology ensures concentrated light output. Complete with protective cover P/N 8101.

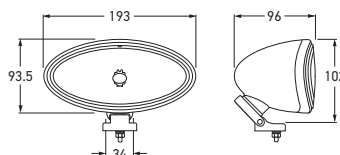


Part Number	1113	FOG BEAM
Mounting	Upright or pendant.	
Power Consumption	55W	
Bulbs to Suit	12V 24V	YC1255 YC2470
Spare Part	9.1113.01	Fog lamp insert
Compliance	(E1) 645	

### Comet 200 Protective Covers



Part Number	8101	PROTECTIVE COVER
Part Number	8144	CLEAR PROTECTIVE COVER



Part Number	1314	SPREAD BEAM
Mounting	Upright or pendant.	
Power Consumption	55W	
Bulbs to Suit	12V 24V	YC1255 YC2470
Spare Part	9.1314.01	Driving lamp insert
Compliance	(E1) 649	

### Comet 300 Spread Beam Driving Lamp

Spread beam driving lamp with modern clear hardened glass lens. The innovative Free-Form (FF) technology ensures concentrated light output. Complete with protective cover P/N 8102.



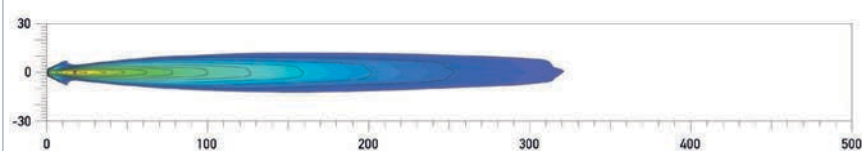
Part Number	1314-BLUE	SPREAD BEAM
Mounting	Upright or pendant.	
Power Consumption	55W	
Bulb to Suit	YC1255	
Spare Part	9.1314.01B	Blue lens driving lamp insert
Compliance	(E1) 649	

### Comet 300 Spread Beam Driving Lamp

Modern 'Cool Blue' lens design version of P/N 1314. The light colour remains white. Complete with protective cover P/N 8102.



Comet 300 Spread Beam distance. Recorded with single lamp. Distance in metres.



Part Number	1114	FOG BEAM
Mounting	Upright or pendant.	
Power Consumption	55W	
Bulbs to Suit	12V 24V	YC1255 YC2470
Spare Part	9.1114.01	Fog lamp insert - white
Compliance	(E1) 648	

### Comet 300 Fog Lamp

Fog beam lamp with modern clear hardened glass lens. The innovative Free-Form (FF) technology ensures concentrated light output. Complete with protective cover P/N 8102.



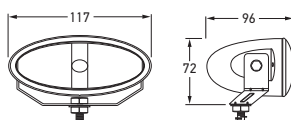
### Comet 300 Protective Covers

Part Number	8102	PROTECTIVE COVER
Part Number	8145	CLEAR PROTECTIVE COVER



## FF 50 Spread Beam Driving Lamp

Compact driving lamp featuring modern clear lens design and Free-Form (FF) reflector.

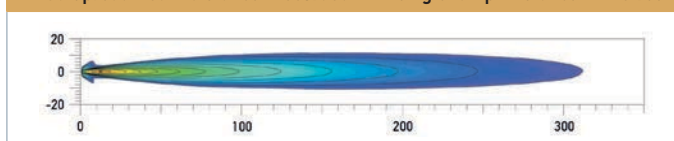


Part Number	1322	SPREAD BEAM
	1322-BLUE	
Mounting	Upright or pendant.	
Power Consumption	55W	
Bulb to Suit	CA1255	
Compliance	(E1) 1210	



P/N 1322-BLUE

FF 50 Spread Beam distance. Recorded with single lamp. Distance in metres.



## FF 50 Fog Lamp

Compact fog lamp featuring modern clear lens design and Free-Form (FF) reflector.



Part Number	1122	FOG BEAM
Mounting	Upright or pendant.	
Power Consumption	55W	
Bulb to Suit	CA1255	
Compliance	E1 1209	

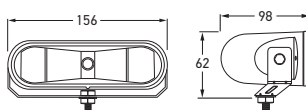
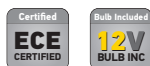
## FF 50 Clear Protective Cover



Part Number	8147
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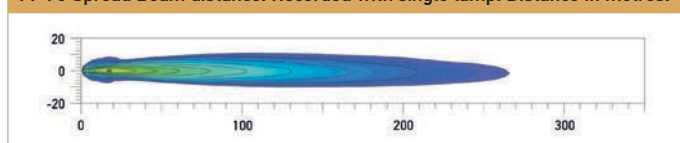


## FOG AND DRIVING LAMPS



Part Number	1323	SPREAD BEAM
	1323-BLUE	
Mounting	Upright or pendant.	
Power Consumption	55W	
Bulb to Suit	CA1255	
Compliance	(E1) 1212	

FF 75 Spread Beam distance. Recorded with single lamp. Distance in metres.



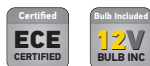
## FF 75 Spread Beam Driving Lamp

Compact driving lamp featuring modern clear lens design and Free-Form (FF) reflector.



P/N 1323-BLUE

FOG AND DRIVING



Part Number	1123	FOG BEAM
Mounting	Upright or pendant.	
Power Consumption	55W	
Bulb to Suit	CA1255	
Compliance	(E1) 1211	

## FF 75 Fog Lamp

Compact fog lamp featuring modern clear lens design and Free-Form (FF) reflector.



## FF 75 Clear Protective Cover

Part Number	8148
-------------	------





A man in a green work suit stands with his arms crossed next to a green tractor at night. The tractor's headlights are on, illuminating the scene. The background shows a dark sky and some trees.

# Work Lamps

Effective and efficient mobile lighting is an essential safety element to increase staff protection from accidents.





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Whatever you drive, good lighting of the outdoor workplace is an essential safety element necessary to protect operators and valuable equipment from accidents.

A large percentage of New Zealand's productive workforce is employed in the outdoors and is susceptible to changes in environmental conditions.

To enhance productivity and maximise the returns on capital intensive farming equipment and machinery, working hours are extended into the night. In the case of road works on major arterial roads, work is conducted at night to avoid major traffic delays during daytime and particularly rush hour.

Good lighting of the outdoor workplace is an essential safety element and necessary to protect valuable equipment and operators from accidents.

The superior performance of HELLA work lamps is recognised by industry worldwide, with the largest agriculture and construction equipment manufacturers now specifying HELLA lighting as original equipment. In heavy duty work environments, LED work lamps offer decisive advantages over other lighting technologies. LED work lamps consume significantly less power than incandescent bulbs resulting in reduced strain on both alternator and battery. This makes LED work lamps the ideal lighting solution for work machines and equipment with low alternator performance or battery-assisted power supply.

#### LED Technology

- Highly efficient light output
- Low power consumption
- Low maintenance
- Ultra long service life
- Multivolt™
- Water and dust-proof
- High resistance to vibration
- Lower operating temperatures

All the advantages of modern LED lighting technology are fully utilised in HELLA work lamps.

The choice of LEDs, the power supply and thermal management of the work lamp are key factors in achieving optimum light output (lumen). The quality of the components used by HELLA ensures, for example, that the light remains at a constant level of brightness in a variety of harsh conditions.

Good thermal management is necessary to ensure a long service life. When an LED is illuminated, heat is produced. As the current is increased to the lamp, more heat is generated. As LED temperature increases, light output decreases and the service life reduces. Efficient design for maximum heat dissipation must be ensured. HELLA uses the latest simulation programs during product development to ensure optimal heat dissipation through the housing.

All HELLA LED work lamps are designed to provide reliable protection against the LEDs overheating. This guarantees long service life as well as consistent light output.

#### Do you know what the actual light output of your work lamp is?

Some LED work lamp manufacturers typically specify a light output without factoring in the impact of temperature, optical losses or other real world effects on light output performance.



This however, does not correspond to the actual effective light output of the work lamp. When these light values are cited, they are often unrealistically high. Such ratings are referred to as "calculated lumen" (clm) or "cold lumen".

The lumen ratings of all HELLA work lamps are always based on values obtained from measuring actual lamps. The lumen values correspond to the light that is actually emitted from the work lamp. HELLA LED work lamps emit their full output in ambient temperatures of up to 50°C.

### What do GGVSEB and ADR stand for?



GGVSEB (previously GGVS) stands for the German regulation on carriage of dangerous goods by road, rail and inland waterway.

This regulation transposes Directive 2008/68/EC of the European Parliament and Council of 24 September 2008 on the inland transport of dangerous goods.

Work lamps marked with this symbol are approved for mounting on transportation equipment which meets the regulations of GGVSEB/ADR.



### How can you compare the illumination of different work lamps?

Work lamps can be compared by using an informative isolux lighting diagram. These diagrams display the projected light pattern on a surface in the form of isolux lines (lines of equal light intensity). To compare isolux diagrams, various criteria such as installation height, inclination angle and lux scale must be taken into account. An objective comparison is inaccurate if the criteria differ from one another. Comparing diagrams with different colour scales can be easily misinterpreted.

### What is the difference between the different types of illumination?

#### Long Range

Narrow beam range designed to illuminate distant objects between 40m - 150m (depending on installation height and inclination angle).

#### Close Range

Spread beam designed to illuminate an area near the vehicle, range approx. 5m to 40m (depending on installation height and inclination angle).



#### Flood

Ultra wide spread beam designed to illuminate a large area adjacent to the vehicle, range up to 10m (depending on installation height and inclination angle).

### Electromagnetic Compatibility (EMC)

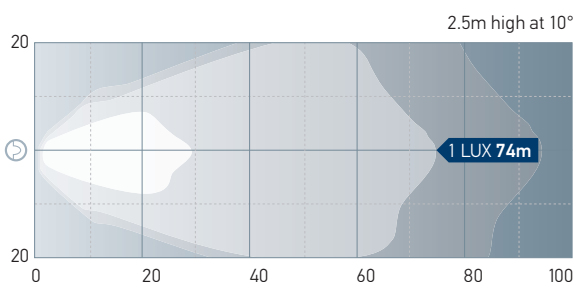
Electromagnetic Compatibility (EMC) is an increasingly relevant feature for emergency and signal warning lighting. As electronic devices become more common, so does the risk of unintended interference that can have adverse effects on other sensitive devices such as radios or communication equipment.

HELLA lighting products are designed and tested to reduce the possible risk of electromagnetic interference, both emissions as well as susceptibility, to limits defined in international standards.

As prescribed by New Zealand legislation, under circumstances, electronic products sold in New Zealand must be labelled with the C-tick  or RCM  marks. HELLA products are designed, tested and labelled to meet the requirements of this legislation

### IP Ratings

See page 153 for full IP rating descriptions and what they mean.



### Isolux Lighting Diagram

Isolux diagrams display the projected light pattern on a surface in the form of isolux lines (lines of equal light intensity).



# OLIVER USES ELIVER - DO YOU?

## ELIVER - THE ONLINE COMPARISON TOOL

Oliver is looking for just the right work lamp for his tractor. ELIVER – our unique comparison tool – helps him find the best possible work lamp for his application.

With ELIVER, you can easily compare our best work lamps online – and get a realistic idea of the light yield. Get the right light for your everyday work.

Discover ELIVER – and be as happy as Oliver!



Scan the QR Code for  
the Eliver home page.  
QR Code reader required.

[www.hella.com/eliver](http://www.hella.com/eliver)



**ELIVER - Compare Work Lamps, Auxiliary  
Headlamps, Beacons and Optical Warning  
Systems online.**

Technology with Vision





# HALOGEN AND LED HEAD-TO-HEAD



**The Past:**  
6 x halogen work lamps  
Alternator load 27.5A



**Upgrade Option 1:**  
4 x halogen work lamps, 2 x LED work lamps  
Alternator load 22.0A



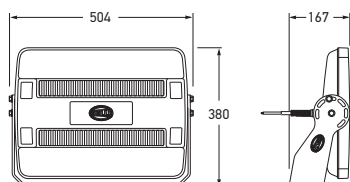
**Upgrade Option 2:**  
2 x halogen work lamps, 4 x LED work lamps  
Alternator load 16.5A




**Upgrade Option 3: The Future**  
6 x LED work lamps  
Alternator load 11.0A

## HypaLUME® LED Work Lamp - Heavy Duty

The HypaLUME® has been designed for multiple applications where high output LED lighting is required. 56 high power LEDs produce an output of more than 20,000 lumens while only consuming 240W at 24V DC. The LEDs have a colour temperature of 5700K to provide a near daylight environment and a Grilamid® lens protects the LEDs from environmental damage.



Part Number	HMF2000WMOB	FLOOD
	HMF2000CMOB	CLOSE RANGE
	HMF2000LMOB	LONG RANGE
Mounting	Upright or pendant.	
Voltage	Optimum brightness at input voltages from 18 to 52 volts.	
Power Consumption	240W	
Max. Light Output	20000 lumen	
Protection	Reverse polarity and voltage spike protection. IP 6K9K (Protection against dust and high-pressure/steam jet cleaning)	
Cable Length	Pre-wired with 1.8m of sheathed cable.	
Lens Material	Grilamid®	
Compliance	CE  ISO 13766 FCC CISPR25	

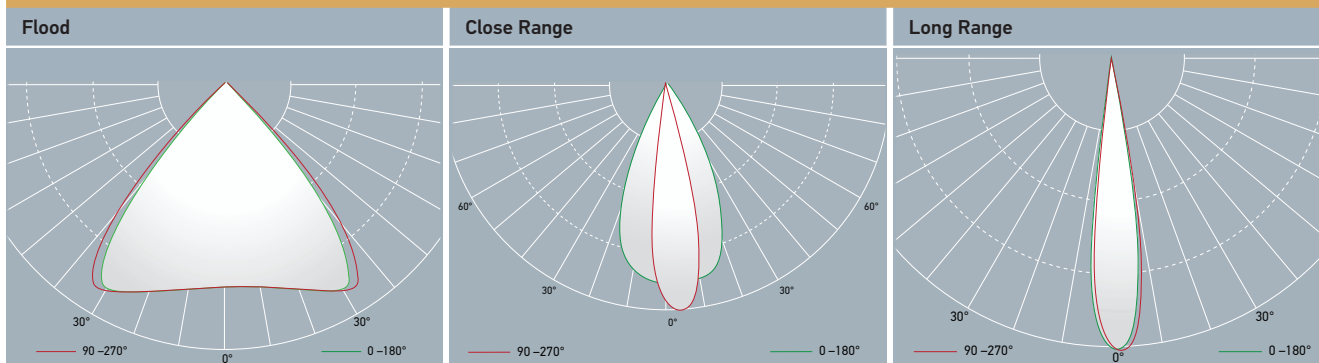


Front view

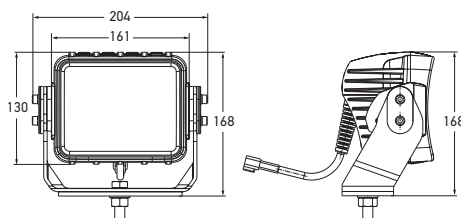
Rear view

Side view

### BEAM PATTERNS



## WORK LAMPS



Part Number	HM1500NBD	LONG RANGE
	HM1500WBD	CLOSE RANGE
Mounting	Upright or pendant.	
Voltage	Multivolt™ for optimum brightness at input voltages from 9 to 33 volts.	
Power Consumption	60W	
Max. Light Output	5000 lumen	
Protection	Reverse polarity and voltage spike protection. IP 6K7 (Protection against temporary water immersion) IP 6K9K (Protection against dust and high-pressure/steam jet cleaning)	
Cable Length	Pre-wired with 200mm of sheathed cable and 3 pin DT socket.	
Lens Material	Grilamid®	
Compliance	CE  ISO 13766-2006 CISPR25	

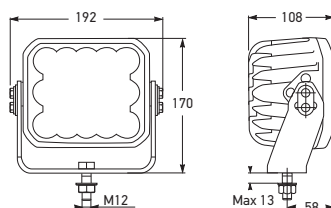
AS 5000LED LED Work Lamp  
- Heavy Duty

The AS 5000LED is a high output, compact and highly versatile heavy duty work lamp for use on mining machinery. Multi-adjustable bracket ensures accurate, stable aiming in high vibration environments.



Side view

Rear view



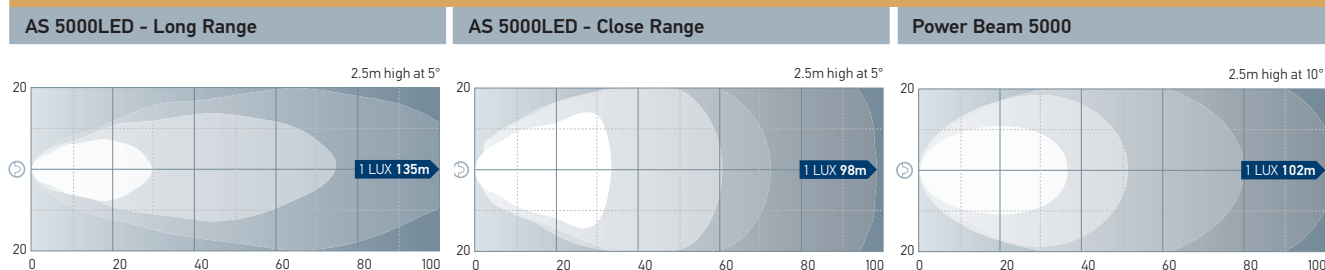
Part Number	1556	CLOSE RANGE
Mounting	Upright.	
Voltage	Multivolt™ for optimum brightness at input voltages from 9 to 33 volts.	
Power Consumption	70W	
Max. Light Output	4500 lumen	
Protection	Reverse polarity and voltage spike protection. IP 6K7 (Protection against temporary water immersion) IP 6K9K (Protection against dust and high-pressure/steam jet cleaning)	
Cable Length	Supplied with 2.5m of sheathed multi-core cable and DT plug.	
Spare Part	9.1549.05	Plug and lead
Lens Material	Grilamid®	
Compliance	(E1) CE	

Power Beam 5000 LED Work Lamp  
- Heavy Duty

LED work lamp with 23 high performance LEDs for a powerful white light output rated at 4500 lumen, very similar to daylight. This guarantees excellent colour reproduction at night and supports sensory perception by the human eye.



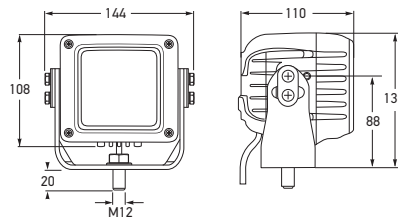
## BEAM PATTERNS





## Power Beam 3000 LED Work Lamp - Heavy Duty

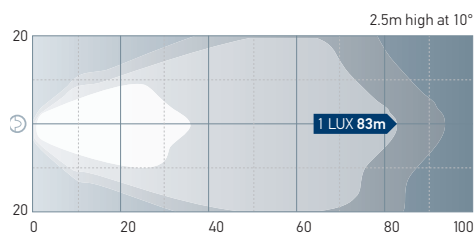
LED work lamp with 16 high performance LEDs for a powerful white light output rated at 3000 lumen, brighter than a standard 35W HID work lamp. Features robust aluminium die-cast housing, heavy duty stainless steel bracket and nylon lens for consistent close range illumination.



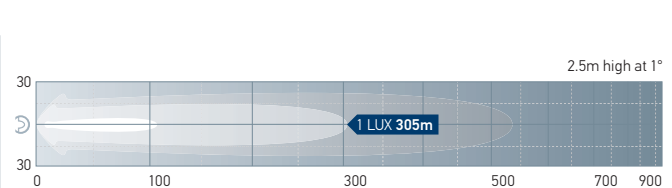
Part Number	1555-HD	CLOSE RANGE
	1555-HDLR	LONG RANGE
Mounting	Upright or pendant.	
Voltage	Multivolt™ for optimum brightness at input voltages from 9 to 33 volts.	
Power Consumption	43W	
Max. Light Output	3000 lumen	
Protection	Reverse polarity and voltage spike protection. IP 6K7 (Protection against dust and temporary water immersion) IP 6K9K (Protection against dust and high-pressure/steam jet cleaning)	
Cable Length	Pre-wired with 2.0m of sheathed twin core cable.	
Lens Material	Grilamid®	
Compliance		

### BEAM PATTERNS

#### Power Beam 3000 - Close Range



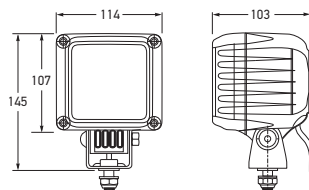
#### Power Beam 3000 - Long Range



P/N 1555-HDLR

## Power Beam 2000 LED Work Lamp

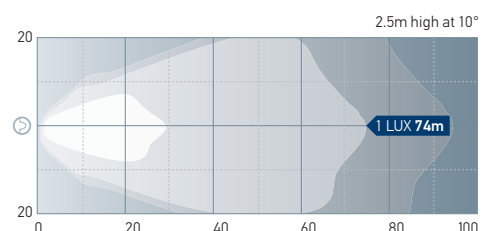
LED work lamp with 16 high performance LEDs for a powerful white light output rated at 2200 lumen, over 50% brighter than a 55W H3 bulb, while consuming 20% less power. Features robust aluminium die-cast housing, stainless steel bracket and hardened glass lens for consistent close range illumination.



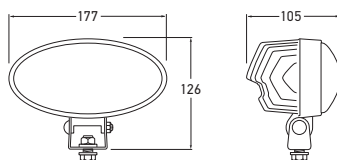
Part Number	1553	CLOSE RANGE
Mounting	Upright or pendant.	
Voltage	Multivolt™ for optimum brightness at input voltages from 9 to 33 volts.	
Power Consumption	43W	
Max. Light Output	2200 lumen	
Protection	Reverse polarity protection. IP 6K7 (Protection against dust and temporary water immersion) IP 6K9K (Protection against dust and high-pressure/steam jet cleaning)	
Cable Length	Pre-wired with 2.0m of sheathed twin core cable.	
Compliance		

### BEAM PATTERN

#### Power Beam 2000







### Oval 90 LED Work Lamp

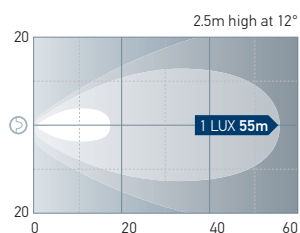
Oval 90 LED work lamp featuring 10 high performance LEDs for an intense light output rated at 2000 lumen. High quality aluminium housing and nylon lens. Suitable for close range or long range illumination.



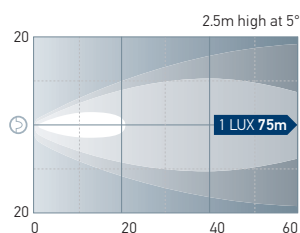
Part Number	1559	CLOSE RANGE
	1559-LR	LONG RANGE
Mounting	Upright or pendant.	
Voltage	Multivolt™ for optimum brightness at input voltages from 9 to 33 volts.	
Power Consumption	28W	
Max. Light Output	2000 lumen	
Protection	Reverse polarity and voltage spike protection. IP 6K7 (Protection against temporary water immersion) IP 6K9K (Protection against dust and high-pressure/steam jet cleaning)	
Cable Length	Supplied with 2m of sheathed multi-core cable and DT plug.	
Spare Part	9.1549.05	Plug and lead
Lens Material	Grilamid®	
Compliance	E1 CE	
See page 147 for work lamp accessories.		

#### BEAM PATTERNS

##### Oval 90 - Close Range



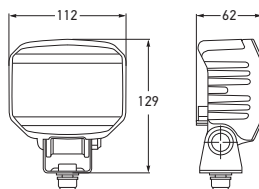
##### Oval 90 - Long Range





AS 5000LED shown - page 129

## Power Beam 1500 LED Work Lamp

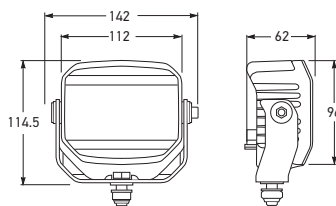
Premium LED work lamp with aluminium housing. Light output rated at 1300 lumen.





Part Number	1557	CLOSE RANGE
Mounting	Upright or pendant.	
Voltage	Multivolt™ for optimum brightness at input voltages from 9 to 33 volts.	
Power Consumption	22W	
Max. Light Output	1300 lumen	
Protection	Reverse polarity protection. IP 6K7 (Protection against dust and temporary water immersion) IP 6K9K (Protection against dust and high-pressure/steam jet cleaning)	
Cable Length	Supplied with 2m of sheathed multi-core cable and DT plug.	
Spare Part	9.1549.05	Plug and lead
Lens Material	Grilamid®	
Compliance	 	
See page 147 for work lamp accessories.		

## Power Beam 1500 LED Work Lamp - Heavy Duty

Premium heavy duty LED work lamp with aluminium housing. Light output rated at 1300 lumen. Suitable for heavy duty use.

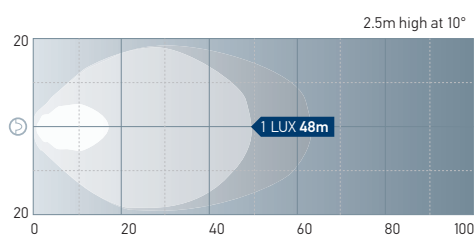


P/N 1557-HD

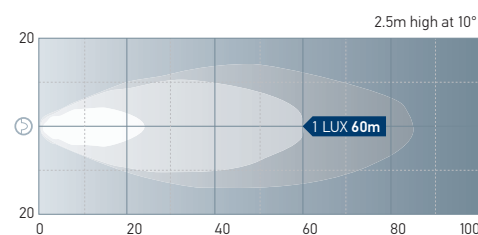
Part Number	1557-HD	CLOSE RANGE
	1557-HDLR	LONG RANGE
Mounting	Upright or pendant.	
Voltage	Multivolt™ for optimum brightness at input voltages from 9 to 33 volts.	
Power Consumption	22W	
Max. Light Output	1300 lumen	
Protection	Reverse polarity protection. IP 6K7 (Protection against dust and temporary water immersion) IP 6K9K (Protection against dust and high-pressure/steam jet cleaning)	
Cable Length	Supplied with 2m of sheathed twin core cable and DT plug.	
Spare Part	9.1549.05	Plug and lead
Lens Material	Grilamid®	
Compliance	 	
See page 147 for work lamp accessories.		

## BEAM PATTERNS

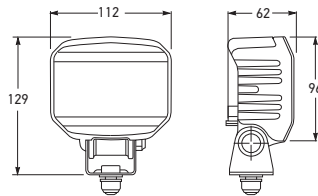
## P/N 1557/1557-HD - Close Range



## P/N 1557-HDLR - Long Range



WORK LAMPS

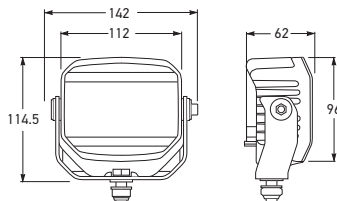


Part Number	1551	CLOSE RANGE
Mounting	Upright or pendant.	
Voltage	Multivolt™ for optimum brightness at input voltages from 9 to 33 volts.	
Power Consumption	<18W	
Max. Light Output	850 lumen	
Protection	Reverse polarity and voltage spike protection. IP 6K7 (Protection against temporary water immersion) IP 6K9K (Protection against dust and high-pressure/steam jet cleaning)	
Cable Length	Supplied with 2m of sheathed twin core cable and DT plug.	
Spare Parts	9.1549.05 9.1530.07	Plug and lead Stainless steel bracket
Compliance	(E) CE	

See page 147 for work lamp accessories.

Power Beam 1000 LED Work Lamp

LED work lamp with 6 high performance LEDs for a powerful white light output. Features robust aluminium die-cast housing, stainless steel bracket and Free-Form (FF) reflector with clear lens for consistent close range illumination. Integrated Deutsch DT socket electrical connection.



Part Number	1551-HD	CLOSE RANGE
Mounting	Upright or pendant.	
Voltage	Multivolt™ for optimum brightness at input voltages from 9 to 33 volts.	
Power Consumption	<18W	
Max. Light Output	850 lumen	
Protection	Reverse polarity and voltage spike protection. IP 6K7 (Protection against temporary water immersion) IP 6K9K (Protection against dust and high-pressure/steam jet cleaning)	
Cable Length	Supplied with 2m of sheathed twin core cable and DT plug.	
Spare Part	9.1549.05	Plug and lead
Compliance	(E) CE	

See page 147 for work lamp accessories.

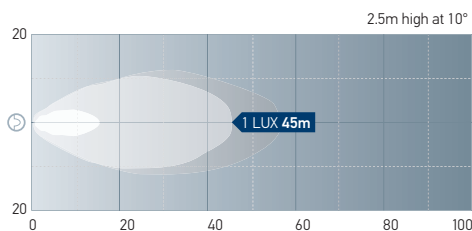
Power Beam 1000 LED Work Lamp - Heavy Duty

LED work lamp with 6 high performance white LEDs for a powerful white light output. Features robust aluminium die-cast housing, stainless steel heavy duty bracket and Free-Form (FF) reflector with clear hardened glass lens for consistent close range illumination. Integrated Deutsch DT socket electrical connection.



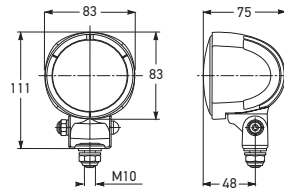
BEAM PATTERN

P/N 1551



### Close Range M70 LED Work Lamp

M70 LED Multivolt™ work lamp features 4 high performance white LEDs providing consistent close range illumination and lamp protection with 12 or 24V systems. High-sheen metallised Free-Form (FF) reflector and clear glass lens. Housed in an impact resistant aluminium die-cast housing, fully sealed for an ultra long service life in demanding high vibration environments.

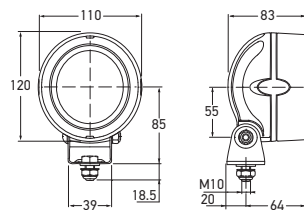


Part Number	1547-LED	CLOSE RANGE
Mounting	Upright or pendant.	
Voltage	Multivolt™ for optimum brightness at input voltages from 9 to 33 volts.	
Power Consumption	13W	
Max. Light Output	800 lumen	
Protection	Reverse polarity and voltage spike protection. IP 6K7 (Protection against dust and temporary water immersion) IP 6K9K (Protection against dust and high-pressure/steam jet cleaning)	
Cable Length	Supplied with 2m of sheathed cable.	
Compliance	<span>Ⓔ</span> <span>CE</span>	

Part Number	CLOSE RANGE LED WORK LAMP - EXTENDED VOLTAGE	
	1547-LEDEV	CLOSE RANGE
Voltage	Multivolt™ for optimum brightness at input voltages from 10 to 100 volts.	
Max. Light Output	600 lumen	
Other specifications as per P/N 1547-LED		

### Close Range Mega Beam LED Work Lamp

Mega Beam Generation 3 LED Multivolt™ work lamps feature 4 high performance white LEDs providing consistent close range illumination with 12 or 24V DC systems. High-sheen metallised Free-Form (FF) reflector and clear glass lens. Housed in an impact resistant aluminium die-cast and UV plastic housing, fully sealed for an ultra long service life in demanding high vibration environments.

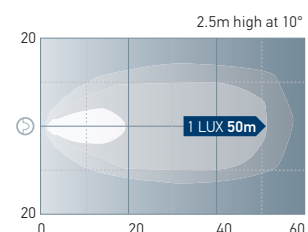
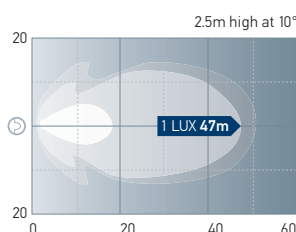


Part Number	1539-LED	CLOSE RANGE
Mounting	Upright with M10 bolt.	
Voltage	Multivolt™ for optimum brightness at input voltages from 9 to 33 volts.	
Power Consumption	13W	
Max. Light Output	800 lumen	
Protection	Reverse polarity and voltage spike protection. IP 6K7 (Protection against dust and temporary water immersion) IP 6K9K (Protection against dust and high-pressure/steam jet cleaning)	
Cable Length	Supplied with 2m of sheathed cable.	
Compliance	<span>Ⓔ</span> <span>CE</span>	

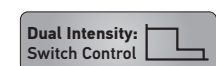
#### BEAM PATTERNS

P/N 1547-LED

P/N 1539-LED





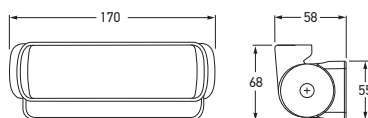


Power Supply  
**MULTI VOLT**

**30 LED**

Lens Material  
**GMD**

Bracket  
**STAINLESS STEEL**



Part Number	LONG RANGE	CLOSE RANGE	
	98095023	98095003	WHITE
	98095033	98095014	WARM WHITE
Mounting	Upright or pendant.		
Voltage	Multivolt™ for optimum brightness at input voltages from 9 to 33 volts.		
Power Consumption	High intensity mode: 12W (1A@12V/0.50A@24V) Low intensity mode: 2W (0.17A@12V/0.08A@24V)		
Max. Light Output	650 lumen		
Protection	Reverse polarity and voltage spike protection. IP 6K7 (Protection against dust and temporary water immersion) IP 6K9K (Protection against dust and high-pressure/steam jet cleaning)		
Cable Length	Pre-wired with 2.5m of sheathed multi-core cable.		
Lens Material	Grilamid®		
Compliance	CE Z208		

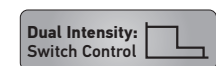
## DuraLED® WL750 Work Lamp

Featuring an integrated dual intensity circuit, a high level of spike protection and energy efficient Multivolt™ technology, the innovative DuraLED® WL750 will appeal for applications where energy efficiency and reliability is a must. Features a tough, chemical resistant Grilamid® lens, a highly impact resistant Swiss-made crystal clear polyamide with superior tolerance to chemical and long term harsh UV exposure, as well as technologically advanced thermally conductive non-metal housing.



Friction mounts; easy adjustment without tools.

Completely sealed lamp/cable entry. Marine grade stainless steel bracket.

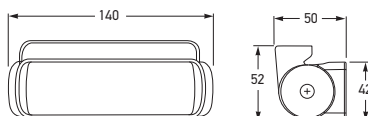



Power Supply  
**MULTI VOLT**

**4 LED**

Lens Material  
**GMD**

Bracket  
**STAINLESS STEEL**



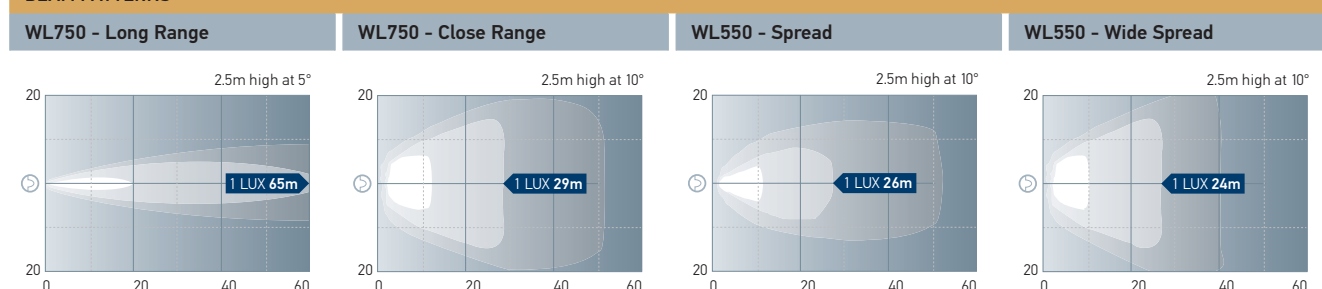
Part Number	SPREAD	WIDE SPREAD	
	98057310	98057300	WHITE
Mounting	Upright or pendant.		
Voltage	Multivolt™ for optimum brightness at input voltages from 9 to 33 volts.		
Power Consumption	7W		
Max. Light Output	550 lumen		
Protection	Reverse polarity and voltage spike protection. IP 6K7 (Protection against dust and temporary water immersion) IP 6K9K (Protection against dust and high-pressure/steam jet cleaning)		
Cable Length	Pre-wired with 2.5m of sheathed multi-core cable.		
Lens Material	Grilamid®		
Compliance	CE  Z208		

## DuraLED® WL550 Work Lamp

LED universal work lamp with low profile stainless steel bracket. Lamp may be mounted upright or pendant and may be adjusted vertically up or down. Totally sealed against dust and moisture and with a tough, chemical resistant Grilamid® lens. Option of two light patterns, spread or wide spread.

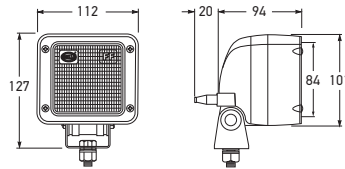


### BEAM PATTERNS



### Close Range Halogen Work Lamp

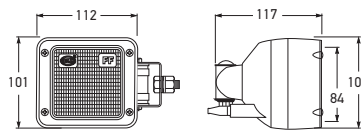
Halogen work lamp with Free-Form (FF) reflector for uniform close range illumination. Made of die-cast aluminium. Glass lens bonded with reflector to be dust and moisture-proof. Shock-proof plastic housing. External wiring connection. DT version with 2 pin Deutsch rear plug.



Part Number	1533	12 VOLT
	1533-35W	
	1533-24V	
	1533-DT24V (With Deutsch DT plug)	24 VOLT
Mounting	Upright, side or pendant mounting through swivelling the lamp unit 90°. U-shape four point fixing bracket with M10 screw for mounting on horizontal and vertical surfaces.	
Power Consumption	12V - 55W/35W 24V - 70W	
Bulbs to Suit	12V 24V	YC1255, YC1235 (1533-35W) YC2470
Protection	IP 6K4K (Protection against dust and water splash) IP X9K (Protection against high-pressure jets)	
Spare Parts	9.1533.01 9.1533.05 9.1533.08 9.1530.07 9.1549.05	Insert Plug and lead Pedestal bracket Stainless steel bracket Deutsch plug and 2.5m of sheathed cable (DT)
Not suitable for 100W bulbs.		

### Close Range Halogen Work Lamp - Side Mount

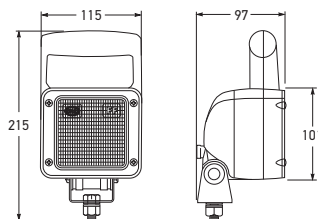
As per P/N 1533 with side mount.



Part Number	1533-SM	12 VOLT
	1533-SM24V	24 VOLT
Mounting	With M10 fixing screw for mounting on vertical surfaces. Pivot range: Horizontal 130° Inclination range: Vertical 90°	
Other specifications as per P/N 1533.		

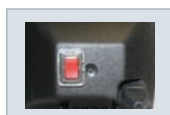
### Close Range Halogen Work Lamp

As per P/N 1533 with handle. P/N 1533-SW includes switch.



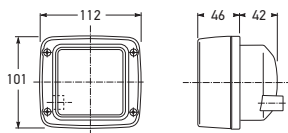
Part Number	1533-HAN	12 VOLT
	1533-HAN24V	24 VOLT
	1533-SW (Includes switch)	12 VOLT

Other specifications as per P/N 1533.



P/N 1533-SW

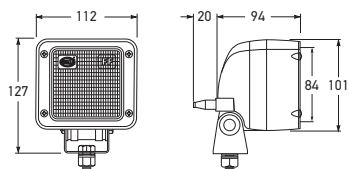
WORK LAMPS



Part Number	1533-FM		12 VOLT
	1533-FM24V		24 VOLT
Mounting	Recess mount.		
Power Consumption	12V - 55W 24V - 70W		
Bulbs to Suit	12V 24V	YC1255, YC1235 YC2470	
Protection	As per P/N 1533.		
Spare Parts	9.1533.01 9.1533.05	Insert Plug and lead	

Close Range Halogen Work Lamp

Halogen work lamp with Free-Form (FF) reflector for uniform close range illumination. Made of die-cast aluminium. Glass lens bonded with reflector to be dust and moisture-proof. Shock-proof plastic housing. External wiring connection. Suitable for recess mounting.



Part Number	1533-LR		12 VOLT
	1533-LR24V		24 VOLT
Mounting	Suitable for upright, side or pendant mounting through swivelling the lens unit 90°. U-shape bracket with M10 screw for mounting on horizontal and vertical surfaces.		
Power Consumption	12V - 55W 24V - 70W		
Bulbs to Suit	12V 24V	YC1255, YC1235 YC2470	
Protection	As per P/N 1533.		
Spare Parts	9.1533.03 9.1533.05 9.1533.08 9.1530.07	Insert Plug and lead Pedestal bracket Stainless steel bracket	
Not suitable for 100W bulbs.			

Long Range Halogen Work lamp

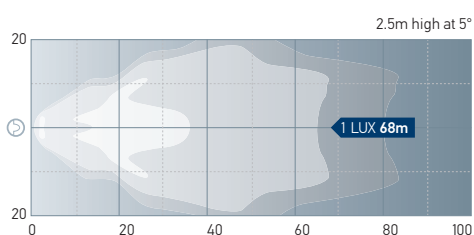
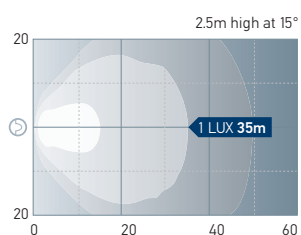
Halogen work lamp with Free-Form (FF) reflector for long range, uniform illumination. Made of die-cast aluminium. Glass lens bonded with reflector to be dust and moisture-proof. Shock-proof plastic housing. External wiring connection.



BEAM PATTERNS

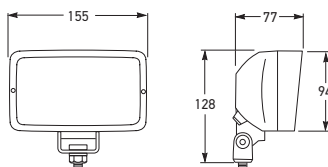
P/N 1533

P/N 1533-LR



## Close Range Halogen Work Lamp

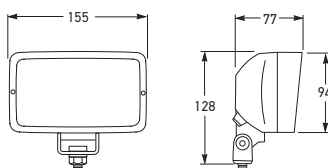
Halogen work lamp with black fibre reinforced ABS housing and Free-Form (FF) reflector for close range, uniform illumination.



Part Number	1519	12 VOLT
	1519-24V	24 VOLT
Mounting	Upright or pendant.	
Power Consumption	12V - 55W 24V - 70W	
Bulbs to Suit	12V 24V	YC1255 YC2470
Protection	IP 5K4K (Protection against dust and water splash)	
Spare Part	9.2859.02	FF insert
Not suitable for 100W bulbs.		

## Close Range Halogen Work Lamp

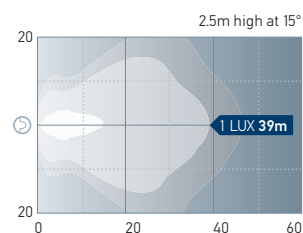
Halogen work lamp with black fibre reinforced ABS housing, stainless steel bracket, bolts and lens screws. Free-Form (FF) reflector for close range, uniform illumination.



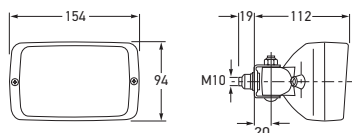
Part Number	1519-SS	12 VOLT
	1519-SS24V	24 VOLT
Mounting	Upright or pendant.	
Power Consumption	12V - 55W 24V - 70W	
Bulbs to Suit	12V 24V	YC1255 YC2470
Protection	IP 5K4K (Protection against dust and water splash)	
Spare Part	9.2859.02	FF insert
Not suitable for 100W bulbs.		

### BEAM PATTERN

P/N 1519



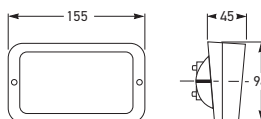




Part Number	1519-SM		12 VOLT
	1519-SM24V		24 VOLT
Mounting	Side mount.		
Power Consumption	12V - 55W 24V - 70W		
Bulbs to Suit	12V	YC1255	
	24V	YC2470	
Protection	IP 5K4K (Protection against dust and water splash)		
Spare Part	9.2859.02	FF insert	
Not suitable for 100W bulbs.			

### Close Range Halogen Work Lamp

Halogen side mount work lamp with black fibre reinforced ABS housing and Free-Form (FF) reflector for close range, uniform illumination. Universal side bracket with M10 mounting screw for attachment to vertical surfaces.



Part Number	2860-BLACK		12 VOLT
Mounting	Recess mount - front inclination +/- 5 degrees.		
Power Consumption	55W		
Bulbs to Suit	12V	YC1255	
	24V	YC2470	
Protection	IP 5K4K (Protection against dust and water splash)		
Spare Part	9.2859.02	FF insert	
Not suitable for 100W bulbs.			

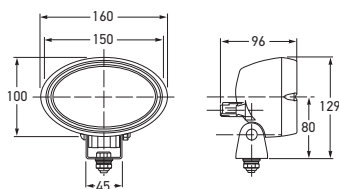
### Close Range Halogen Work Lamp

Halogen work lamp with recess mount black fibre reinforced ABS housing and Free-Form (FF) reflector for close range, uniform illumination.



## Close Range Oval 100 Halogen Work Lamp

Oval 100 Halogen work lamp with Free-Form (FF) reflector for close range, medium spread illumination. Uniform large surface illumination results in excellent working light. Sturdy housing design.

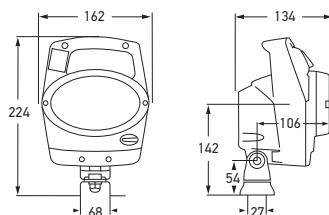


Part Number	1540	12 VOLT
	1540-24V	24 VOLT
Power Consumption	12V - 55W 24V - 70W	
Bulbs to Suit	12V 24V	YC1255 YC2470
Protection	IP 5K4K (Protection against dust and water splash)	
Spare Parts	9.1540.01 9.1533.05 9.1533.08 9.1530.07	Insert Plug and lead Pedestal bracket Stainless steel bracket

Not suitable for 100W bulbs. See page 147 for work lamp accessories.

## Close Range Oval 100 Halogen Work Lamp with Handle and Switch

Oval 100 Halogen work lamp with solid alloy Free-Form (FF) reflector for close range illumination. Comes with handle and switch. Reinforced plastic housing and glass lens. Glass lens protected by extended rim. On-off switch conveniently positioned on the front of the lamp.

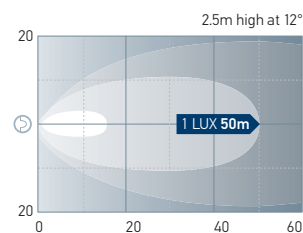


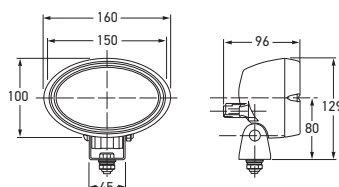
Part Number	1552	12 VOLT
Mounting	Upright with four point fixing bracket.	
Power Consumption	55W	
Bulbs to Suit	12V 24V	YC1255 YC2470
Spare Part	9.1540.01	Insert

Not suitable for 100W bulbs.

### BEAM PATTERN

P/N 1552



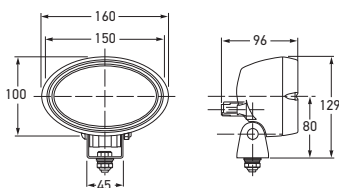


### Close Range Halogen Work Lamp

Halogen work lamp with Free-Form (FF) reflector and clear glass lens for close range, wide spread illumination. Sturdy housing design.



Part Number	1541	12 VOLT
	1541-24V	24 VOLT
Mounting	Upright or pendant. Single bolt with tilt adjustment.	
Power Consumption	110W (2 x 55W)	
Bulbs to Suit	12V	2 x YC1255
	24V	2 x YC2470
Protection	IP 5K4K (Protection against dust and water splash)	
Spare Parts	9.1541.01	Close range insert
	9.1530.07	Stainless steel bracket
	9.1531.08	Pipe socket base
	Not suitable for 100W bulbs.	



### Long Range Halogen Work Lamp

Halogen work lamp with Free-Form (FF) reflector for wide spread, long range illumination. The pattern free lens prevents scatter loss and avoids unwanted light reflections outside the illuminated area.



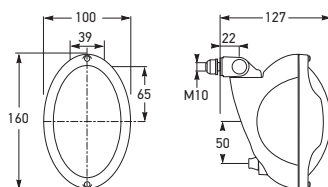
Part Number	1542	12 VOLT
	1542-24V	24 VOLT
Mounting	Upright or pendant. Single bolt with tilt adjustment.	
Power Consumption	110W (2 x 55W)	
Bulbs to Suit	12V	2 x YC1255
	24V	2 x YC2470
Protection	IP 5K4K (Protection against dust and water splash)	
Spare Parts	9.1542.01	Long range insert
	9.1530.07	Stainless steel bracket
	9.1531.08	Pipe socket base
	Not suitable for 100W bulbs.	

## Close Range Oval 100 Double Beam Work Lamp

Oval 100 double beam Halogen work lamp with solid alloy Free-Form (FF) reflector for close range illumination. Has two distinct patterns for use with fork lifts and other lifting vehicles. Lower beam illuminates the roadway and the upper beam illuminates the load and/or loading area. Sturdy glass reinforced plastic housing and glass lens.

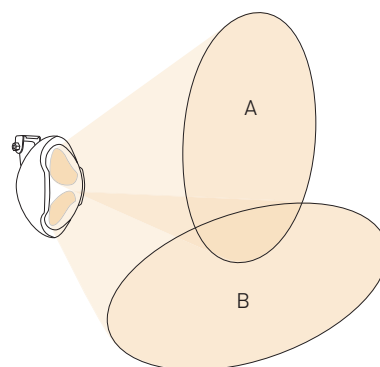


Side view shown



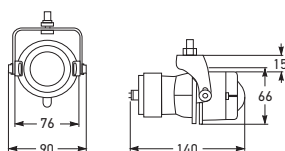
Part Number	1554	12 VOLT
Mounting	Pendant mounting with M10 mounting bolt.	
Power Consumption	12V - 110W (2 x 55W)	
Bulbs to Suit	12V 24V	2 x YC1255 2 x YC2470
Protection	IP 5K9K (Protection against dust and high-pressure/steam jet cleaning)	
Not suitable for 100W bulbs.		

### BEAM PATTERN



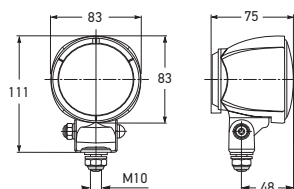
## Close Range Micro DE Halogen Work Lamp

Compact Micro DE (Dixial Ellipsoid) Halogen work lamp for use in applications with limited mounting space. Concentrated close range illumination. Magnesium housing with U-shaped one point mounting bracket.



Part Number	1501	12 VOLT
Mounting	Upright or pendant.	
Power Consumption	55W	
Bulbs to Suit	12V 24V	YC1255 YC2470
Protection	IP 5K4K (Protection against dust and water splash)	
Spare Part	9HD 149 253-007	Plastic cap with cable
Not suitable for 100W bulbs.		





Part Number	1547	12 VOLT
	1547-24V	24 VOLT
	PENDANT MOUNT	
	1547-P	12 VOLT
	1547-P24V	24 VOLT

Mounting P/Ns 1547 and 1547-24V suitable for upright mounting with M10 fixing screw.  
P/Ns 1547-P and 1547-P24V suitable for pendant mounting.

Power Consumption	12V - 55W 24V - 70W	
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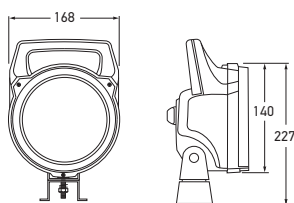
Bulbs to Suit	12V	YC1255
	24V	YC2470

Protection	IP 5K9K (Protection against dust and high-pressure/steam jet cleaning)	
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Not suitable for 100W bulbs.

### Close Range Halogen Work Lamp

Compact Halogen work lamp with a Free-Form (FF) brilliant round reflector. The non-patterned lens reduces light scatter and provides close range uniform illumination of the work area. Reflector made from die-cast aluminium. The lamp's ingenious bracket design allows it to be swivelled 360°, as well as the normal lateral adjustment.



Part Number	1511	12 VOLT
	1511-24V	24 VOLT
	LONG RANGE	COMBINATION RANGE
	1512	1513

Mounting Full swivel four point fixing bracket for mounting on flat or slightly curved surfaces.

Power Consumption	12V - 55W 24V - 70W	
-------------------	------------------------	--

Bulbs to Suit	12V	YC1255
	24V	YC2470

Protection	IP 5K4K (Protection against dust and water splash)	
------------	--	--

Spare Parts	9.1511.01	Close range insert
	9.1511.06	On-off rotary switch
	9.1511.08	Mounting bracket assembly
	9.1512.01	Long range insert
	9.1513.01	Combination range insert

Not suitable for 100W bulbs.

### Close Range Halogen Work Lamp

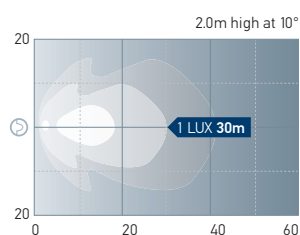
Work lamp with handle and switch. Black fibre-glass reinforced plastic housing with extended edge to protect lens.



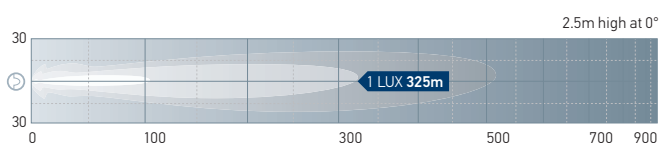
P/N 1512

#### BEAM PATTERNS

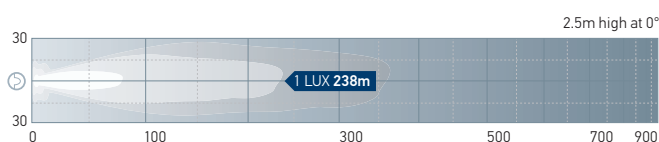
##### P/N 1547



##### P/N 1512 - Long Range

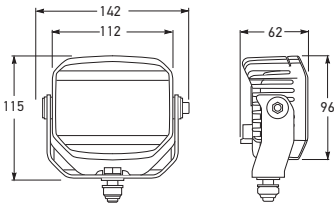


##### P/N 1513 - Combination Range



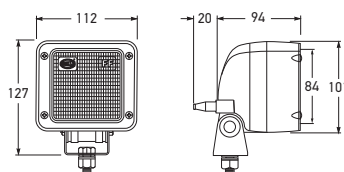
Power Beam 1000 LED  
Reversing Lamp

LED reversing lamp features 6 LEDs providing consistent illumination with 12 or 24V systems.



Part Number	1551-RE	
Mounting	Upright or pendant. Lamp inclination of 27° downwards.	
Voltage	Multivolt™ for optimum brightness at input voltages from 9 to 32 volts.	
Power Consumption	<18W	
Light Output	850 lumen	
Protection	Reverse polarity and Transient Voltage Suppressor (TVS). IP 6K7 (Protection against dust and temporary water immersion) IP 6K9K (Protection against dust and high-pressure/steam jet cleaning)	
Cable Length	Supplied with 2.5m of sheathed twin core cable and DT plug.	
Spare Part	9.1549.05	Plug and lead
Compliance	(E) 36160	



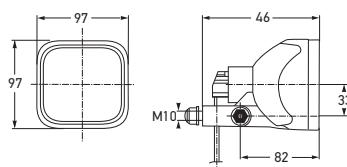


Part Number	1533-RE24V	24 VOLT
Mounting	Suitable for upright horizontal mounting. Single M10 mounting bolt with tilt adjustment. Inclination has to be 12° downwards.	
Power Consumption	70W	
Bulbs to Suit	12V 24V	YC1255 YC2470
Protection	IP 6K4K (Protection against dust and water splash) IP X9K (Protection against high-pressure jets)	
Spare Parts	9.1533RE.01 9.1533.05	Insert Plug and lead
Compliance	E12 23005	

Fully compliant with 3rd edition ADR 1/00 reversing spot lamp. Not suitable for 100W bulbs.

### Reversing Spot Lamp

Reversing spot lamps with 70W bulb, approved for use in New Zealand. Provides maximum visibility of the rear and/or sides during reversing manoeuvres. Equipped with die-cast aluminium Free-Form (FF) reflector and patterned glass lens for a broad and uniform illumination without harsh contrasts. Sturdy design and shock-proof plastic housing.



Part Number	1502-RE24V	24 VOLT
Mounting	Upright.	
Power Consumption	21W	
Bulbs to Suit	12V 24V	R1221 R2421
Protection	IP 6K9K (Protection against dust and high-pressure/steam jet cleaning)	
Compliance	E4 23262	

### Reversing Spot Lamp

ECO 21 reversing spot lamp with economical 21W bulb. Approved for use in New Zealand.

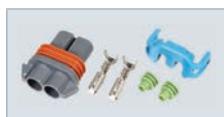


### HID Gas Discharge Power Pack - G3

HID gas discharge power pack to suit Generation 3 (G3) work lamps and headlamps. For D2S and D2R bulbs.



Part Number	5DV 007 760-631	12 VOLT
	5DV 007 810-171	24 VOLT
Spare Part	9.1534.05	2 pin connector, terminals and seals.



P/N 9.1534.05

### HID Gas Discharge Power Pack - G3

HID gas discharge power pack with alloy mounting bracket. To suit Generation 3 (G3) work lamps and headlamps. For D2S and D2R bulbs.



Part Number	9.1534.03	12 VOLT
	9.1535.03	24 VOLT
Spare Part	9.1534.05	2 pin connector, terminals and seals.
See page 99 for HID headlamp power packs.		



P/N 9.1534.05

### HID Gas Discharge Power Pack - G4

HID gas discharge power pack with plastic mounting bracket. To suit Generation 4 (G4) work lamps and headlamps. For D1S and D1R bulbs.



Part Number	9.1534G4.03	12 VOLT
	9.1535G4.03	24 VOLT
Spare Parts	9.1549.05	Deutsch plug and 2.5m sheathed cable
	9.1534G4.06	Ballast lead - 1m
	9.1534G4.07	Ballast lead - 3m
See page 99 for HID headlamp power packs.		

## WORK LAMPS

Part Number	9.1530.07
To Suit	P/Ns 1533, 1534, 1535, 1540, 1541, 1542 and 1551.

## Stainless Steel Bracket Assembly

Upper and lower stainless steel bracket and lamp mounting bolt. Suitable for 42mm wide lamp mounts.



Part Number	9.1533.08
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## Pedestal Bracket

Pedestal swivel bracket to suit most work lamps.



Part Number	9.1531.08
Mounting	Pipe socket mounting system. Allows work lamps be to be mounted on vehicles and removed again quickly.
Features	Integrated power feed is via the pipe socket. No separate wiring is necessary for the work lamp. Tightening the wing nut attaches the pipe socket attachment tightly to the base. Suitable for P/Ns 8007, 8007FM, 8007RA and 8008.
To Suit	P/Ns 1533, 1534, 1535, 1540, 1541, 1542 and 1551.

## Ultra Beam Pipe Socket Base

Suitable for applications that require a removable work lamp.



Part Number	9.1533.05
To Suit	P/N 1533

## Plug and Lead

AMP - 2 pin plug and 150mm cable.



Part Number	9.1520.07
To Suit	P/Ns 1520, 1521, 1522, 1523, 1524 and 1525.

## Spiral Cable Complete Plug

Plug and 2m extendable sheathed cable.



Part Number	9.1549.05
To Suit	LED and HID work lamp P/Ns 1551, 1551-RE, 1556, 1557 and 1559.

## Plug and Lead to Suit LED and HID Work Lamps

2 pin Deutsch plug and 2.5m sheathed cable.







# Emergency Lighting and Signal Warning Lamps

A comprehensive range of products that meet the requirements of a modern Emergency Response Fleet.



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# HELLA EMERGENCY AND SIGNAL WARNING LIGHTING

HELLA's range of Emergency Lighting and Signal Warning Lamps provide high levels of performance and reliability for situations where a powerful warning light is required to attract attention.



HELLA's revolving and warning lamps, either in LED, bulb or strobe technology, offer choices of signal colour, luminous intensities, flash patterns and supply voltages, providing a complete range to suit most applications and performance requirements.

## Light Technology

HELLA rotating beacons offer robust design and superior light performance. The high gloss, vapour-coated parabolic reflector and halogen bulb form an efficient optical system, maximising the light performance. The rotating light pattern is well recognised as a highly effective warning signal in all conditions, even in bright sunlight.

The design of the internal airflow prevents the light dome and reflector from accumulating condensation providing full functional safety at all times, while maintenance-free bearings and drive belt technology ensures smooth operation. Instant activation is ensured from ambient temperatures ranging from  $-40^{\circ}\text{C}$  to  $+60^{\circ}\text{C}$ .

## LED High Intensity Emergency Lighting

High intensity LED signal warning lamps are specially designed for emergency services and specialist applications. Features include ultra long service life, reduced maintenance requirements, reliability and outstanding light performance.

The HELLA Multi-flash range of warning lamps have 10 programmable flash modes and can be synchronised to flash alternatively, as a sequenced running pattern or in unison.





### Electromagnetic Compatibility (EMC)

Electromagnetic compatibility (EMC) is an increasingly relevant feature for Emergency and Signal Warning lighting.

As electronic devices become more common, so does the risk of unintended interference that can have adverse effects on other sensitive devices such as radios or communication equipment.

HELLA lighting products are designed and tested to reduce the possible risk of electromagnetic interference, both emissions as well as susceptibility, to limits defined in international standards.

As prescribed by New Zealand legislation, under circumstances, electronic products sold in New Zealand must be labelled with the C-tick  or RCM  marks. HELLA products are designed, tested and labelled to meet the requirements of this legislation



A cut away image showing the construction of the beacon and reflector.

### Revolving Beacons

HELLA's revolving beacons are specified with a robust plastic housing. This material is lightweight and insulated.

Noise is effectively minimised in some lamps by utilising silver contacts and a drive belt system. Dual drive belts ensure the lamp remains fully operational even if one of the belts should fail.

HELLA revolving beacons feature corrosion resistant bulb holders. On some models bulbs can be replaced from the rear of the reflector, preventing damage to the highly polished and coated reflector.

HELLA's revolving lamps incorporate radio frequency (RF) suppression which reduces the potential for interference with on-board communication equipment.

### Beacons and Optical Warning System Advantages:

- Intense light output - maximising warning light visibility and effectiveness.
- Independent bulb socket system - allows for simple, fast light source replacement without misalignment of the reflector.
- Economic product solution – low maintenance costs, minimal replacements required.

## ELIVER THE ONLINE COMPARISON TOOL



**Compare Beacons and Optical Warning Systems, Work Lamps, Auxiliary Head Lamps online.**



Scan the QR Code for the Eliver home page. QR Code reader required.

[www.hella.com/eliver](http://www.hella.com/eliver)

### CAUTION: MOUNTING OF MAGNETIC BASE REVOLVING LAMPS

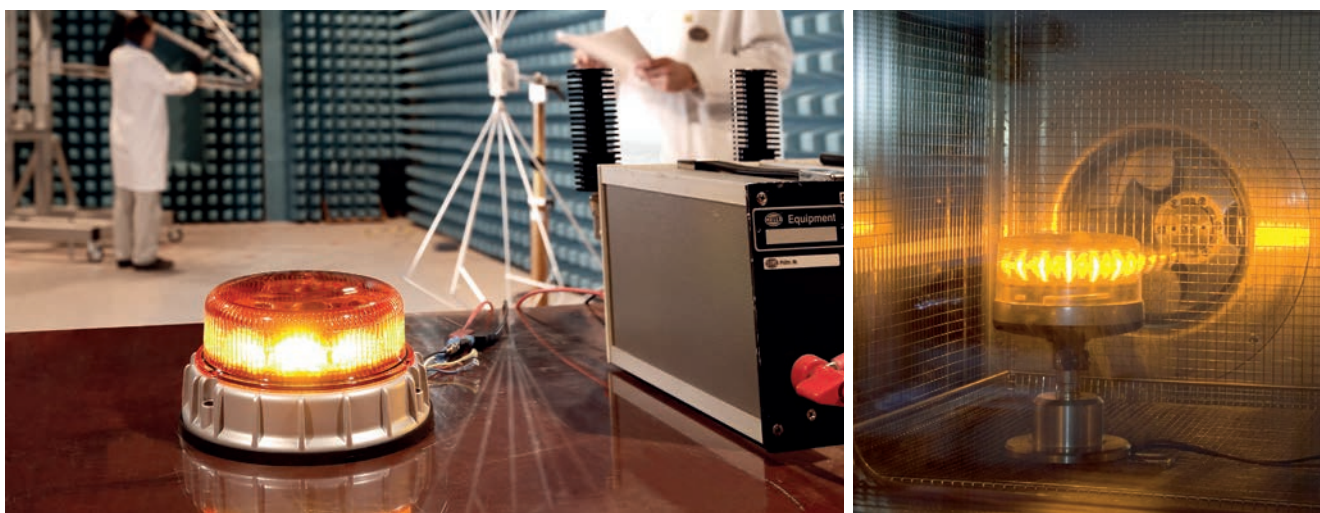
Due to environmental variances involved with vehicle acceleration and deceleration, fitment of warning lamps with a magnetic base cannot be recommended for use on moving vehicles





# PERFORMANCE AND RELIABILITY ARE GUARANTEED

HELLA Emergency Lamps are tested to International Standards.



## Vibration Test

This test simulates the behaviour of the products in harsh off-road conditions and verifies resistance to potholes, washboard road patterns and gravel roads.

The wide band random vibration test is used to test the mechanical endurance strength of the test specimen. The vibration frequency range extends from 10 to 1000 Hertz. In addition to vibration testing, products are subjected to a temperature overload of -40°C to +80°C.

## Ingress Protection (IP ratings)

HELLA Emergency and Signal Warning Lighting contain precision electronic and mechanical components in order to achieve outstanding product performance. In order to protect these components and assure long term reliability HELLA products are designed and tested to meet international standards on ingress protection as per IEC 60529, DIN 40050-9 or ISO 20653.

## Dust Test

Entry of dust can affect the optical and mechanical operation of a lamp, potentially compromising its performance and reliability. Accordingly HELLA products are designed and tested to ensure the risk of dust ingress is minimised or eliminated. Dust-resistant products are rated at IP 5(K) X, while dust-proof products are rated at IP 6(K) X.

## Water Splash Test

HELLA products that fulfil the water splash test requirement have been subjected to environmental testing designed to simulate operating conditions representing normal weather conditions. When correctly installed heavy rain, direct splashes and water sprays up to 4 bar will have no adverse effects on the long term reliability and performance of the product. This level of protection is provided on HELLA products rated at IP X4K or above.

## Temporary Immersion Test

HELLA products that fulfil the temporary immersion test requirement have been subjected to tests designed to simulate operating conditions that involve brief immersions in water such as off-road driving through a stream. This level of protection is provided on HELLA products rated at IP X7.

## High-Pressure Cleaner Test

The ultimate in water ingress protection, HELLA products that fulfil the high-pressure cleaner test requirement are able to withstand water and steam jets of up to 80°C and 100 bar that may be encountered during commercial and industrial cleaning processes. This level of protection is provided on HELLA products rated at IP X9K.


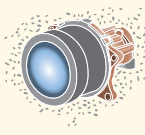


Designed, tested and protected for guaranteed performance and reliability.



# IP Ratings

How well protected is a product against environmental influences?  
The IP protection class states how resistant the product is.  
The classes are defined in DIN 40050-9. HELLA products  
are designed for different degrees of protection:

First Digit	PROTECTION AGAINST SOLID FOREIGN OBJECTS AND ACCESS TO HAZARDOUS PARTS		Second Digit	PROTECTION AGAINST LIQUIDS	
0	—	Non-protected	0	—	Non-protected
1	 50mm ↓ ● ↑	Protected against solid foreign objects of 50mm diameter and greater.	1		Protected against drops of water falling vertically.
2	 12.5mm ↓ ● ↑	Protected against solid foreign objects of 12.5mm diameter and greater.	2		Protected against drops of water falling vertically at up to 15° from the vertical.
3	 2.5mm ↓ ● ↑	Protected against solid foreign objects of 2.5mm diameter and greater.	3		Protected against spraying water falling vertically at up to 60° from the vertical.
4	 1.0mm ↓ ● ↑	Protected against solid foreign objects of 1.0mm diameter and greater.	4		Protected against splashing water from all directions.
5		Dust-protected.	4K		With higher pressure.
5K			5		Protected against jet of water from all directions.
6		Dust-sealed.	6		Protected against powerful water jets.
6K			6K		With higher pressure, specific for road vehicles.
			7		Protected against the effects of immersion. Protected against high-pressure cleaner, specific for road vehicles.
			8		Protected against prolonged effects of immersion under pressure to specified depth.
			9K		Protected against high-pressure cleaner, specific for road vehicles.



## DuraLED® Multi-flash Signal Warning Lamp

Multivolt™ warning lamps for emergency vehicles. The HELLA multi-flash range of warning lamps have 10 programmable flash modes and can be synchronised to flash alternately or in unison.



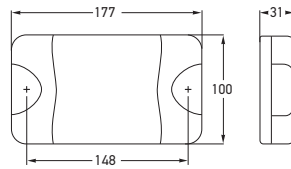
P/N 95903711

P/N 95903761



P/N 95903781

P/N 95903791



Part Number	95903701	RED
	95903711	AMBER
	95903761	BLUE
	95903781	GREEN
	95903791	WHITE

Mounting Two hole surface mount with mounting bushes supplied.

Voltage Multivolt™ for optimum brightness at input voltages from 9 to 33 volts.

Power Consumption 9W continuous (less in flashing modes).

Protection Reverse polarity and 5000 watt Transient Voltage Suppressor (TVS)  
IP 6K6 (Protection against dust and high-pressure water jets)  
IP 6K7 (Protection against dust and temporary water immersion)

Cable Length Pre-wired with 2.5m of sheathed multi-core cable.

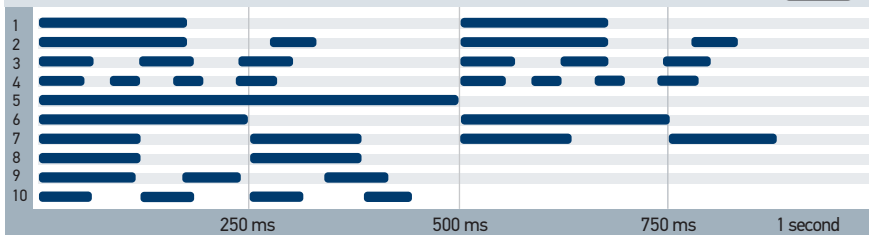
Compliance SAE J845 Class 1 (Red and amber versions) EMC e4 03 1925

See page 66 for DuraLED® accessories.

## HELLA MULTI-FLASH LAMP OPERATING MODES



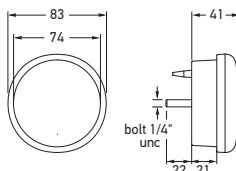
### Selectable Flash Patterns



### Flashing Options

Steady state	Lamp operates as a continuous ON signal
Independent flash	Lamp operates from an external flashing system
Flash state	Lamp operates in the flash mode preselected by the user
Blitz state	Lamp operates in a burst of quad flashes (pattern 4)

The blitz mode overrides the other operating modes and is triggered by switching the blue cable to negative (-).



Part Number	95901140	RED
	95901145	AMBER
	95901160	BLUE
	95901165	GREEN
Mounting	Single bolt 1/4" stainless UNC thread. Nut and washer supplied.	
Voltage	Multivolt™ for optimum brightness at input voltages from 9 to 33 volts.	
Power Consumption	6W continuous (less in flashing modes).	
Protection	Reverse polarity and voltage spike protection. IP 6K7 (Protection against dust and temporary water immersion) IP 6K9K (Protection against dust and high-pressure/steam jet cleaning)	
Cable Length	Pre-wired with 2.5m of sheathed multi-core cable.	
Compliance	EMC  03 1681	

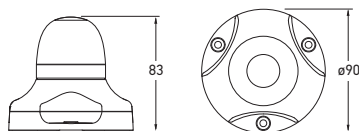
See page 69 for mounting accessories.


### LED 83mm Round Multi-flash Signal Lamp

83mm diameter round LED signal lamps with single bolt mount for emergency vehicles. The HELLA multi-flash range of warning lamps have 10 programmable flash modes and can be synchronised to flash alternately or in unison.



P/N 95901145 P/N 95901160 P/N 95901165



Part Number	98091100	WHITE
	98091120	GREEN
	98091140	RED
	98091160	AMBER
	98091170	BLUE
Mounting	Upright mounting with three point mount.	
Voltage	Multivolt™ for optimum brightness at input voltages from 9 to 33 volts.	
Power Consumption	Less than 5W (less in flashing modes).	
Protection	Reverse polarity and voltage spike protection. IP 67 (Protection against dust and temporary water immersion)	
Cable Length	Pre-wired with 2.5m of sheathed multi-core cable.	
Lens Material	Grilamid®	
Compliance	EMC  03 1679	
Lamps shown illuminated (right).		

### LED 360° Multi-flash Signal Lamp

Multi-purpose LED 360° warning lamp with clear Grilamid® lens, available in four signal colours and white. The HELLA multi-flash range of warning lamps have 10 programmable flash modes and can be synchronised to flash alternately or in unison. Optic appears clear until illuminated.



P/N 98091120 P/N 98091140



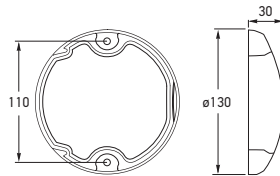
P/N 98091160 P/N 98091170

### EuroLED® Signal Warning Lamp - 24 Volt

Low profile signal warning LED lamp featuring Ultra Wide Visibility Optics for significantly improved side visibility.



P/N 95902181



Part Number	95902081	RED
	95902181	AMBER
Mounting	Two hole surface mount with mounting bushes supplied.	
Voltage	20-28V	
Power Consumption	5W	
Protection	Reverse polarity and Transient Spike Circuit protection. IP 6K6 (Protection against dust and high-pressure water jets) IP 6K7 (Protection against dust and temporary water immersion)	
Cable Length	Pre-wired with 2.5m of sheathed multi-core cable.	
Compliance	EMC	e4 03 1140

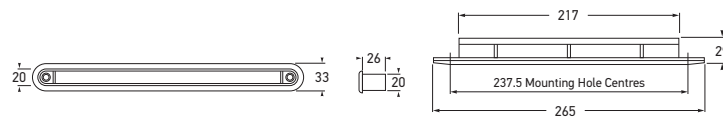
This lamp requires an external flasher unit such as P/N 3040. See page 68 for EuroLED® accessories.

### LED Wide Rim Strip Warning Lamp

Covert wide rim strip LED signal warning lamp available in red and blue colour variants. Optic appears clear until illuminated. Includes gasket, screws and screw caps.



P/N 95907370

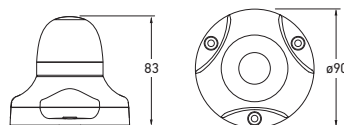


Part Number	12 VOLT	24 VOLT	
	95907360	95907365	BLUE
	95907370	95907375	RED
Mounting	Two hole recess mount. May be mounted horizontally or vertically.		
Power Consumption	2W		
Protection	Reverse polarity protection. IP 6K7 (Protection against dust and temporary water immersion) IP 6K9K (Protection against dust and high-pressure/steam jet cleaning)		
Cable Length	Pre-wired with 2.5m of multi-core cable.		

This lamp requires an external flasher unit such as P/N 3040. See page 70 for strip lamp accessories.

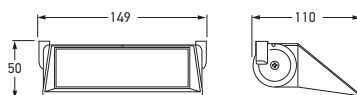
### LED 360° Warning Lamp

Multi-purpose LED 360° warning lamps with Grilamid® lens available in four signal colours and white. Optics appear clear until illuminated.



Part Number	98091004	WHITE
	98091024	GREEN
	98091044	RED
	98091064	AMBER
	98091074	BLUE
Mounting	Upright mounting with three point mount.	
Voltage	Multivolt™ for optimum brightness at input voltages from 9 to 33 volts.	
Power Consumption	5W	
Protection	Reverse polarity and voltage spike protection. IP 67 (Protection against dust and temporary water immersion)	
Cable Length	Pre-wired with 2.5m of sheathed multi-core cable.	
Lens Material	Grilamid®	
Compliance	EMC	e4 03 1679
See page 155 for multi-flash versions. This lamp requires an external flasher unit such as P/N 3040.		

### LED Dash Mount Signal Lamp - 12 Volt

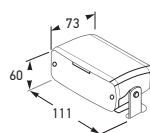


Part Number	95913610	AMBER
Mounting	Dash mount.	
Voltage	12V	
Power Consumption	3W	
Cable Length	Pre-wired with 2.5m of multi-core cable.	
This lamp requires an external flasher unit such as P/N 3040.		

Inconspicuous LED warning lamp with an unobtrusive and aesthetic design allowing for permanent fitment, making it an ideal supplement to revolving or strobe lamps attached to the vehicle roof. Optic appears clear until illuminated in amber signal colour.



### LED Viper™ S2 Signal Lamp - 12 Volt

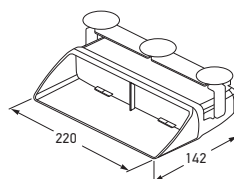


Part Number	329000A	AMBER
	329000R	RED
Mounting	Mounting bracket or suction caps (included).	
Voltage	12V	
Power Consumption	19W	
Cable Length	Pre-wired with 2.7m of cable with switchable power plug.	

Viper™ S2 advances auxiliary internal warning to a higher plateau with superior light output, easy-to-select flash patterns and simple pattern synchronization. The superior warning capability of Solaris™ reflector technology provides a bold array of light and impressive off-axis reflection. Phenomenal light output, versatile mounting options and simplistic product functionality make the Viper™ S2 product stand out in the warning light industry.



### LED Viper™ S2 Signal Lamp - 12 Volt



Part Number	329000AA	AMBER
	329000RR	RED
Mounting	Mounting bracket or suction caps (included).	
Voltage	12V	
Power Consumption	28W	
Cable Length	Pre-wired with 2.7m of cable with switchable power plug.	

Viper™ S2 advances auxiliary internal warning to a higher plateau with superior light output, easy-to-select flash patterns and simple pattern synchronization. The superior warning capability of Solaris™ reflector technology provides a bold array of light and impressive off-axis reflection. Phenomenal light output, versatile mounting options and simplistic product functionality make the Viper™ S2 product stand out in the warning light industry.



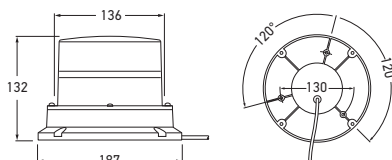
		
Push button pattern selection makes selecting one of over 20 flash patterns simple.	Snap on guards attach or detach without requiring the use of hand tools and provide flash protection inside the vehicle.	The power plug option allows for instant installation and features an on/off switch for fast activation.



### LED UltraRAY® Warning Beacon

UltraRAY® LED beacons offer multiple, user-selectable flash patterns that suit a large variety of applications. Additional user selectable features include a battery saver mode to alert users if the equipment power supply drops below normal operating voltage levels to conserve power, as well as a daylight sensing that can automatically adjust the intensity of the beacon to ambient light levels.

A reverse gear circuit allows the flash pattern to be changed to alert staff of the travel direction of the equipment. UltraRAY® beacons are extremely robust, tolerant to severe vibration levels and very compact in design.

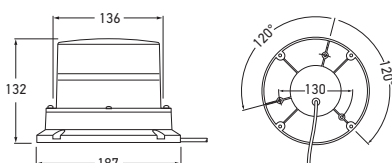


Part Number	27091001	AMBER
Voltage	Multivolt™ 12-30V	
Power Consumption	20W max.	
Protection	IP 6K5K (Protection against dust and powerful water jets at increased pressure)	
Cable Length	Pre-wired with 200mm of cable.	
Compliance	SAE J845 Class 1	



### LED UltraRAY® R Rotating Beacon

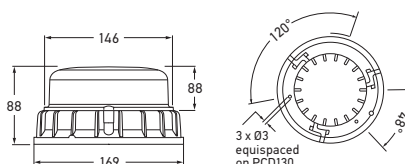
UltraRAY® R LED beacons feature user selectable 'rotating' or quad flash patterns. They are extremely robust, tolerant to severe vibration levels and very compact in design. UltraRAY® R LED warning beacons are maintenance free with no moving parts or fragile globes.



Part Number	27091071	AMBER
	27091091 (High output)	
Voltage	Multivolt™ 12-30V	
Power Consumption	20W max.	
Protection	IP 6K5K (Protection against dust and powerful water jets at increased pressure)	
Cable Length	Pre-wired with 200mm of cable.	
Compliance	SAE J845 Class 1	



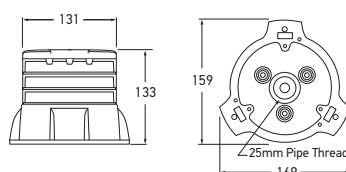
## EMERGENCY LIGHTING AND SIGNAL WARNING LAMPS



Part Number	1614			AMBER
	1614-MAG (Magnetic mount)			
	1616			RED
Mounting	Fixed or magnetic mounting on horizontal surfaces.			
Voltage	Multivolt™ for optimum brightness at input voltage from 9 to 33 volts.			
Power Consumption	30W max.			
Protection	Reverse polarity and Transient Spike Circuit protection. IP 6K7 (Protection against dust and temporary water immersion)			
Flash Rate	Simulated rotation 120rpm (2.00Hz)			
Compliance	ECE R65 TA2	ECE R65 TR2	SAE J 845 Class 1	CISPR25 Class 5

## K-LED 2 Beacon

K-LED low profile beacons are the ideal choice wherever beacons risk interference with radio communications. Featuring 20 high power LEDs providing high light output for best visibility. An automatic day/night sensor adjusts brightness to avoid glare discomfort at night. 14 different flashing and 2 rotating patterns.



## DuraRAY3® Beacon

DuraRAY3® beacons are designed for mining and construction applications where the cost of equipment downtime is large and safety is paramount.

Part Number	2RL 011 585-001	AMBER
Mounting	Fixed on horizontal surfaces.	
Voltage	Multivolt™ 9-33V	
Power Consumption	33W max. average	
Temperature Range	-20° to +50°C	
Protection	Overheat, reverse polarity and short circuit protection. Shock resistant to 200G. IP 6K9K (Protection against dust and high-pressure/steam jet cleaning)	
Flash Rate	Simulated rotation 133rpm (2.22Hz)	
Compliance	CISPR25 Class 3 UL94HB	

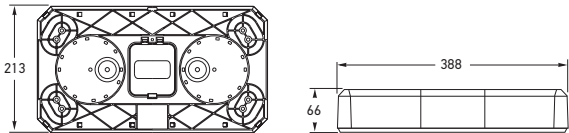


## Caution: Mounting of Magnetic Base Revolving Lamps

Due to HELLA being unable to control the condition of the mounting surface or the potential forces that may occur during deceleration, fitment of warning lamps with a magnetic base cannot be recommended for use on moving vehicles.

LED Highlighter™ Mini Light Bars

The Highlighter™ LED combines the high performance ROC™ (Reliable On-board Circuitry) with the high efficiency Solaris™ reflector design. The innovative reflector design offers uniform 360° light distribution, which means no dark spots or shadows.

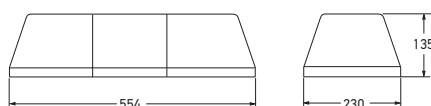


P/N 454218/454217

Part Number	12 VOLT	24 VOLT	
	454201A	454201A-24V	AMBER
	454205A (Economy)		
	454201AMAG (Magnetic base)		
	454201R	454201R-24V	RED
	454201B		BLUE
Flash Rate	20 selectable flash patterns.		
Current Draw	12V - 5.0A max. 24V - 3.0A max.		
Spare Parts	454217 454218 452341 9.454201.07 9.454201.02 9.454201.03 9.454201.04 9.454201.05	Mount riser 52mm Mount flat 12mm Magnetic mounting kit Highlighter base Amber lens Blue lens Red lens Clear lens	
Compliance	SAE J845 Class 1		

HELLA does not recommend the magnetic base version for use on a moving vehicle (see page 159).





Part Number	12 VOLT		24 VOLT	
	7415111		7211908	AMBER
	7211702		7211908-R	RED
Flash Rate	190 flashes per minute.			
Bulbs to Suit	12V 24V	2 x C1255 2 x C2470		
Spare Parts	7210897 7210989 7411010 Z8559A002B 7439234	Magnetic mount kit Lens retainer/plug kit Motor/reflector assembly 12V Worm gear - replacement Motor/reflector assembly 24V		
Compliance	SAE J845 Class 1			

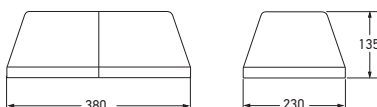
### Turbo Beam 56cm (22") Light Bar

Turbo beams are built from very highly reliable components to maximise their effectiveness in extreme conditions. They also feature impact-resistant polycarbonate domes and aluminium alloy extrusions to increase service life. In addition, the Turbo Beam's powerful rotators contain parabolic reflectors, providing exceptional performance and reliability.



P/N 7210989

P/N 7210897



Part Number	12 VOLT		24 VOLT	
	7415010		7211900	AMBER
	7211700		7211900-R	RED
Flash Rate	190 flashes per minute.			
Bulbs to Suit	12V 24V	2 x C1255 2 x C2470		
Spare Parts	7210897 7210989 7411010 Z8559A002B 7439234	Magnetic mount kit Lens retainer/plug kit Motor/reflector assembly 12V Worm gear - replacement Motor/reflector assembly 24V		
Compliance	SAE J845 Class 1			

### Turbo Beam 38cm (15") Light Bar

Turbo beams are built from very highly reliable components to maximise their effectiveness in extreme conditions. They also feature impact-resistant polycarbonate domes and aluminium alloy extrusions to increase service life. In addition, the Turbo Beam's powerful rotators contain parabolic reflectors, providing exceptional performance and reliability.



P/N 7415010

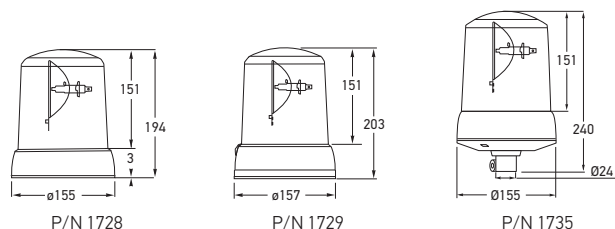
#### LENSES FOR TURBO BEAM LIGHT BARS

Lens	Left Hand	Centre	Right Hand
Amber	P/N 7411187	P/N 7411177	P/N 7411167
Red	P/N 7411189	P/N 7411179	P/N 7411169
Blue	P/N 7411186	P/N 7411176	P/N 7411166



## Revolving Beacon KL 7000

KL 7000 high performance revolving beacon with light values well above the minimum requirements. All KL 7000 beacons can be operated on 12 or 24V by changing the bulb. The halogen bulb is replaced from the rear of the reflector eliminating the need to touch the highly polished reflector surface. A twin belt drive ensures a smooth and quiet operation.



Part Number	12 VOLT		24 VOLT	
	1728		1728-24V	AMBER
	1727		1727-24V	RED
	1726		1726-24V	BLUE



Part Number	12/24 VOLT		
	1729 (Magnetic mount)		AMBER
	1735 (Flexibase mount)		
Current Draw	12V 24V	5.5A 3.5A	
Power Consumption	12V - 55W 24V - 70W		
Rotation	160rpm		
RF Suppression	Conducted Class 5 (CISPR25).		
Protection	IP 5K4K (Protection against dust and water splashing with increased pressure) IP X9K (Protection against high-pressure/steam jet cleaning)		
Bulbs to Suit	12V 24V	C1255 C2470	
Spare Parts	9.1726.01 Blue lens 9.1727.01 Red lens 9.1728.01 Amber lens 9.1737.91 Two drive belts 9.1726.23 Reflector assembly 9.1726.52 Motor assembly 12/24V 8007 Connecting piece 8007RA Connecting piece - right angle mount 8007FM Connecting piece - flat mount 8008 Connecting piece - threaded		
Compliance	R65/00	(E) 1241	e1 03 1740

HELLA does not recommend the magnetic base version for use on a moving vehicle (see page 159).  
See page 169 for spare part images.



P/N 8007

P/N 8007FM

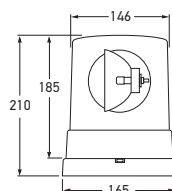
P/N 8007RA

P/N 8008



P/N 1729

P/N 1735

**EMERGENCY LIGHTING AND SIGNAL WARNING LAMPS**


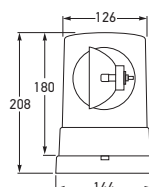
Part Number	12 VOLT		24 VOLT	
			1720	BLUE
			1721	RED
	1724		1722	AMBER
Power Consumption	12V - 55W 24V - 70W			
Rotation	160rpm			
RF Suppression	VDE 0879, Class 3, FM 5.			
Bulbs to Suit	12V 24V	C1255 C2470		
Protection	IP 5K4K (Protection against dust and water splashing with increased pressure) IP X9K (Protection against high-pressure/steam jet cleaning)			
Spare Parts	1653                      Magnetic mounting kit 9.1717.01              Blue lens 9.1718.01              Red lens 9.1719.01              Amber lens (no optic lens) 9.1724.01              Amber lens 9.1723.01              Green lens 9.1725.02              Purple lens (Heavy haulage) 9.1717.54              Motor 12V 9.1720.54              Motor 24V 9.1737.91              Two drive belts 9.1717.23              Reflector base assembly			
Compliance	R65/00	E2 88072		
HELLA does not recommend the magnetic base version for use on a moving vehicle (see page 159). See page 169 for spare part images.				

**Revolving Beacon KL 700**

KL 700 high performance revolving beacon. The halogen bulb is replaced from the rear of the reflector eliminating the need to touch the highly polished reflector surface. Twin belt drive ensures a smooth and quiet operation.



P/N 1653



Part Number	12 VOLT		24 VOLT	
	1702		1705	AMBER
Power Consumption	12V - 55W 24V - 70W			
Rotation	160 +/- 30rpm			
RF Suppression	VDE 0879, Class 3, FM 5.			
Bulbs to Suit	12V 24V	C1255 C2470		
Protection	IP 5K4K (Protection against dust and water splashing with increased pressure) IP X9K (Protection against high-pressure/steam jet cleaning)			
Spare Parts	9.1709.01 Red lens 9.1708.01 Blue lens 9.1713.01 Amber lens 9.1717.54 Motor 12V 9.1720.54 Motor 24V 9.1737.91 Two drive belts 9.1717.23 Reflector base assembly 9.1717.52 Motor/reflector assembly 12V 9.1720.52 Motor/reflector assembly 24V			
Compliance	R65/00	E4 6506	E4 03 2183	
See page 169 for spare part images.				

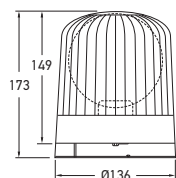
**Revolving Beacon KL 710**

KL 710 high performance revolving beacon. The halogen bulb is replaced from the rear of the reflector eliminating the need to touch the highly polished reflector surface. Twin belt drive ensures a smooth and quiet operation.



### Revolving Beacon KL Junior - Amber

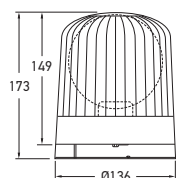
Economy revolving beacon with gear drive and fixed halogen bulb.



Part Number	<b>71724</b>	<b>12 VOLT</b>
	<b>71722</b>	<b>24 VOLT</b>
	<b>71723 (Bulb/s not included)</b>	<b>12/24 VOLT</b>
Mounting	Three point mount. Horizontal mount.	
Power Consumption	12V - 55W 24V - 70W	
Bulbs to Suit	12V 24V	C1255 C2470
Protection	IP 5K4K (Protection against dust and water splashing with increased pressure) IP X9K (Protection against high-pressure/steam jet cleaning)	
Spare Part	9.71722.01	Amber lens
Compliance	R65/00	(E) 6514 [e] 03 2182

### Revolving Beacon KL Junior, Magnetic Mount - Amber

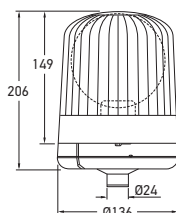
Revolving beacon complete with magnetic base for quick and secure attachment to vehicle roof. Features a spiral cable and power socket.



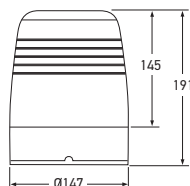
Part Number	<b>71725 (Bulb/s not included)</b>	<b>12/24 VOLT</b>
Rotation	160rpm	
Bulbs to Suit	12V 24V	C1255 C2470
Protection	IP 5K4K (Protection against dust and water splashing with increased pressure) IP X9K (Protection against high-pressure/steam jet cleaning)	
Spare Part	9.71722.01	Amber lens
Compliance	R65/00	(E) 6514 [e] 03 2182
HELLA does not recommend the magnetic base version for use on a moving vehicle (see page 159).		

### Revolving Beacon KL Junior, Flexible Pipe Mount - Amber

Revolving beacon with flexible housing base with a spring action allowing beacon to bend on impact. The polycarbonate lens is particularly resistant to impact damage. The base incorporates a spigot tube mount.



Part Number	<b>71726 (Bulb/s not included)</b>	<b>12/24 VOLT</b>
Mounting	Must be used in conjunction with connecting piece P/N 8007, 8007FM, 8007RA or 8008.	
Rotation	160rpm	
Bulbs to Suit	12V 24V	C1255 C2470
Protection	IP 5K4K (Protection against dust and water splashing with increased pressure) IP X9K (Protection against high-pressure/steam jet cleaning)	
Spare Parts	9.71722.01 8007 8007FM 8007RA 8008	Amber lens Connecting piece Connecting piece - flat mount Connecting piece - right angle mount Connecting piece - threaded
Compliance	R65/00	(E) 6514 [e] 03 2182



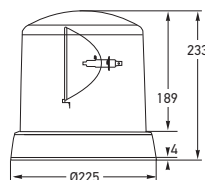
Part Number	1797	12 VOLT
	1797-24V	24 VOLT
	1797-MAG (12 and 24V bulbs included)	12/24 VOLT
Power Consumption	12V - 55W 24V - 70W	
Rotation	180rpm	
RF Suppression	Conducted Class 3 (CISPR 25).	
Bulbs to Suit	12V 24V	C1255 C2470
Protection	IP 5K4K (Protection against dust and water splashing with increased pressure) IP X9K (Protection against high-pressure/steam jet cleaning)	
Spare Parts	9.1797.01 9.1797.91	Amber acrylic lens Drive belt
Compliance	R65/00	(E) 1419      e1 03 3954
HELLA does not recommend the magnetic base version for use on a moving vehicle (see page 159). See page 169 for spare part images.		

### Revolving Beacon KL Junior Plus - Amber

KL Junior Plus revolving beacon offers a belt drive, which enhances reliability, bulb life and lowers noise output. Light output has been improved with the halogen bulb being located in the reflector.



P/N 1797-MAG



Part Number	1794	BLUE
	1795	RED
	1796	AMBER
Power Consumption	12V - 55W 24V - 70W	
Rotation	160rpm	
RF Suppression	Conducted Class 5 (CISPR 25).	
Bulbs to Suit	12V 24V	C1255 C2470
Protection	IP 5K4K (Protection against dust and water splashing with increased pressure) IP X9K (Protection against high-pressure/steam jet cleaning)	
Spare Parts	9.1794.01 9.1795.01 9.1796.01 9.1737.91 9.1794.23 9.1726.52	Blue lens Red lens Amber lens Two drive belts Reflector assembly Motor assembly 12/24V
Compliance	R65/00	(E) 1243      e1 03 1740
See page 169 for spare part images.		

### Revolving Beacon KL 8000 - 12/24 Volt

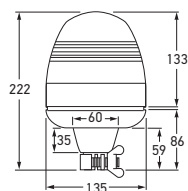
KL 8000 revolving beacon developed for large and heavy commercial vehicles. Particularly high light values guarantee utmost warning effectiveness and safety. Maximum smooth running thanks to the maintenance-free drive bearings and twin-belt technology.





## Rotoflex Revolving Beacon - Amber

Rotoflex revolving beacon with polycarbonate lens and flexible rubber base.



Part Number	1730		12 VOLT
	1731		24 VOLT
Mounting	Tubular base incorporates connection plug. Must be used in conjunction with connecting piece P/N 8007, 8007FM, 8007RA or 8008.		
Power Consumption	12V - 55W 24V - 70W		
Rotation	160rpm		
RF Suppression	Conducted Class 5 (CISPR 25).		
Bulbs to Suit	12V 24V	C1255 C2470	
Protection	IP 5K4K (Protection against dust and water splashing with increased pressure) IP X9K (Protection against high-pressure/steam jet cleaning)		
Spare Parts	9.1730.01 9.1732.52 9.1732.54 9.1730.23 8007 8007FM 8007RA 8008	Amber polycarbonate lens Motor 12V Motor 24V Reflector for Rotoflex Connecting piece Connecting piece - flat mount Connecting piece - right angle mount Connecting piece - threaded	
Compliance	R65/00	(E) 6509	e1 03 2181

See page 169 for spare part images.



P/N 8007

P/N 8007FM

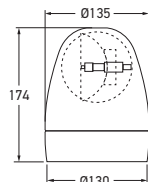


P/N 8007RA

P/N 8008

## Rotofix Revolving Beacon - Amber

Rotofix revolving beacon with polycarbonate lens and rubber base.

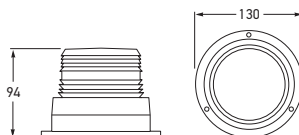


Part Number	12 VOLT	24 VOLT	
	1732	1732-24V	
	1733	1733-24V	MAGNETIC MOUNT
Mounting	Fixed base or with magnetic attachment.		
Power Consumption	12V - 55W 24V - 70W		
Rotation	160 +/- 30rpm		
RF Suppression	Conducted Class 5 (CISPR 25).		
Bulbs to Suit	12V 24V	C1255 C2470	
Protection	IP 5K4K (Protection against dust and water splashing with increased pressure) IP X9K (Protection against high-pressure/steam jet cleaning)		
Spare Parts	9.1730.01 9.1732.52 9.1732.54 9.1732.23	Amber polycarbonate lens Motor 12V Motor 24V Reflector for Rotofix	
Compliance	R65/00	(E) 6509	e1 03 2181



P/N 1733

HELLA does not recommend the magnetic base version for use on a moving vehicle (see page 159).  
See page 169 for spare part images.



Part Number	1655	BLUE
	1656	RED
	1657	AMBER
	1663	GREEN
Voltage	Multivolt™ 12-72V	
Current Draw	0.24 - 0.04A	
Power Consumption	3 Watts, 2 Joules	
Flash Rate	60 +/- 10 per minute	
Protection	IP 55 (Protection against dust and water jets)	
Bulb to Suit	XN000	Strobe tube (see page 335)
Spare Parts	8027	Magnetic mounting kit
	9.1655.01	Blue lens
	9.1656.01	Red lens
	9.1657.01	Amber lens
	9.1655.03	Multi-voltage power supply, 12-72V
Compliance	SAE J1318 Class 3	

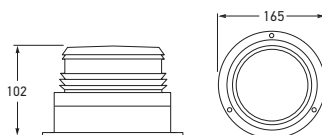
HELLA does not recommend the magnetic base version for use on a moving vehicle (see page 159).

### Firebolt Plus Strobe Beacon -12-72 Volts

The Firebolt Plus strobe features a 2 joule power supply that works from 12 to 72V. Modular construction incorporates a powerful replaceable strobe tube and vibration resistant circuit board. The unit also features a tough impact-resistant polycarbonate lens and base. Applications include fork-lift, electric vehicles, industrial trucks and equipment. Supplied with enclosed base and all necessary mounting hardware (mounts with three bolts).



P/N 8027 (extendable to two metres) P/N XN000



Part Number	1643	BLUE
	1644	RED
	1645	AMBER
Voltage	Multivolt™ 12-48V	
Current Draw	0.9 - 0.25A	
Power Consumption	11 Watts, 8 Joules	
Flash Rate	80 +/- 10 per minute, double flash.	
Protection	IP 55 (Protection against dust and water jets)	
Bulb to Suit	XN451	Strobe tube (see page 335)
Spare Parts	8028	Magnetic mounting kit
	9.1643.01	Blue lens
	9.1644.01	Red lens
	9.1645.01	Amber lens
	9.1643.03	Multi-voltage power supply, 12-48V
Compliance	SAE J1318 Class 2	

HELLA does not recommend the magnetic base version for use on a moving vehicle (see page 159).

### Pulsator 451 Strobe Beacon - 12-48 Volts

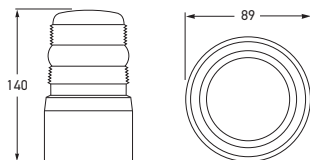
The Pulsator 451 low profile, 12 to 48V strobe is ideal for applications that require shock-resistant mounting, water-resistant performance and easy maintenance. The unit is reverse polarity protected with an isolated earth that enables both negative and positive ground installations.



P/N 8028 (extendable to two metres) P/N XN451

**Flashing Beacon - 12 Volt**

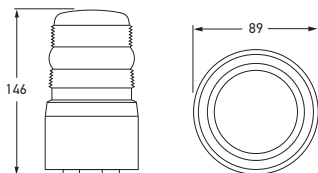
Fresnel lens. Flasher unit P/N 3008 included.



<b>Part Number</b>	<b>1688</b>	<b>RED</b>
	<b>1689</b>	<b>AMBER</b>
Mounting	Three holes for fixing screws.	
Bulb to Suit	U1245	
Spare Parts	1.6502.012 1.6502.01 1.6502.013 1.6502.014 3008	Red lens Amber lens Green lens Blue lens 12V Flasher unit

**Flashing Beacon Magnetic Mount - 12 Volt**

Fresnel lens. Flasher unit P/N 3008, 3m cable and lighter plug included.

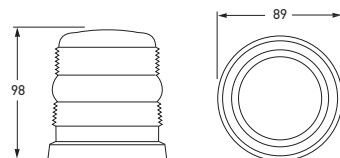


<b>Part Number</b>	<b>1690</b>	<b>RED</b>
	<b>1691</b>	<b>AMBER</b>
Mounting	Magnetic base.	
Bulb to Suit	U1245	
Spare Parts	1.6502.012 1.6502.01 1.6502.013 1.6502.014 3008	Red lens Amber lens Green lens Blue lens 12V Flasher unit

HELLA does not recommend the magnetic base version for use on a moving vehicle (see page 159).

**Beacon - 12 Volt**

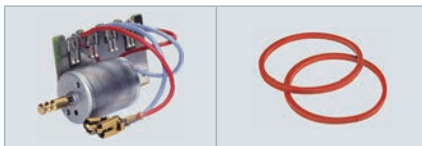
Fresnel lens. Flasher unit not included.



<b>Part Number</b>	<b>1692</b>	<b>RED</b>
	<b>1694</b>	<b>BLUE</b>
	<b>1696</b>	<b>AMBER</b>
Mounting	Three holes for fixing screws.	
Bulb to Suit	12V	U1245
Spare Parts	1.6502.012 1.6502.01 1.6502.013 1.6502.014	Red lens Amber lens Green lens Blue lens

## EMERGENCY LIGHTING AND SIGNAL WARNING LAMPS

KL 7000 ACCESSORIES		
Part Number	9.1726.23	REFLECTOR ASSEMBLY
	9.1726.52	MOTOR ASSEMBLY 12/24V
	9.1737.91	TWO DRIVE BELTS



P/N 9.1726.52

P/N 9.1737.91



P/N 9.1726.23

KL 700 AND KL 710 ACCESSORIES			
Part Number	9.1717.23		REFLECTOR ASSEMBLY - SCREW MOUNT
	9.1717.52 (12 Volt)	9.1720.52 (24 Volt)	MOTOR/REFLECTOR ASSEMBLY - CLIP MOUNT
	9.1717.54 (12 Volt)	9.1720.54 (24 Volt)	MOTOR
	9.1737.91		TWO DRIVE BELTS
	1653		MAGNETIC MOUNTING KIT



P/N 9.1717.54/9.1720.54

P/N 9.1737.91

P/N 1653


P/N 9.1717.23  
Screw mount

P/N 9.1717.52  
Clip mount

KL JUNIOR PLUS ACCESSORIES		
Part Number	9.1797.91	DRIVE BELT



KL 8000 ACCESSORIES		
Part Number	9.1794.23	REFLECTOR ASSEMBLY
	9.1726.52	MOTOR ASSEMBLY 12/24V
	9.1737.91	TWO DRIVE BELTS



P/N 9.1726.52

P/N 9.1737.91



P/N 9.1794.23

ROTOFLEX AND ROTOFIX ACCESSORIES			
Part Number	9.1730.23		REFLECTOR FOR ROTOFLEX
	9.1732.23		REFLECTOR FOR ROTOFIX
	9.1732.52 (12 Volt)	9.1732.54 (24 Volt)	MOTOR



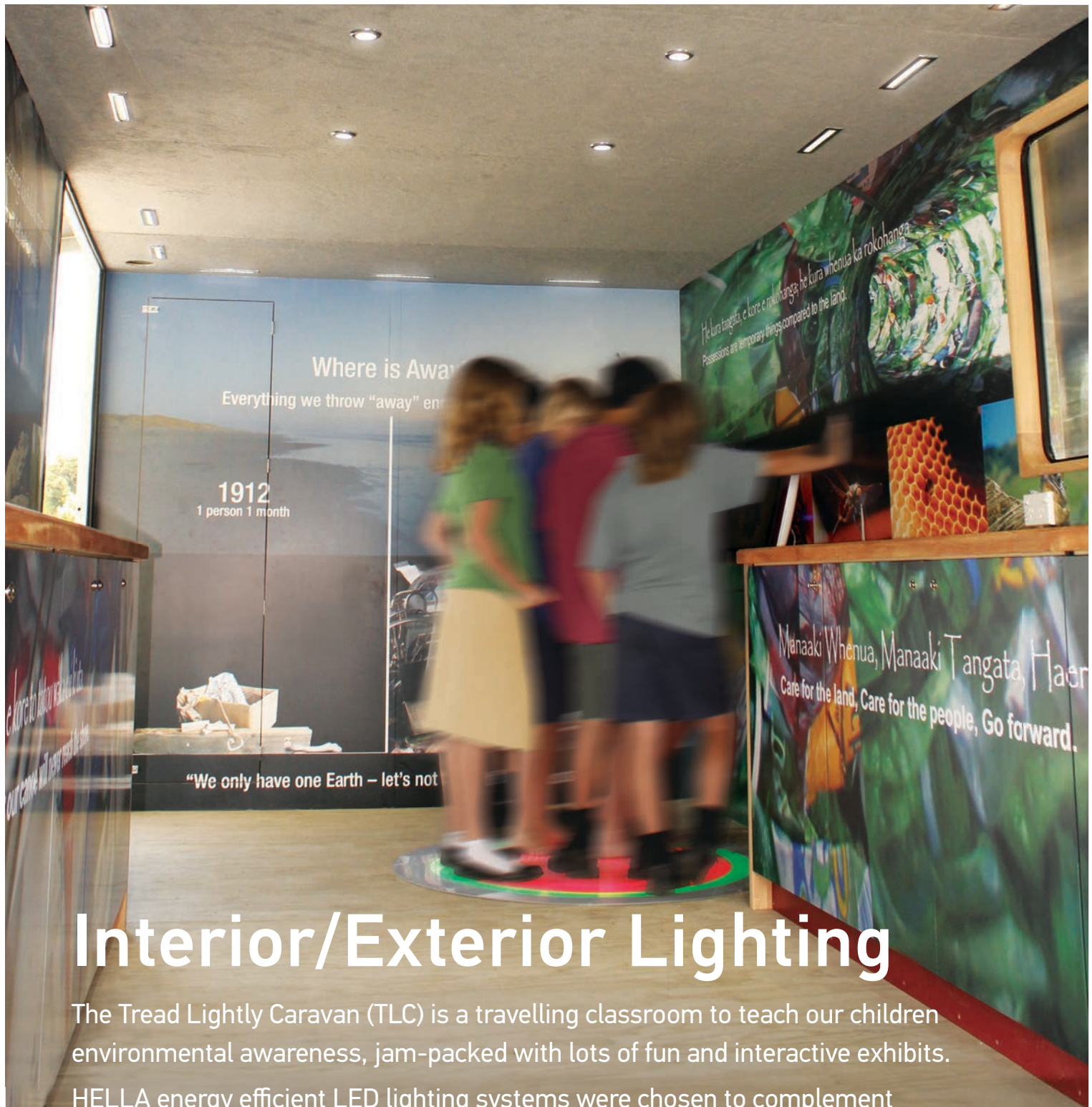
P/N 9.1732.52/9.1732.54



P/N 9.1730.23

P/N 9.1732.23





# Interior/Exterior Lighting

The Tread Lightly Caravan (TLC) is a travelling classroom to teach our children environmental awareness, jam-packed with lots of fun and interactive exhibits.

HELLA energy efficient LED lighting systems were chosen to complement the Tread Lightly message of leaving the smallest environmental footprint.



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# LED LIGHTING TECHNOLOGY - ENERGY EFFICIENT CRISP WHITE LIGHT

HELLA LED based luminaires are sophisticated opto-electronic devices designed to be highly energy efficient and durable, and are a future-proof, low 'Cost-of-Ownership' solution.



“In depth design and engineering know how is required to produce durable products with reliable performance year after year.”

LED based lighting is fast advancing to becoming the logical solution for the cost conscious operator who considers 'Cost-of-Ownership' rather than just the initial purchase price. To design efficient LED luminaires, many factors need to be considered. The LED itself, optics, optic materials, thermal design and drive electronics. These are among the many factors that add up to result in an efficient and durable luminaire.

## **Lens, Optic Technology and Eye Safety**

To take advantage of the ever increasing efficacy of the most advanced LEDs, efficient optic design is essential to capture as much of the luminous flux emitted by the LED as possible. An evenly illuminated surface area is evidence of competent optic design. With significant advances in LED brightness, eye safety considerations are increasingly important. For interior lights it is essential for high power LEDs to be coupled with optic designs that protect the eye's retina. It is desirable for a large portion of the lens area of a luminaire to be evenly illuminated via an efficient optic rather than using a bundle of LEDs without any optic. Easily visible LEDs inside a luminaire without any optic or lens protection can cause a degree or even significant eye discomfort if viewed directly.

A recent US Department of Energy (DOE) report warns of poorly designed LED luminaires, associating low frequency 'Flicker' with the possibility to trigger epileptic attacks in parts of the population that are susceptible.

Well designed LED lighting systems do carry a higher initial price compared to many other lamps now on offer. For most applications, higher efficiency and long term reliability of a competently designed and manufactured LED luminaire is a convincing Value Proposition.

## **Heat and Thermal Management**

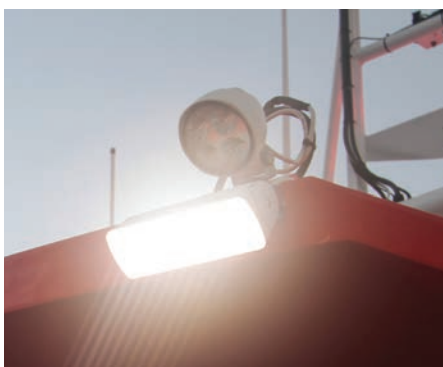
Competent and well engineered thermal management is essential for the long-term durability of HELLA LED luminaires. A common misconception is that LEDs do not generate heat. LEDs consume power and some of this power is also converted to heat, even in the most energy efficient LEDs.

In contrast to incandescent lamps however, LEDs do not like to 'run hot'. As a rule of thumb the hotter an LED runs, the faster it will degrade and in extreme cases result in a much lower light performance and shorter service life.

A noticeably 'hot to touch' exterior surface of a high power LED interior lamp provides some indication that the light output of the device will deteriorate fast, sometimes within a few hundred hours. Well engineered LED devices will operate 'cool' or 'warm' to the touch after many hours of operation. HELLA has many years of technical expertise in developing good thermal designs, when matched with superior optics and electronic design it ensures the long term durability of all our LED lighting products with minimal degradation over many years of service.

Highly efficient white LED luminaires are becoming a solution that make ecological and economic sense for an ever increasing range of applications.





## Reliability

Due to the solid state nature of LEDs there are no filaments to break, however LEDs do require precise current control, overvoltage and spike protection to avoid any premature damage.

For LED luminaire designers and manufacturers, in depth design and engineering know how is required to produce durable products with reliable performance year after year.

Considerations such as hermetically sealed housings, sealed cable entries, effective electronic protection, shock, vibration and impact resistant components all contribute towards long term reliability. Compared to incandescent lighting, where a filament inside a bulb may break at any moment, HELLA LED lighting is designed as a reliable Fit and Forget solution.

## Colour Temperature and Rendering

LED based lighting has had a reputation for appearing 'cold' and 'blue' due to their phosphorous coating technology.

However today's high efficacy devices can rival traditional incandescent light sources for colour and ambience. When selecting LED interior lighting, colour temperature is an important consideration.

1850K	Candle
2800K	Halogen Bulb (Incandescent Lamp)
2500-3200K	Warm White LED
4600K-5600K	Crisp White LED
6500K	Daylight

Colour temperature is measured in Kelvin and describes the effect of heating an object until it glows incandescently. The emitted radiation, and apparent colour changes in proportion to the temperature; envisioned when considering hot metal in a forge that glows red, then orange, and then white as the temperature increases.

HELLA describes higher colour temperatures (4600K to 5600K) as 'crisp white' and lower colour temperatures as 'warm white'.

'Neutral white' is considered around 4200K range. Crisp white is recommended for visual tasks, work areas and exterior lighting.

Warm white is suggested for interior spaces as it adds life and vibrancy to people and objects. It is considered more flattering to skin tones or fabrics and makes food look fresh and attractive.

## NEW DIMMABLE LOGOS WHAT DO THEY MEAN?

Logos used throughout the Interior/Exterior section to help quick referencing of important product features are explained below.



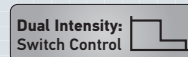
Light intensity is reduced as the DC input voltage is reduced below the lamps specified operating voltage.



Light intensity is controlled through the lamp's own internal circuitry via in-built buttons, an external DC power source and a standard switch. See specific lamp instructions for further information.



Light intensity is adjusted between 10-100% using a high frequency PWM (pulse width modulation) DC power supply, with adjustable duty cycle control.



Light intensity can be switched between 100% and a lower level factory pre-set value, usually via an additional cable input supplied with the lamp using a positive feed from the DC power supply within the lamps operating voltage range.

## EuroLED® White/Red Touch Lamp

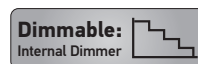
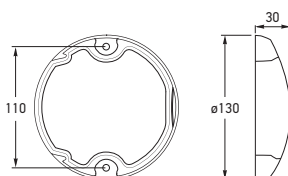
Dual colour EuroLED® touch lamps with dimming and momentary switch control. Touch the white or red pads for on/off, hold finger to cycle through dimming levels. Provides ultra long service life and is shock and vibration proof. Clear lens.




P/N 2JA 959 950-021



EuroLED Touch™ red night light function shown.



Part Number	BLACK SHROUD	WHITE SHROUD	
	2JA 959 950-011	2JA 959 950-021	WHITE/RED
Mounting	Two hole surface mount with mounting bushes supplied.		
Voltage	Multivolt™ for optimum brightness at input voltage from 9 to 33 volts.		
Power Consumption	White: 4W Red: 1.5W		
Protection	Reverse polarity and transient spike circuit protection. IP 6K6 (Protection against dust and high-pressure water jets) IP 6K7 (Protection against temporary water immersion)		
Cable Length	Pre-wired with 2.5m of sheathed multi-core cable.		
Accessories	95995200 95995201	Mounting spacer - Black Mounting spacer - White	
Compliance	CE  Z208		
See page 68 for EuroLED® accessories.			



P/N 95995200

P/N 95995201

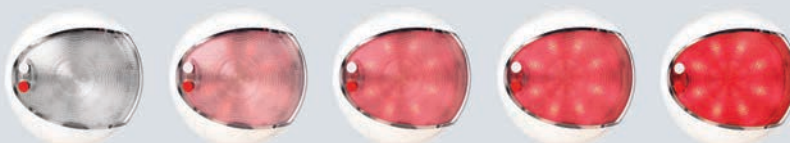
# EuroLED®

Advanced LED lamps with touch sensitive switching.  
Power saving and ultra durable.

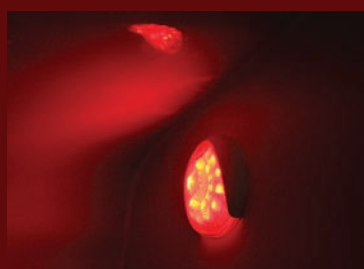
Lighting control is beautifully simple. Touch the colour pad for red light and the white pad for white light. On the dual colour versions, hold your finger on the pad for more than two seconds and the lamp will cycle through four dimming levels. Release your finger on the light level required.

Dual colour EuroLED® Touch lamps can also be remotely operated from multiple points with 'off the shelf' ON/OFF/ON momentary switches. Holding one of the external switches for two seconds will synchronise the lamps to the same dimming level.

Light levels are 'remembered' by the lamps circuitry, even when a vehicle's batteries are turned off.



Designed and manufactured in New Zealand, EuroLED® Touch lamps provide red/white, or white only light using the latest completely sealed touch sensitive technology.

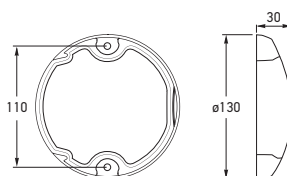


The lamp will always turn on at the colour intensity previously set, regardless of power interruption.

EuroLED® Touch power consumption is 4W on white (0.33A @ 12V) and less than 1.5W on red (less than 0.125A @ 12V) to provide significant power savings.


The durability of EuroLED® Touch lamps is outstanding. Each lamp is completely waterproof, impact and shock resistant, for an ultra long service life. Multivolt™ circuitry provides optimum brightness across a range of input voltages from 9-33 DC, even under severe voltage fluctuations.





### EuroLED® White Touch Lamp

White single LED lamp with touch switching and clear lens. Touch the white pad to turn on and the black pad to turn off. Provides ultra long service life and is shock and vibration proof.

Part Number	BLACK SHROUD	WHITE SHROUD	
	2JA 959 950-551	2JA 959 950-561	WHITE
Mounting	Two hole surface mount with mounting bushes supplied.		
Voltage	Multivolt™ for optimum brightness at input voltage from 9 to 33 volts.		
Power Consumption	4W		
Protection	Reverse polarity and transient spike circuit protection. IP 6K6 (Protection against dust and high-pressure water jets) IP 6K7 (Protection against temporary water immersion)		
Cable Length	Pre-wired with 2.5m of sheathed multi-core cable.		
Accessories	95995200 95995201	Mounting spacer - Black Mounting spacer - White	
Compliance	CE  Z208		
See page 68 for EuroLED® accessories.			



P/N 2JA 959 950-561



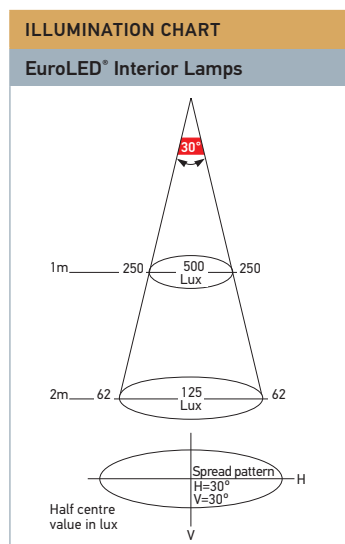
Part Number	95982050	WHITE
Mounting	Two hole surface mount with mounting bushes supplied.	
Voltage	Multivolt™ for optimum brightness at input voltage from 9 to 33 volts.	
Power Consumption	4W	
Protection	Reverse polarity and transient spike circuit protection. IP 6K6 (Protection against dust and high-pressure water jets) IP 6K7 (Protection against temporary water immersion)	
Cable Length	Pre-wired with 2.5m of sheathed multi-core cable.	
Accessories	95995200 95995201	Mounting spacer - Black Mounting spacer - White
Compliance	CE Z208	

### EuroLED® Lamp

White single LED lamp with clear lens. Provides ultra long service life and is shock and vibration proof. Includes a black and a white rim. No switching or dimming.



INTERIOR/EXTERIOR



### Illumination Charts Explained

Our light performance charts show luminance and spread in an easy to read format. At the top is the spread, with the boundary threshold being defined as half the peak luminance. While there is light beyond the indicated angles, the majority of light will be inside the cone shown.

The difference between lux (luminance) and lumen (luminous flux) is that lux takes into account the area over which the luminous flux is spread. Accordingly the lux figure decreases with distance. Most interior lamps will be installed at around the 2 - 2.5 metre height.

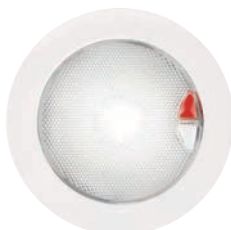
As a guideline, some 40 - 100 lux is required for corridors and passageways, around 300 lux for reading and 500 - 800 lux for offices.

The spread pattern may not be designed symmetrical so the spread horizontally (H) and vertically (V) are given.

Luminance is additive, meaning overlapping light patterns or multiple lamps lighting the same surface add their luminance.

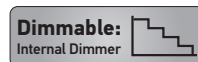
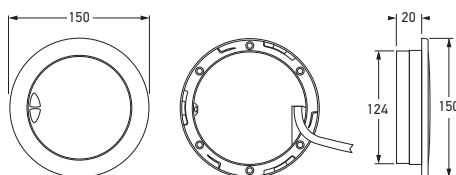
## EuroLED® Touch 150 Downlights - Dual Colour

Dual colour EuroLED® touch lamps with dimming and momentary switch control. Touch the white pad for on/off, hold finger on the pad to cycle through dimming levels. Provides ultra long service life and is shock and vibration proof. Clear lens.



Red function

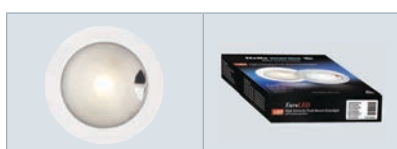
Packaging



Part Number	WHITE PLASTIC RIM	POLISHED STAINLESS STEEL RIM	
	2JA 980 630-001	2JA 980 630-011	WHITE/RED
	2JA 980 630-101	2JA 980 630-111	WARM WHITE/RED
Mounting	Recess mount, 124mm hole.		
Voltage	Multivolt™ for optimum brightness at input voltage from 9 to 33 volts.		
Power Consumption	White: 4W Red: 1.5W		
Protection	Reverse polarity and transient spike circuit protection. Sealed against dust and water ingress.		
Cable Length	Pre-wired with 0.5m of sheathed multi-core cable.		
Compliance	CE Z208		

## EuroLED® Touch 150 Downlights - Single Colour

White single LED lamp with touch switching and clear lens. Touch the white pad to turn on and the black pad to turn off. No dimming. Provides ultra long service life and is shock and vibration proof.



P/N 2JA 980 630-601

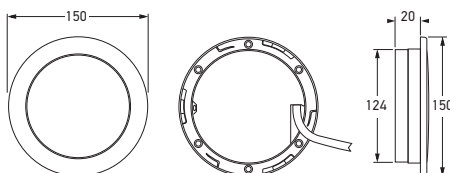
Packaging



Sealed cable entry



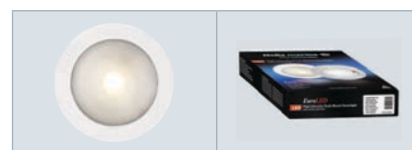
Part Number	WHITE PLASTIC RIM	POLISHED STAINLESS STEEL RIM	
	2JA 980 630-501	2JA 980 630-511	WHITE
	2JA 980 630-601	2JA 980 630-611	WARM WHITE
Mounting	Recess mount, 124mm hole.		
Voltage	Multivolt™ for optimum brightness at input voltage from 9 to 33 volts.		
Power Consumption	4W		
Protection	Reverse polarity and transient spike circuit protection. Sealed against dust and water ingress.		
Cable Length	Pre-wired with 0.5m of sheathed multi-core cable.		
Compliance	CE Z208		



Part Number	WHITE PLASTIC RIM	POLISHED STAINLESS STEEL RIM	
	2JA 980 631-501	2JA 980 631-511	WHITE
	2JA 980 631-601	2JA 980 631-611	WARM WHITE
Mounting	Recess mount, 124mm hole.		
Voltage	Multivolt™ for optimum brightness at input voltage from 9 to 33 volts.		
Power Consumption	4W		
Protection	Reverse polarity and transient spike circuit protection. Sealed against dust and water ingress.		
Cable Length	Pre-wired with 0.5m of sheathed multi-core cable.		
Compliance	CE Z208		

## EuroLED® 150 Downlights

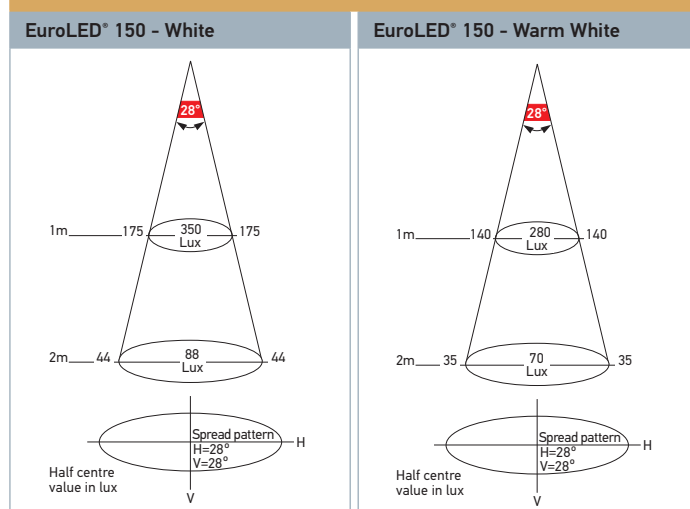
White single LED lamp with clear lens.  
Provides ultra long service life and is shock and vibration proof. No switching or dimming.



P/N 2JA 980 631-601

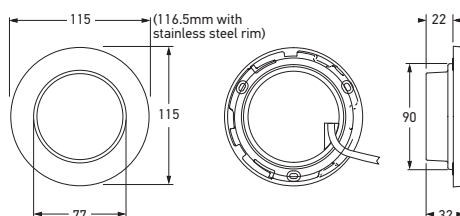
Packaging

## ILLUMINATION CHARTS



### EuroLED® 115 Downlights - With White Spacer

Round LED high intensity downlights offering class leading efficiency and durability. Supplied with white or polished stainless steel rim to suit.



**Dimmable:** PWM 10-100%

Power Supply  
**MULTI VOLT**



P/N 2JA 980 820-101 Sealed cable entry

Part Number	WHITE PLASTIC RIM		POLISHED STAINLESS STEEL RIM	
	2JA 980 820-001		2JA 980 820-011	WHITE
	2JA 980 820-101		2JA 980 820-111	WARM WHITE
Mounting	Recess mount, 90mm hole. Surface mount via optional spacer.			
Voltage	Multivolt™ for optimum brightness at input voltage from 10 to 33 volts.			
Power Consumption	4.5W			
Protection	Reverse polarity and transient spike circuit protection. Sealed against dust and water ingress.			
Cable Length	Pre-wired with 0.5m of sheathed multi-core cable.			
Compliance	CE Z208			

See page 197 for a HELLA PWM based dimmer unit.

### EuroLED® 115 Downlights - With White Spacer and Switch

Round LED high intensity downlights offering class leading efficiency and durability. Supplied with white or polished stainless steel rim to suit.

**Dimmable:** PWM 10-100%

Power Supply  
**MULTI VOLT**



P/N 2JA 980 828-111 Packaging

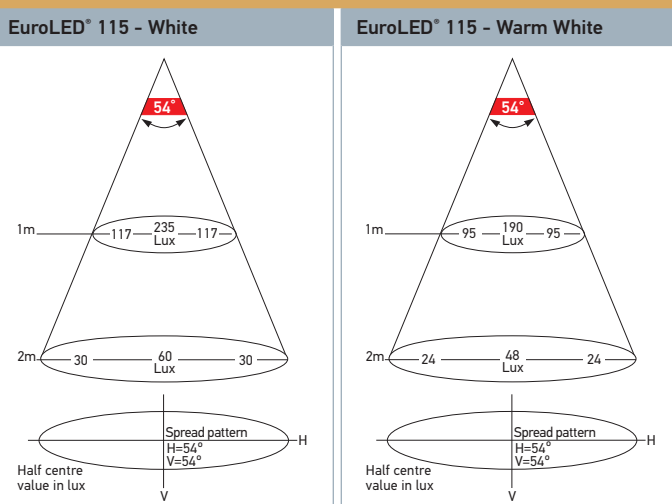
Part Number	WHITE PLASTIC RIM		POLISHED STAINLESS STEEL RIM	
	2JA 980 828-001		2JA 980 828-011	WHITE
	2JA 980 828-101		2JA 980 828-111	WARM WHITE
Mounting	Recess mount. Surface mount via spacer.			
Voltage	Multivolt™ for optimum brightness at input voltage from 10 to 33 volts.			
Power Consumption	4.5W			
Protection	Reverse polarity and transient spike circuit protection. Sealed against dust and water ingress.			
Cable Length	Pre-wired with 0.5m of sheathed multi-core cable.			
Compliance	CE Z208			

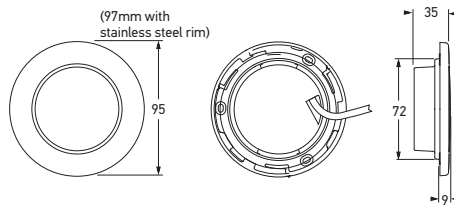
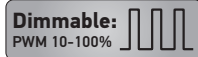
See page 197 for a HELLA PWM based dimmer unit.



EuroLED® 115 Downlights with switch, expanded view.

#### ILLUMINATION CHART





### EuroLED® 95 Downlights - Recess Mount

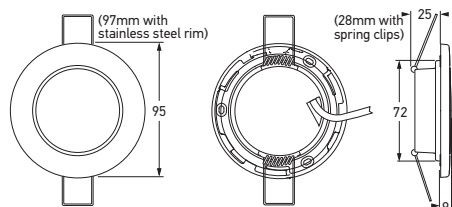
Round LED high intensity downlights offering class leading efficiency and durability. Supplied with white or polished stainless steel rim to suit.

Part Number	WHITE PLASTIC RIM	POLISHED STAINLESS STEEL RIM	
	2JA 980 940-001	2JA 980 940-011	WHITE
	2JA 980 940-101	2JA 980 940-111	WARM WHITE
Mounting	Recess mount, 72mm hole. Screw mount.		
Voltage	Multivolt™ for optimum brightness at input voltage from 10 to 33 volts.		
Power Consumption	4W		
Protection	Reverse polarity and transient spike circuit protection. Sealed against dust and water ingress.		
Cable Length	Pre-wired with 0.5m of sheathed multi-core cable.		
Compliance	CE Z208		

See page 197 for a HELLA PWM based dimmer unit.



P/N 2JA 980 940-111 Packaging



### EuroLED® 95 Downlights - Recess Mount With Spring Clip

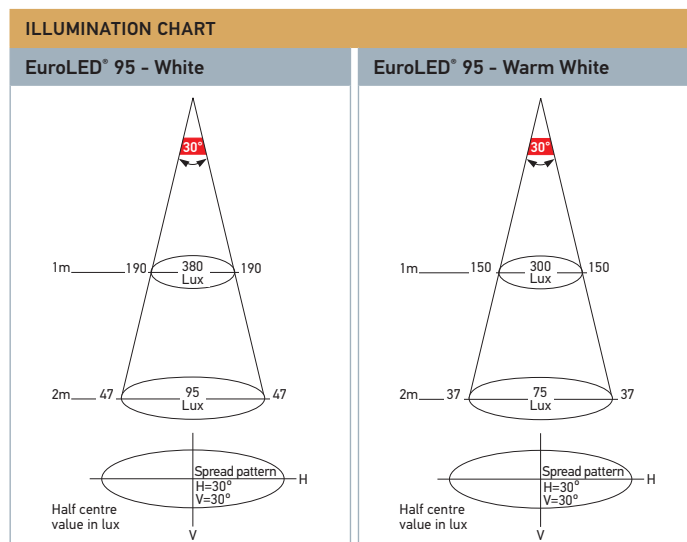
Round LED high intensity downlights offering class leading efficiency and durability. Supplied with white or polished stainless steel rim to suit.

Part Number	WHITE PLASTIC RIM	POLISHED STAINLESS STEEL RIM	
	2JA 980 940-201	2JA 980 940-211	WHITE
	2JA 980 940-301	2JA 980 940-311	WARM WHITE
Mounting	Recess mount, 72mm hole. Spring clip.		
Voltage	Multivolt™ for optimum brightness at input voltage from 10 to 33 volts.		
Power Consumption	4W		
Protection	Reverse polarity and transient spike circuit protection. Sealed against dust and water ingress.		
Cable Length	Pre-wired with 0.5m of sheathed multi-core cable.		
Compliance	CE Z208		

See page 197 for a HELLA PWM based dimmer unit.



P/N 2JA 980 940-311 Packaging



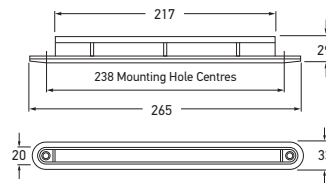


## LED White Interior/Exterior Strip Lamp

White LED interior lamp with clear UV resistant acrylic lens. Ideal for steps, interior or exterior courtesy lighting and storage areas.



P/N 2641HB



**Dimmable:**  
Analog DC Input

Part Number	12 VOLT	24 VOLT	
	2641-12V	2641-24V	
	2641HB	2641HB-24V	
Mounting	Recess mount.		WHITE
Power Consumption	<2W		HIGH BRIGHTNESS WHITE
Protection	Reverse polarity protection. IP 6K7 (Protection against dust and temporary water immersion) IP 6K9K (Protection against dust and high-pressure/steam jet cleaning)		
Cable Length	Pre-wired with 2.5m of sheathed multi-core cable.		
Spare Part	9GD 959 155-507	Gasket	
See page 197 for a HELLA analog based dimmer unit.			

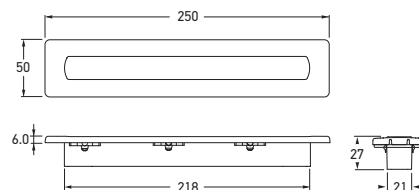
## LED Interior/Exterior Strip Lamp

LED lamp with clear UV impact resistant lens and attractive stainless steel cover. Stainless steel bezel features a unique internal tab lock for secure attachment and no visible fastenings.



P/N 2651WW

Shown expanded



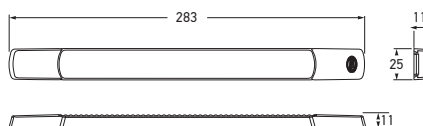
**Dimmable:**  
Analog DC Input

Part Number	12 VOLT	24 VOLT	
	2651	2651-24V	WHITE
	2651WW	2651WW-24V	WARM WHITE
Mounting	Recess mount.		
Power Consumption	<2W		
Protection	Reverse polarity protection. IP 6K7 (Protection against dust and temporary water immersion) IP 6K9K (Protection against dust and high-pressure/steam jet cleaning)		
Cable Length	Pre-wired with 2.5m of sheathed multi-core cable.		
See page 197 for a HELLA analog based dimmer unit.			

## ILLUMINATION CHARTS

P/Ns 2641/2641-24V	P/Ns 2641HB/2641HB-24V	P/Ns 2651/2651-24V	P/Ns 2651WW/2651WW-24V

**Dimmable:**  
Analog DC Input



Part Number	12 VOLT	24 VOLT	
	2652	2652-24V	WHITE
	2652WW	2652WW-24V	WARM WHITE

Mounting Surface mount.

Power Consumption <3W

Protection Reverse polarity protection.  
IP 6K7 (Protection against dust and temporary water immersion)  
IP 6K9K (Protection against dust and high-pressure/steam jet cleaning)

Cable Length Pre-wired with 2.5m of sheathed multi-core cable.

See page 70 for surface mount strip lamp screw caps.  
See page 197 for a HELLA analog based dimmer unit.

## LED Interior/Exterior Strip Lamp - Surface Mount

LED lamp featuring a soft white colour temperature and diffused lens for an evenly spread light. Fully sealed for complete protection against water and dust ingress.

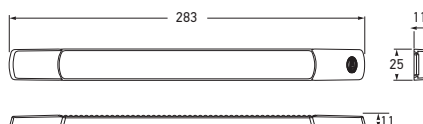


P/N 2652WW



Ultra slim design.

**Dimmable:**  
Analog DC Input



Part Number	12 VOLT	24 VOLT	
	2JA 980 881-402	2JA 980 881-502	BLUE
	2JA 980 881-602	2JA 980 881-702	RED

Mounting Surface mount.

Power Consumption <2W

Protection Reverse polarity protection.  
IP 6K7 (Protection against dust and temporary water immersion)  
IP 6K9K (Protection against dust and high-pressure/steam jet cleaning)

Cable Length Pre-wired with 0.5m of sheathed multi-core cable.

See page 70 for surface mount strip lamp screw caps.  
See page 197 for a HELLA analog based dimmer unit.

## LED Courtesy Strip Lamp - Surface Mount

These LED courtesy surface mount strip lamps feature a shallow 11mm profile and completely sealed housings. Available in blue and red colour variants.



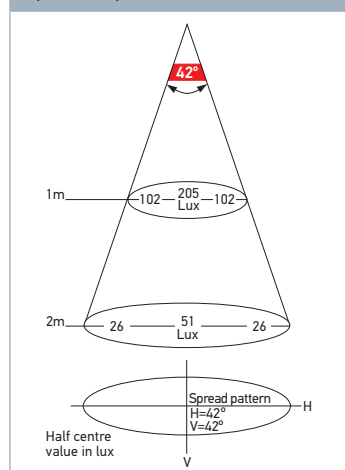
P/N 2JA 980 881-602



INTERIOR/EXTERIOR

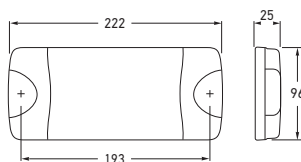
### ILLUMINATION CHART


P/Ns 2652/2652-24V



## DuraLED® Combi-S White 50 LED Lamp

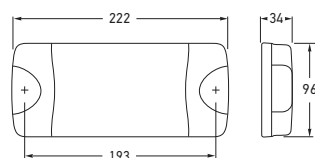
White high brightness LED lamp with Grilamid® lens. Exceptional light output, incorporating high efficacy electronics and LEDs resulting in low power consumption (<12 watts) and low heat. Spread light is suitable for general area lighting. Lens manufactured from Grilamid® clear nylon which features high UV and chemical resistance, and high impact strength. The lamp is fully sealed against dust and moisture ingress.




Part Number	98060450	SPREAD
Mounting	Two hole surface mount with mounting bushes supplied.	
Voltage	Multivolt™ for optimum brightness at input voltages from 9 to 33 volts.	
Power Consumption	<12W	
Protection	Reverse polarity and transient spike circuit protection. IP 6K7 (Protection against dust and temporary water immersion) IP 6K9K (Protection against dust and high-pressure/steam jet cleaning)	
Cable Length	Pre-wired with 2.5m of sheathed multi-core cable.	
Lens Material	Grilamid®	
Compliance	CE  Z208	
See page 66 for DuraLED® accessories.		

## DuraLED® Combi White 50 LED Lamp

White high brightness LED lamp with Grilamid® lens. Exceptional light output, incorporating high efficacy electronics and LEDs resulting in low power consumption (<12 watts) and low heat. Spread light is suitable for general area lighting. Lens manufactured from Grilamid® clear nylon which features high UV and chemical resistance, and high impact strength. The lamp is fully sealed against dust and moisture ingress.



	WHITE LENS	CHARCOAL LENS	
Part Number	98060420	98060421	SPREAD
	98060400	98060403	WIDE SPREAD
Mounting	Two hole surface mount with mounting bushes supplied.		
Voltage	Multivolt™ for optimum brightness at input voltages from 9 to 33 volts.		
Power Consumption	<12W		
Protection	Reverse polarity and transient spike circuit protection. IP 6K6 (Protection against dust and high-pressure water jets) IP 6K7 (Protection against dust and temporary water immersion)		
Cable Length	Pre-wired with 2.5m of sheathed multi-core cable.		
Accessories	98071900 98071901	Mounting spacer - Black Mounting spacer - White	
Lens Material	Grilamid®		
Compliance	CE  Z208		

INTERIOR/EXTERIOR



P/N 98060403



P/N 98071900

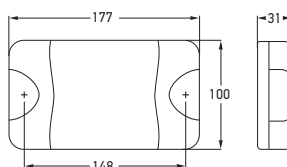


P/N 98071901

Suitable for all DuraLED® Combi lamps, see page 66.

### ILLUMINATION CHARTS

P/N 98060450	P/Ns 98060420/...21	P/Ns 98060400/...03



Part Number	WHITE LENS	CHARCOAL LENS	
	95903730	95903731	PENCIL
	95903740	95903741	NARROW
	95903720	95903721	SPREAD

Mounting Two hole surface mount with mounting bushes supplied.

Voltage Multivolt™ for optimum brightness at input voltages from 9 to 33 volts.

Power Consumption <9W

Protection Reverse polarity and transient spike circuit protection.  
IP 6K6 (Protection against dust and high-pressure water jets)  
IP 6K7 (Protection against dust and temporary water immersion)

Cable Length Pre-wired with 2.5m of sheathed multi-core cable.

Lens Material Grilamid®

Compliance CE Z208

See page 66 for DuraLED® accessories.

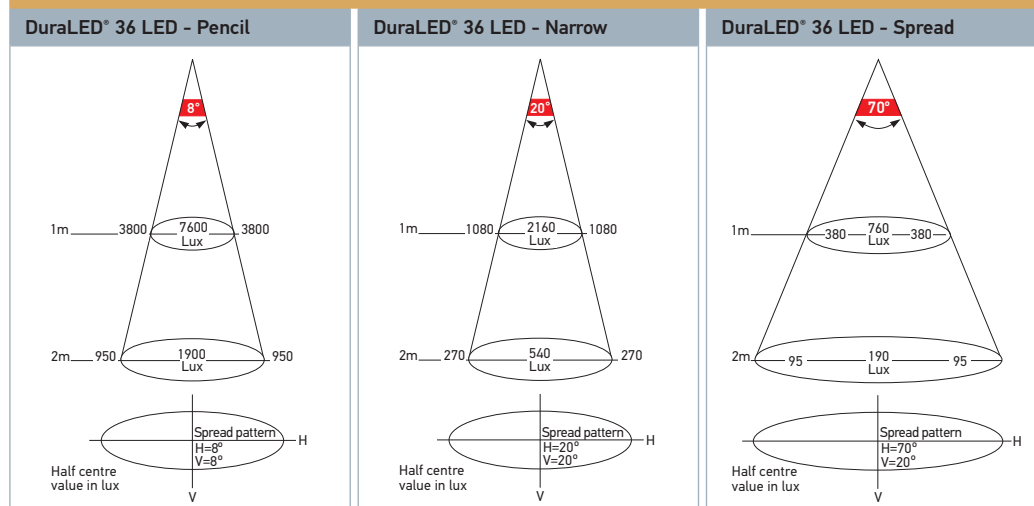
## DuraLED® White 36 LED Lamp

White high brightness LED lamp with Grilamid® lens. Exceptional light output, incorporating high efficacy electronics and LEDs resulting in low power consumption (<9 watts) and low heat. Lens manufactured from Grilamid® clear nylon which features high UV and chemical resistance, and high impact strength. The lamp is fully sealed against dust and moisture ingress.



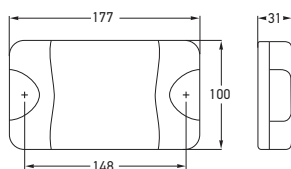
P/N 9593721

## ILLUMINATION CHARTS



### DuraLED® 20 LED Wide Spread Lamp

White high brightness LED lamp. Exceptional light output, incorporating high efficacy electronics and LEDs resulting in low power consumption (<5 watts) and low heat. The lamp is fully sealed against dust and moisture ingress.

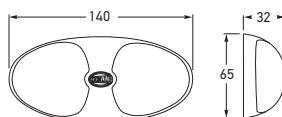


Part Number	98060801	WHITE
Mounting	Two hole surface mount with mounting bushes supplied.	
Voltage	Multivolt™ for optimum brightness at input voltages from 9 to 33 volts.	
Power Consumption	5W	
Protection	Reverse polarity and transient spike circuit protection. IP 6K6 (Protection against dust and high-pressure water jets) IP 6K7 (Protection against dust and temporary water immersion)	
Cable Length	Pre-wired with 2.5m of sheathed multi-core cable.	
Compliance	CE Z208	

See page 66 for DuraLED® accessories.

### DuraLED® White 12 LED Wide Spread Lamp

White high brightness LED lamp. Exceptional light output, incorporating high efficacy electronics and LEDs resulting in low power consumption (<3 watts) and low heat. The lamp is fully sealed against dust and moisture ingress.

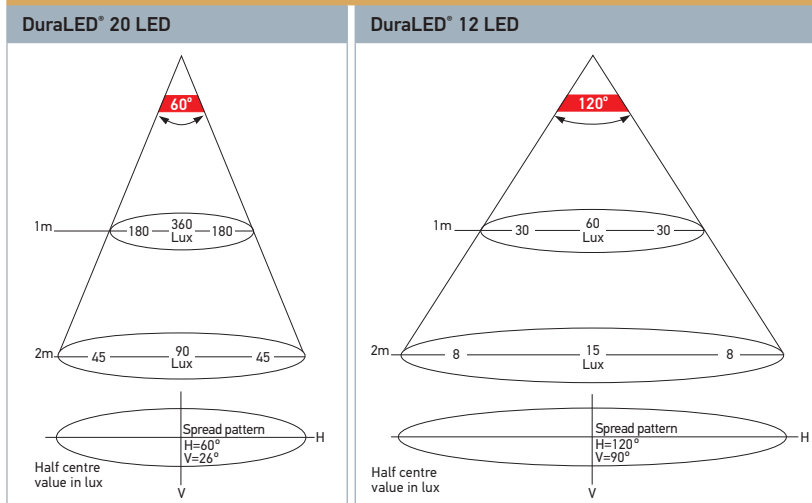


Part Number	95970010 95970400 (Includes switch)	WHITE
Mounting	Two hole surface mount with mounting bushes supplied.	
Voltage	Multivolt™ for optimum brightness in 12 and 24 volt systems.	
Power Consumption	<3W	
Protection	Reverse polarity and transient spike circuit protection. Fully sealed against dust, high-pressure washing and temporary water immersion.	
Cable Length	Pre-wired with 2.5m of sheathed multi-core cable.	
Compliance	CE Z208	

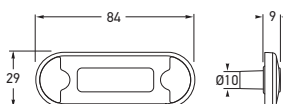


P/N 95970400

#### ILLUMINATION CHARTS







Part Number	98085510	WHITE
	98085515	WARM WHITE
	98085525	AMBER
	98085535	RED
	98085540	BLUE
	98085550	GREEN
Mounting	Two hole surface mount.	
Voltage	Multivolt™ for optimum brightness in 12 and 24 volt systems.	
Power Consumption	<0.5W	
Protection	Reverse polarity protection. IP 6K7 (Protection against dust and temporary water immersion) IP 6K9K (Protection against dust and high-pressure/steam jet cleaning)	
Cable Length	Pre-wired with 0.5m of sheathed multi-core cable.	
Lens Material	Grilamid®	
Compliance		

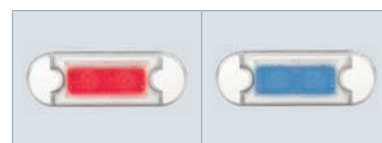
### DuraLED® Surface Mount Courtesy Lamp - Low Profile

These LED courtesy lamps feature a shallow 9mm profile and completely sealed housing. Available in a range of colours. Optic appears clear until illuminated.



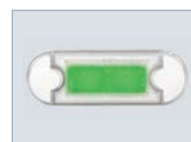
P/N 98085515

P/N 98085525



P/N 98085535

P/N 98085540



P/N 98085550

RIMS		
Part Number	Colour	Material
95968500	POLISHED	316 STAINLESS STEEL
95968502	GOLD PLATED	
95968506	SATIN CHROME PLATED	

SCREW CAPS		
Part Number	Colour	Quantity
9.2310.09-BULK	BLACK	PACK OF 4
9.2310.10-BULK	RED	
9.2310.11-BULK	WHITE	
9.2310.12-BULK	BLUE	
9.2310.13-BULK	GREEN	
9.2310.14-BULK	YELLOW	
9.2310.15-BULK	AMBER	
9.2310.16-BULK	GREY	

Pack sizes of 50 available upon request.

### DuraLED® Surface Mount Courtesy Lamp Accessories

Accessory rims and screw caps for the LED surface mount courtesy lamp family.



P/N 95968506

P/N 95968502

P/N 95968500



P/N 9.2310.09-BULK

P/N 9.2310.11-BULK



9.2310.10-BULK

9.2310.12-BULK

9.2310.13-BULK

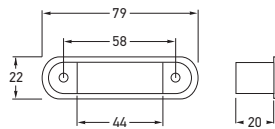
9.2310.14-BULK

9.2310.15-BULK

9.2310.16-BULK

### LED Narrow Rim Rectangular Courtesy Lamp

Narrow rim flush mount courtesy lamp with either white, red, amber, green or blue LEDs.



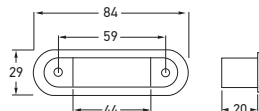
Part Number	12/24 VOLT	
	95951040 (Clear lens)	WHITE
	95951015 (Clear lens)	GREEN
	95951025 (Clear lens)	BLUE
Voltage	Multivolt™ for optimum brightness in 12 and 24 volt systems.	
Compliance	CE Z208	



Part Number	12 VOLT	24 VOLT	
	95951031 (Red lens)	95951033 (Red lens)	RED
	95951001 (Amber lens)	95951006 (Amber lens)	AMBER
Mounting	Recess mount.		
Power Consumption	<1W		
Protection	Reverse polarity protection. IP 6K6 (Protection against dust and high-pressure water jets) IP 6K7 (Protection against dust and temporary water immersion)		
Cable Length	Pre-wired with 120mm of cable.		
See page 67 and 70 for spare parts and accessories. See page 197 for a HELLA analog based dimmer unit.			

### LED Wide Rim Rectangular Courtesy Lamp

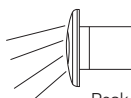
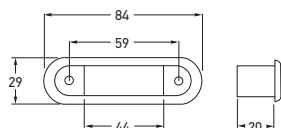
Wide rim flush mount courtesy lamp with either white, red, amber, green or blue LEDs.



Part Number	12/24 VOLT	
	95951080 (Clear lens)	WHITE
	95951095 (Clear lens)	GREEN
	95951065 (Clear lens)	BLUE
Voltage	Multivolt™ for optimum brightness in 12 and 24 volt systems.	
Compliance	CE Z208	



Part Number	12 VOLT	24 VOLT	
	95951071 (Red lens)	95951073 (Red lens)	RED
	95951051 (Amber lens)	95951053 (Amber lens)	AMBER
Mounting	Recess mount.		
Power Consumption	<1W		
Protection	Reverse polarity protection. IP 6K6 (Protection against dust and high-pressure water jets) IP 6K7 (Protection against dust and temporary water immersion)		
Cable Length	Pre-wired with 120mm of cable.		
See page 67 and 70 for spare parts and accessories. See page 197 for a HELLA analog based dimmer unit.			



Peak light output is projected down at 30°

### LED Wide Rim Rectangular Courtesy Step Lamp

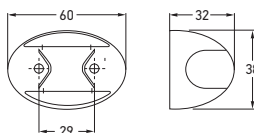
Wide rim, flush mount, courtesy step lamp with either white, red, green or blue LEDs. Optic appears clear until illuminated.

Part Number	12/24 VOLT (CLEAR LENS)	
	95968080	WHITE
	95968070	RED
	95968090	GREEN
	95968060	BLUE
Mounting	Recess mount.	
Voltage	Multivolt™ for optimum brightness in 12 and 24 volt systems.	
Power Consumption	<1W	
Protection	Reverse polarity protection. IP 6K6 (Protection against dust and high-pressure water jets) IP 6K7 (Protection against dust and temporary water immersion)	
Cable Length	Pre-wired with 120mm of cable.	
Compliance	CE Z208	

See page 67 and 70 for spare parts and accessories.



P/N 95968060

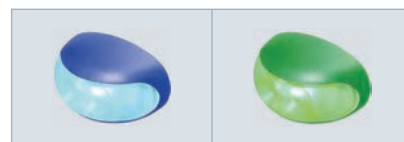


### DuraLED® Surface Mount Courtesy Lamp

Blue, white or green LED courtesy lamps. Optic appears clear until illuminated.

Part Number	95963046	WHITE
	95963025	BLUE
	95963055	GREEN
Mounting	Two hole surface mount.	
Voltage	Multivolt™ for optimum brightness in 12 and 24 volt systems.	
Power Consumption	<1W	
Protection	Reverse polarity protection. IP 6K6 (Protection against dust and high-pressure water jets) IP 6K7 (Protection against dust and temporary water immersion)	
Cable Length	Pre-wired with 0.5m of cable.	
Compliance	CE Z208	

See page 67 for spare parts and accessories.

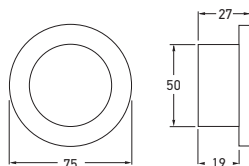


P/N 95963025

P/N 95963055

## LED High Intensity Courtesy Lamps

Round LED high intensity courtesy lamps for interior and exterior use. Includes a black and a white plastic rim (as shown). Additional rims and housings are available as spare parts.



**Dimmable:**  
Analog DC Input

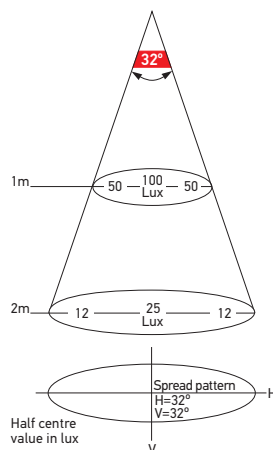


P/N 95959606

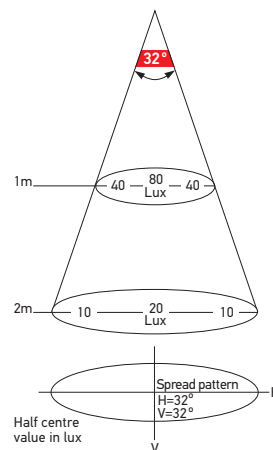
	12 VOLT	24 VOLT	
Part Number	95959908	95959918	WHITE
	95959606	95959616	WARM WHITE
Mounting	Recess mount with 50mm diameter hole.		
Power Consumption	1W		
Protection	Reverse polarity protection. Fully sealed against dust, high-pressure washing and temporary water immersion.		
Cable Length	Pre-wired with 120mm of cable.		
See page 197 for a HELLA analog based dimmer unit.			

## ILLUMINATION CHARTS

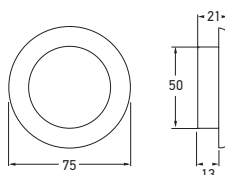
## P/N 95959908/...918 - White



## P/N 95959606/...616 - Warm White



**Dimmable:**  
Analog DC Input



Part Number	12 VOLT	24 VOLT	
	98050001	98050101	WHITE
	98050021	98050121	WARM WHITE
	98050741	98050841	DEEP RED
	98050721	98050821	RED
	98050761	98050861	ORANGE
	98050701	98050801	AMBER
	98050201	98050301	GREEN
	98050241	98050341	CYAN
	98050221	98050321	BLUE

Mounting Recess mount with 50mm diameter hole.

Power Consumption 1W

Protection Reverse polarity protection.  
Fully sealed against dust, high-pressure washing and temporary water immersion.

Cable Length Pre-wired with 120mm of cable.

Each lamp includes a black and a white plastic rim. Additional rims and housings are available as spare parts.  
See page 197 for a HELLA analog based dimmer unit.

## LED Round Courtesy Lamps - Clear Lens

Attractive, energy efficient round LED courtesy lamps for interior and exterior use. Available in nine exciting colours with a range of different rim finishes. Optic appears clear until illuminated.



P/N 98050001



P/N 98050021

P/N 98050741

P/N 98050721



P/N 98050761

P/N 98050701

P/N 98050201



P/N 98050241

P/N 98050221

ROUND RIMS - SINGLE		
Part Number	Colour	Material
95950520	BLACK	PLASTIC
95950531	WHITE	
95950550	POLISHED	316 STAINLESS STEEL
95950552	GOLD PLATED	
95950556	SATIN CHROME PLATED	

ROUND HOUSING		
Part Number	Colour	Material
95999310	BLACK	PLASTIC
95999311	WHITE	

Housing does not suit high intensity courtesy lamps.



P/N 95999310

P/N 95950550

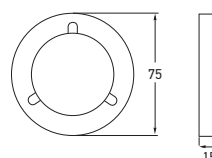
P/N 95950552

P/N 95950556

P/N 95950531

## Round Courtesy Lamp Accessories

Spare rims and housings for the round courtesy lamp family. One rim is required per lamp.



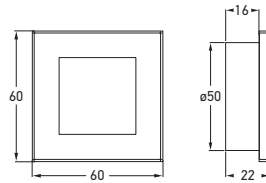


## LED High Intensity Courtesy Lamps

Square LED high intensity courtesy lamps for interior and exterior use. Includes a black and a white plastic rim (as shown). Additional rims and housings are available as spare parts.



P/N 98059704



**Dimmable:**  
Analog DC Input

	12 VOLT	24 VOLT	
Part Number	98059604	98059614	WHITE
	98059704	98059714	WARM WHITE

Mounting Recess mount with 50mm diameter hole.

Power Consumption 1W

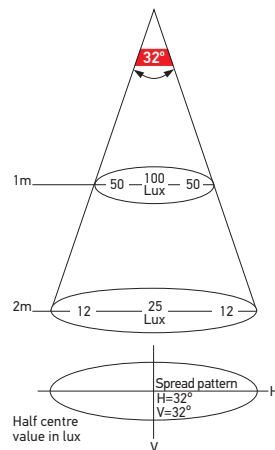
Protection Reverse polarity protection.  
Fully sealed against dust, high-pressure washing and temporary water immersion.

Cable Length Pre-wired with 120mm of cable.

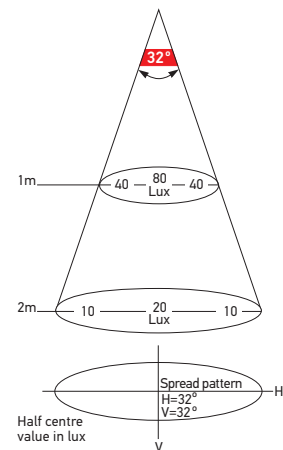
See page 197 for a HELLA analog based dimmer unit.

## ILLUMINATION CHARTS

## P/N 98059604/...614 - White

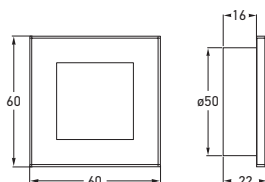


## P/N 98059704/...714 - Warm White



Square Courtesy lamps

**Dimmable:**  
Analog DC Input



Part Number	12 VOLT	24 VOLT	
	98058001	98058101	WHITE
	98058021	98058121	WARM WHITE
	98058741	98058841	DEEP RED
	98058721	98058821	RED
	98058761	98058861	ORANGE
	98058701	98058801	AMBER
	98058201	98058301	GREEN
	98058241	98058341	CYAN
	98058221	98058321	BLUE

Mounting Recess mount, 50mm diameter hole.

Power Consumption 1W

Protection Reverse polarity protection.  
Fully sealed against dust, high-pressure washing and temporary water immersion.

Cable Length Pre-wired with 120mm of cable.

Each lamp includes a black and a white plastic rim. Additional rims and housings are available as spare parts.  
See page 197 for a HELLA analog based dimmer unit.

## LED Square Courtesy Lamps - Clear Lens

Attractive, energy efficient square LED courtesy lamps for interior and exterior use. Available in nine exciting colours with a range of different rim finishes. Optic appears clear until illuminated.



P/N 98058001



P/N 98058021

P/N 98058741

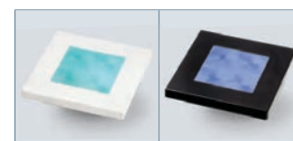
P/N 98058721



P/N 98058761

P/N 98058701

P/N 98058201



P/N 98058241

P/N 98058221

SQUARE RIMS - SINGLE		
Part Number	Colour	Material
98058520	BLACK	PLASTIC
98058531	WHITE	
98058501	CHROME PLATED	
98058502	GOLD PLATED	
98058503	SATIN CHROME PLATED	

SQUARE HOUSING		
Part Number	Colour	Material
95999360	BLACK	PLASTIC
95999354	WHITE	



P/N 95999360

P/N 98058503

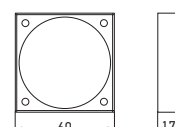
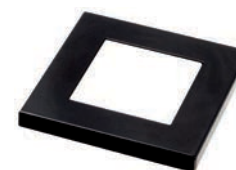
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P/N 98058501

P/N 98058531

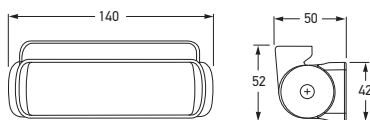
## Square Courtesy Lamp Accessories


Spare rims and housings for the square courtesy lamp family. One rim is required per lamp.



## DuraLED® WL200 Work Lamp

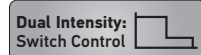
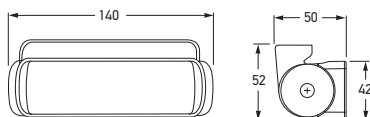
LED universal work lamp with low profile stainless steel bracket. Lamp may be mounted upright or pendant and may be adjusted vertically up or down. Totally sealed against dust and moisture and with a tough, chemical resistant Grilamid® lens. Option of two light patterns, narrow or spread.




Part Number	NARROW	SPREAD	
	98067020	98067030	WHITE
Mounting	Upright or pendant.		
Voltage	Multivolt™ for optimum brightness at input voltages from 9 to 33 volts.		
Power Consumption	3W		
Max. Light Output	200lm		
Protection	Reverse polarity and voltage spike protection. IP 6K7 (Protection against dust and temporary water immersion) IP 6K9K (Protection against dust and high-pressure/steam jet cleaning)		
Cable Length	Pre-wired with 2.5m of sheathed multi-core cable.		
Lens Material	Grilamid®		
Compliance	CE  Z208		

## DuraLED® WL550 Work Lamp

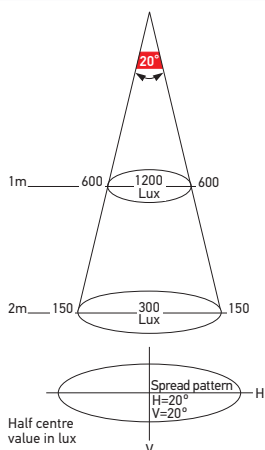
LED universal work lamp with low profile stainless steel bracket. Lamp may be mounted upright or pendant and may be adjusted vertically up or down. Totally sealed against dust and moisture and with a tough, chemical resistant Grilamid® lens. Option of two light patterns, spread or wide spread.



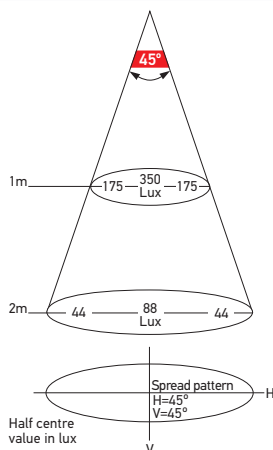
Part Number	SPREAD	WIDE SPREAD	
	98057310	98057300	WHITE
Mounting	Upright or pendant.		
Voltage	Multivolt™ for optimum brightness at input voltages from 9 to 33 volts.		
Power Consumption	7W		
Max. Light Output	550 lm		
Protection	Reverse polarity and voltage spike protection. IP 6K7 (Protection against dust and temporary water immersion) IP 6K9K (Protection against dust and high-pressure/steam jet cleaning)		
Cable Length	Pre-wired with 2.5m of sheathed multi-core cable.		
Lens Material	Grilamid®		
Compliance	CE  Z208		

## ILLUMINATION CHARTS

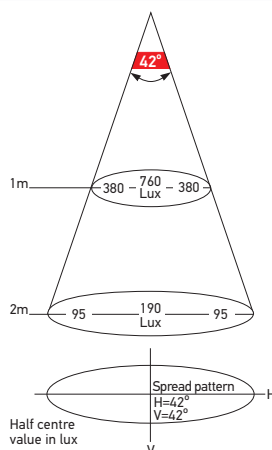
## WL200 - Narrow



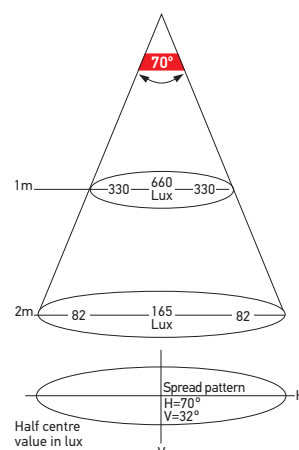
## WL200 - Spread


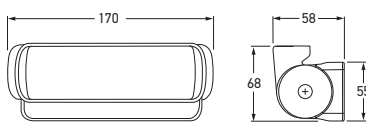



## WL550 - Spread



## WL550 - Wide Spread



<b>Dual Intensity:</b> Switch Control 			
Power Supply	30 LED	Lens Material	Bracket
MULTI VOLT		GMD	STAINLESS STEEL
			
Part Number	NARROW	SPREAD	
	98095023	98095003	WHITE
	98095033	98095014	WARM WHITE
Mounting	Upright or pendant.		
Voltage	Multivolt™ for optimum brightness at input voltages from 9 to 33 volts.		
Power Consumption	High intensity mode: 12W (1A@12V/0.50A@24V) Low intensity mode: 2W (0.17A@12V/0.08A@24V)		
Max. Light Output	750lm		
Protection	Reverse polarity and voltage spike protection. IP 6K7 (Protection against dust and temporary water immersion) IP 6K9K (Protection against dust and high-pressure/steam jet cleaning)		
Cable Length	Pre-wired with 2.5m of sheathed multi-core cable.		
Lens Material	Grilamid®		
Compliance	CE 		

## DuraLED® WL750 Work Lamp

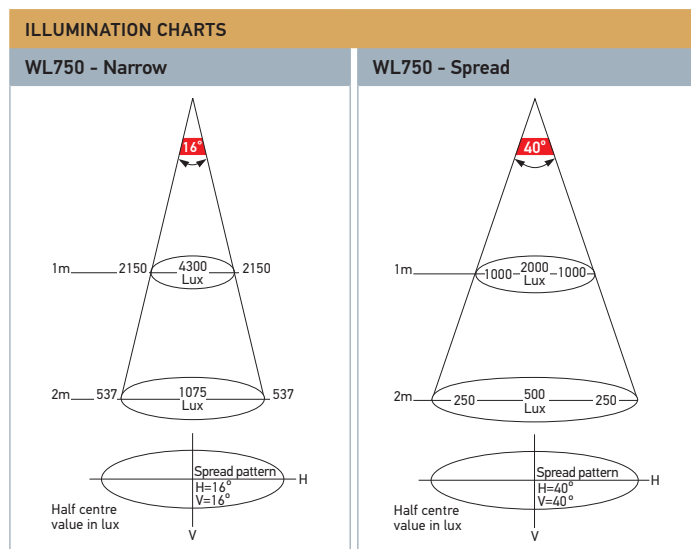
Featuring an integrated dual intensity circuit, a high level of spike protection and energy efficient Multivolt™ technology, the innovative DuraLED® WL750 will appeal for applications where energy efficiency and reliability is a must. Features a tough, chemical resistant Grilamid® lens, a highly impact resistant Swiss-made crystal clear polyamide with superior tolerance to chemical and long term harsh UV exposure, as well as technologically advanced thermally conductive non-metal housing.



Friction mounts; easy adjustment without tools.

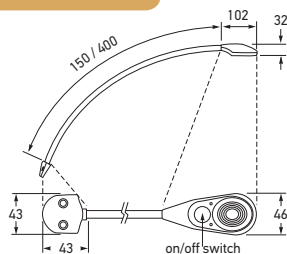
Completely sealed lamp/cable entry. Marine grade stainless steel bracket.

INTERIOR/EXTERIOR



## LED Flexible Map Reading Lamp

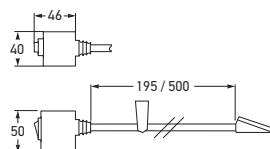
LED map reading light featuring a strong flexible shaft and an on/off switch on the lamp head. Low power consumption.



Part Number	2638	150MM
	2639	400MM
Mounting	Screw mount.	
Voltage	Multivolt™ for optimum brightness at input voltage from 9 to 31 volts.	
Power Consumption	2.4W	
Protection	Reverse polarity protection. IP 53 (Protection against dust and water spray)	
Cable Length	Pre-wired with 150mm of cable.	
Compliance	CE	
Suitable for interior use only.		

## Halogen Map Reading Lamp

Flexible black arm. Lamp head has an integral rocker on/off switch and is fitted with a clear diffuser lens for glare-free illumination. Pillar or dash mounting.



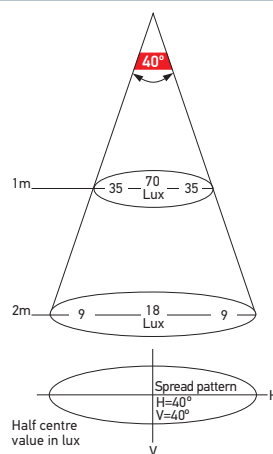
Part Number	2633	295MM
	2636	600MM
Mounting	Screw mount.	
Power Consumption	5W	
Bulbs to Suit	12V 24V	YL125 HL247
Spare Parts	9EL 128 922-011 128 922 02	Red lens Clear lens



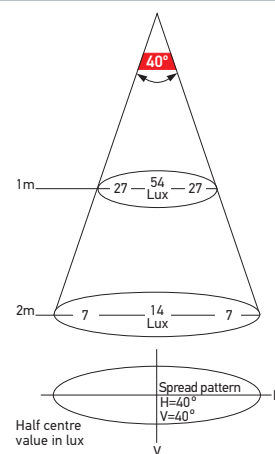
INTERIOR/EXTERIOR

### ILLUMINATION CHARTS

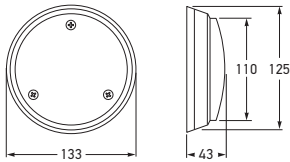
#### P/Ns 2638/2639



#### P/Ns 2633/2636







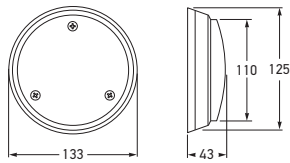
Part Number	2610		WHITE RIM
	2611		CHROME RIM
Bulbs to Suit	12V	K1210	
	24V	K2410	
Spare Part	2.9800.08	Clear lens	

Interior Lamp

Suitable for insulated earth circuits.



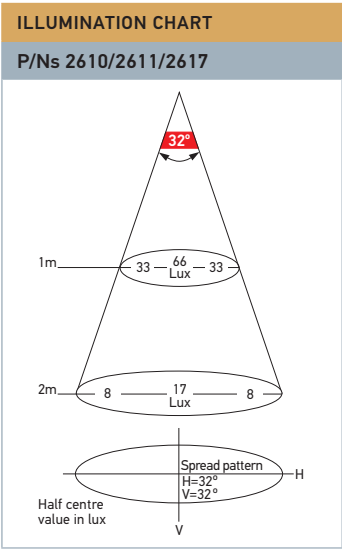
P/N 2611



Part Number	2617		WHITE RIM
Bulbs to Suit	12V	K1210	
	24V	K2410	
Spare Part	2.9800.08	Clear lens	

Interior Lamp - Polycarbonate Base with Switch

Complete with on/off switch. Suitable for insulated earth circuits.

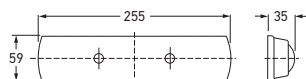


## Fluorescent Lamp - 7 Watt

High quality, fully suppressed fluorescent interior lamp with impact resistant lens, on/off switch and compact fluorescent tube 7W.



P/N 9.2642.02



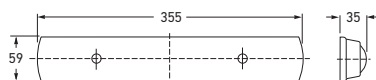
Part Number	2642	12 VOLT
	2642-24V	24 VOLT
Power Consumption	4W @ 12V, 8W @ 24V	
Spare Parts	9.2642.01	Clear lens
	9.2642.02	Compact fluorescent twin tube 7W white
RF Suppression	Suppression Class K in accordance with VDE 0871 Class B and VDE 0879 Part 3.	

## Fluorescent Lamp - 11 Watt

High quality, fully suppressed fluorescent interior lamp with impact resistant lens, on/off switch and compact fluorescent tube.



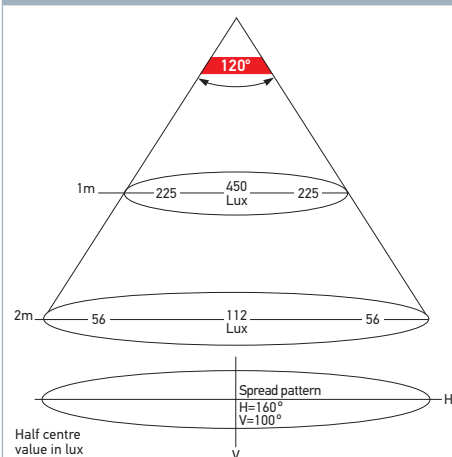
P/N 9.2643.02



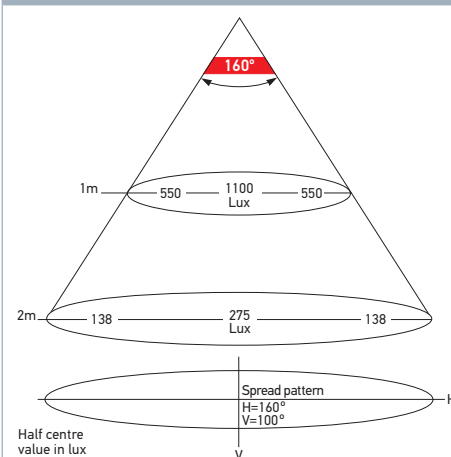
Part Number	2643	12 VOLT
	2643-24V	24 VOLT
Power Consumption	7W @ 12V, 14W @ 24V	
Spare Parts	9.2643.01	Clear lens
	9.2643.02	Compact fluorescent twin tube 11W white
RF Suppression	Suppression Class K in accordance with VDE 0871 Class B and VDE 0879 Part 3.	

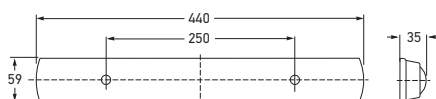
### ILLUMINATION CHARTS

#### P/Ns 2642/2642-24V



#### P/Ns 2643/2643-24V





Part Number	2644	12 VOLT
	2644-24V	24 VOLT
Power Consumption	5W @ 12V, 10W @ 24V	
Spare Parts	9.2644.01 TL8W/336J	Clear lens Compact fluorescent tube 8W white
RF Suppression	Suppression Class K in accordance with VDE 0871 Class B and VDE 0879 Part 3.	

## Fluorescent Lamp - 8 Watt

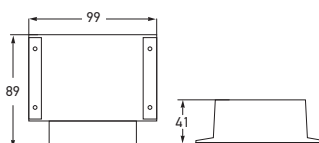
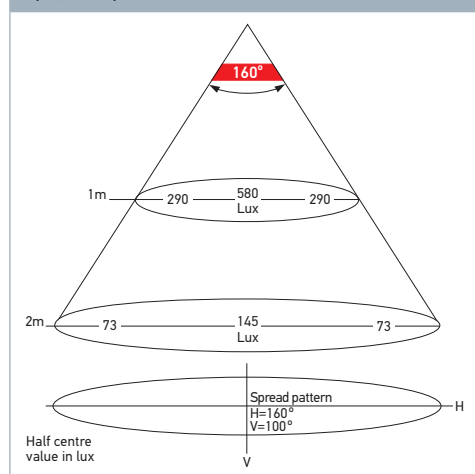
High quality, fully suppressed fluorescent interior lamp with impact resistant lens, on/off switch and compact fluorescent tube.



P/N TL8W/336J

### ILLUMINATION CHART

P/Ns 2644/2644-24V

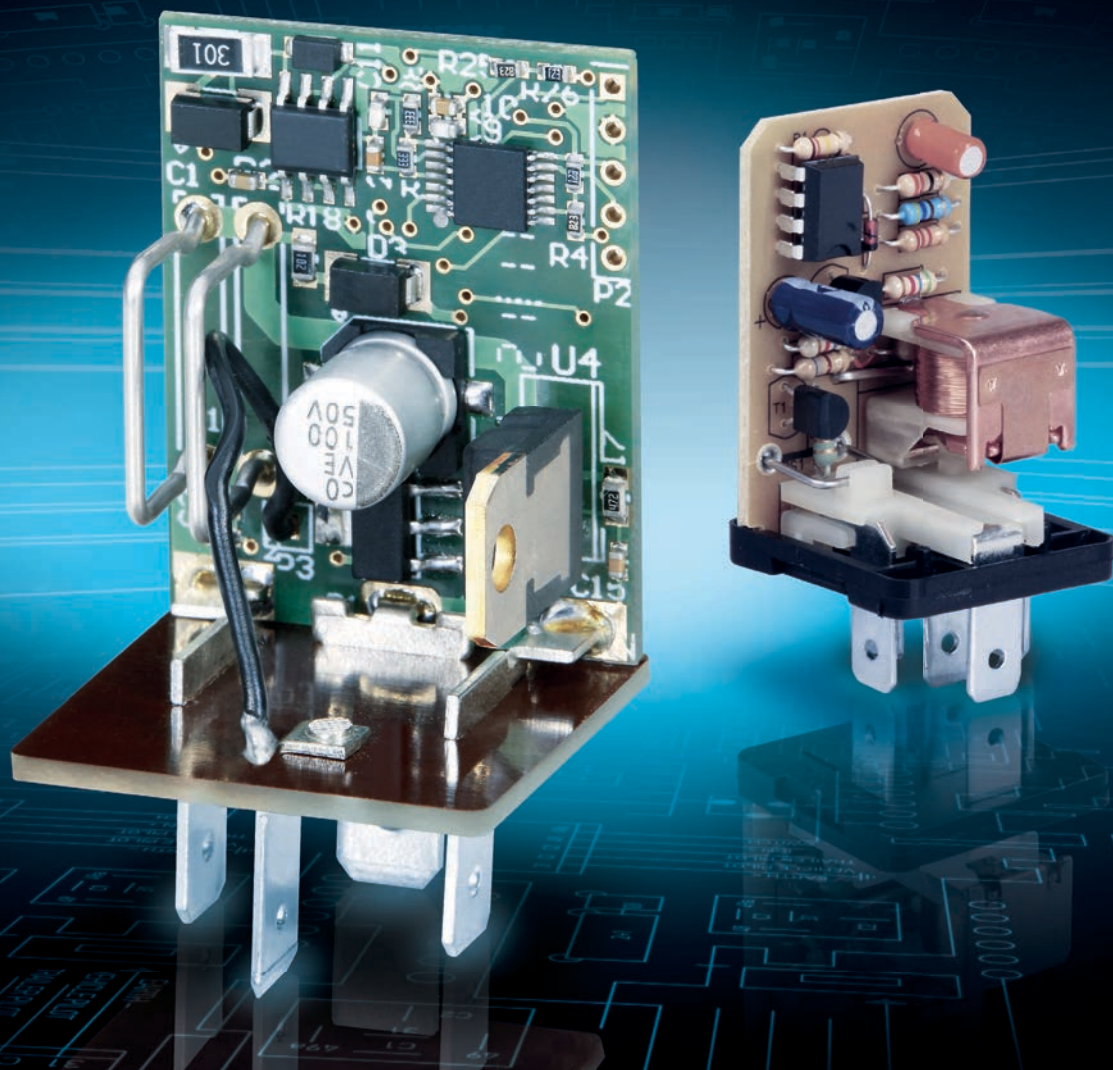


Part Number	5XA 998 572-001	
Maximum Load	12V 24V	2 x 100W 2 x 200W
Input Voltage Range	8 - 30V DC	
System Voltage	Suitable for 12 or 24V systems.	
Number of Groups	2	
Switches Per Group	Unlimited	
Switch Type	Normally open momentary switch.	
Protection	Overload, Temperature, Low voltage.	
Fuse	2 x 10A	
Compliance	CE	

## 2 Group Light Dimmer

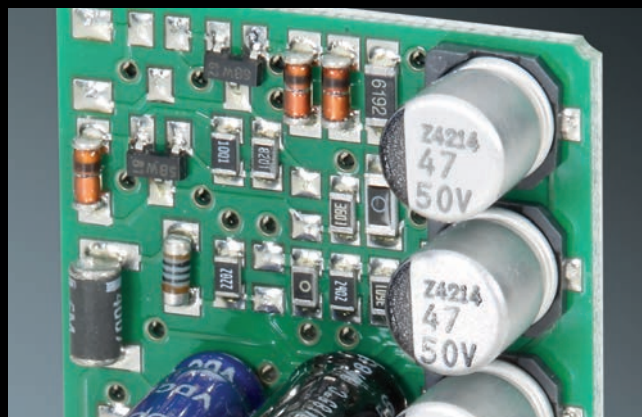
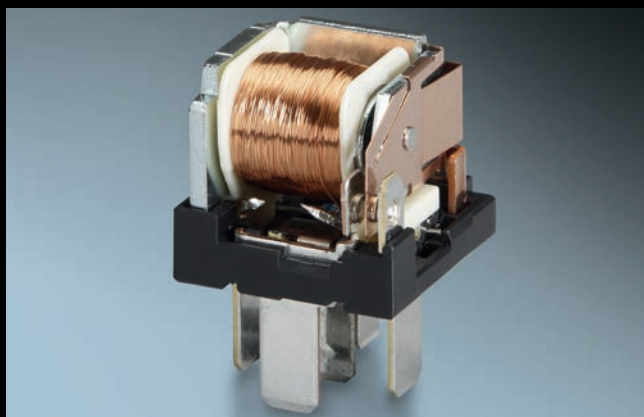
The Hella marine 2 group light dimmer provides precise dimming control for one or two separate light groups, and sophisticated voltage regulation with a 'soft-start' feature to lengthen the life of a filament bulb. Suitable for selected HELLA PWM based LED and bulb lamps. The dimmer also provides low voltage protection against deep battery discharge.





# Relays and Flasher Units

HELLA manufactures more than 100 million units per year and thanks to optimised production, HELLA relay and flasher units consistently benchmark with the highest reliability in the industry.



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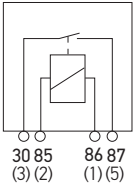
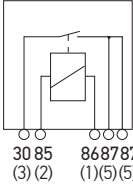
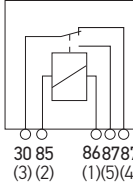


# HELLA RELAYS

HELLA offers a comprehensive range of relays to suit 12 and 24 volt applications. Quality accessories facilitate the expansion into new applications and provide customers with new solutions.

COMMON PIN DESIGNATIONS FOR RELAYS		
Pin No.	Description	<b>Eliminating Voltage Spikes</b>  Voltage spikes from 300V to 500V can occur momentarily when a relay is switched off. Sensitive electronic equipment can be damaged or malfunctions can occur if these spikes reach the vehicle electrical network without suppression. A relay with a diode eliminates voltage spikes completely.
85/2	Earth (end of winding to ground or negative)	
86/1	Positive	
87/5	Output (to consumer e.g. driving lamp)	
87a/4	Alternative output (1st output, break side)	
30/3	Positive supply (Input from + battery terminal, direct)	

## The Different Types of Relays

The Normally Open Relay	The Normally Open Relay with Dual Output	The Change-over Relay
 <p>30 85 86 87 (3) (2) (1) (5)</p>	 <p>30 85 86 87 87a (3) (2) (1) (5) (5)</p>	 <p>30 85 86 87 87a (3) (2) (1) (5) (4)</p>
<p>A normally open relay is used to close the electric circuit between power source and electrical load, i.e. the load is switched on. Relays are operated by means of switches, pulse generators or control devices.</p> <p>Application: Headlamps, auxiliary driving lamps, auxiliary fog lamps, horns, heaters, motors for fans and power windows, air-conditioners and ignition assemblies.</p>		<p>The change-over relay changes the load path from one electrical load to another. The relay is operated by a dashboard switch.</p> <p>Application: Switching over from town horn to fanfare horn, for 2 speed appliances such as heated rear window or fan motors.</p> <p>Change-over relays can be used as:</p> <ul style="list-style-type: none"> <li>• Change-over relays</li> <li>• Normally open relays</li> <li>• Normally closed relays</li> </ul>

Relays have been predicted to be obsolete in modern vehicles, however the automotive industry needs relays since relay functions cannot always be replaced by control units. Only relays make “galvanic isolation” possible between input and output. Semi-conductor devices cannot manage this at the moment. Another positive factor is the cost advantage relays have compared with an electronic solution.

In motor vehicles, relays are used to switch high currents. For example the engine control unit is switched by a relay. Their sturdiness allows them to be installed near electric consumers. As only low control currents are required, the cable cross-sections can be kept small. The switching/amplifier function of a relay can only be achieved with a lot more effort and a lot less reliability using “modern” electronics. An additional advantage is that the replacement of a relay is quick and easy. These characteristics guarantee that relays will have a regular place in many vehicles for a long time to come.

### Trust in our Quality Relays

- Production expertise: HELLA produces more than 100 million relays per year. Thanks to optimised production we can offer a competitive price for customers. HELLA relays have an extremely low failure rate.
- OEM customers: HELLA develops and produces relays for AGCO, Claas, Daimler AG, Ford, VW, GM, JCB, Opel, Nissan, John Deere, Chrysler and Jaguar/Land Rover among others. We have been working with many customers for decades.

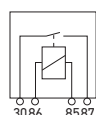
## RELAY QUICK REFERENCE CHART

MINI RELAYS - NORMALLY OPEN								
Part Number	Voltage	Pins	Function	Protection	Maximum Load	Current Draw	Bracket	Description
3078	12V	4	N/O		30A	140mA	Yes	
3078R	12V	4	N/O	Resistor	50A	140mA	Yes	Terminals 30 and 87 are 9.5mm terminals
3053	12V	4	N/O	Diode	40A	170mA	Yes	
3059	12V	4	N/O	Diode	50A	210mA	Yes	Terminals 30 and 87 are 8.1mm terminals
3082	12V	5	N/O		40A	140mA	Yes	
3055	12V	5	N/O	Diode	40A	170mA	Yes	
3079	24V	4	N/O		30A	70mA	Yes	
3079R	24V	4	N/O	Resistor	30A	90mA	Yes	
3054	24V	4	N/O	Diode	22A	90mA	Yes	
3060	24V	4	N/O	Diode	30A	90mA	Yes	Terminals 30 and 87 are 8.1mm terminals
3083	24V	5	N/O		20A	70mA	No	
3056	24V	5	N/O	Diode	22A	90mA	Yes	
MINI RELAYS - NORMALLY OPEN FUSED								
3076	12V	4	N/O		25A	140mA	Yes	
3077	24V	4	N/O		15A	80mA	Yes	
MINI RELAYS - CHANGE-OVER								
3080	12V	5	N/O-N/C		30-87, 30A/30-87a, 20A	140mA	Yes	
3057	12V	5	N/O-N/C	Diode	30-87, 40A/30-87a, 15A	170mA	Yes	
3081	24V	5	N/O-N/C		30-87, 20A/30-87a, 10A	70mA	Yes	
3058	24V	5	N/O-N/C	Diode	30-87, 22A/30-87a, 10A	90mA	Yes	
WEATHERPROOF RELAY - CHANGE-OVER								
3080S	12V	5	N/O-N/C	Resistor	30-87, 30A/30-87a, 20A	160mA	Yes	Connector P/N 4973S
SOLID STATE RELAY - NORMALLY OPEN								
3063	12V	4	N/O		22A		No	
HIGH CAPACITY RELAYS - NORMALLY OPEN								
3084	12V	4	N/O		60A	140mA	Yes	Terminals 30 and 87 are 9.5mm terminals
3061	12V	4	N/O		180A peak (100A continuous)	380mA	Yes	
3085	24V	4	N/O		60A	70mA	Yes	Terminals 30 and 87 are 9.5mm terminals
3062	24V	4	N/O		80A peak (60A continuous)	180mA	Yes	
MICRO RELAY - NORMALLY OPEN								
3064	12V	4	N/O	Resistor	20A	140mA	No	Terminals 85 and 86 are 4.8mm
MICRO RELAY - CHANGE-OVER								
3065	12V	5	N/O-N/C	Resistor	30-87, 20A/30-87a, 10A	140mA	No	Terminals 85, 86 and 87a are 4.8mm
MICRO RELAY - LATCHING								
3064L	12V	5	Latching		20A	140mA	No	Terminals 1, 2 and 6 are 4.8mm
TIME CONTROL RELAYS								
3086	12V	5	N/O-N/C	Contact opened 10A, Contact closed 20A 30min			Yes	
3087	12V	5	N/O-N/C	Contact opened 10A, Contact closed 20A 30min			Yes	
3086-24V	24V	5	N/O-N/C	Contact opened 10A, Contact closed 20A 30min			Yes	
3087-24V	24V	5	N/O-N/C	Contact opened 10A, Contact closed 20A 30min			Yes	

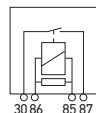
## Normally Open Mini Relay



P/Ns 3078 and 3082



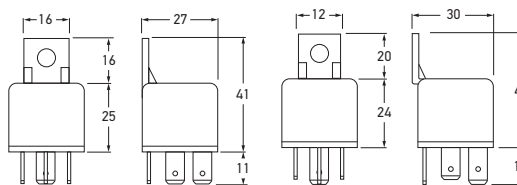
P/Ns 3078



P/Ns 3078R



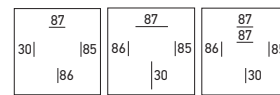
P/Ns 3082



P/Ns 3078 and 3082

P/N 3078R

Terminals 30 and 87 are 9.5mm terminals



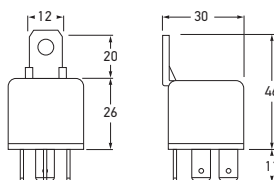
P/N 3078

P/N 3078R

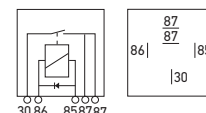
P/N 3082

Part Number	3078	4 PIN	12 VOLT
	3078-BULK (Pack of 10)		
	3078R (With resistor)		
	3082	5 PIN	
	3082-BULK (Pack of 10)		
Maximum Load	P/N 3078: 30A	P/N 3078R: 50A	P/N 3082: 40A
Current Draw	140mA		

## Normally Open Mini Relay with Diode



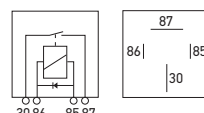
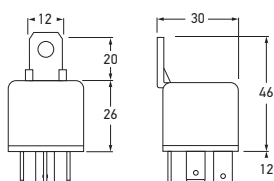
P/N 3053



P/N 3055

Part Number	3053	4 PIN	12 VOLT
	3055	5 PIN	
Maximum Load	40A		
Protection	Diode		
Current Draw	170mA		

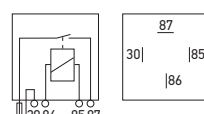
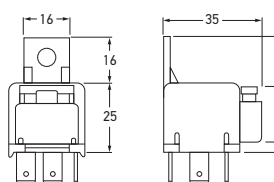
## Normally Open Mini Relay with Diode



Terminals 30 and 87 are 8.1mm terminals

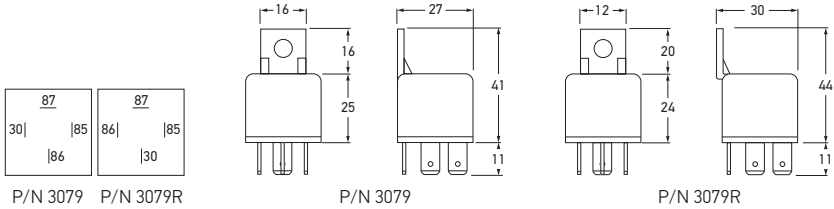
Part Number	3059	4 PIN	12 VOLT
Maximum Load	50A		
Protection	Diode		
Current Draw	210mA		

## Normally Open Fused Relay



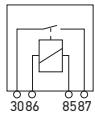
Part Number	3076	4 PIN	12 VOLT
Maximum Load	25A with 25A fuse		
Current Draw	140mA		

RELAYS AND FLASHER UNITS

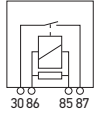


Part Number	3079		4 PIN	24 VOLT
	3079-BULK (Pack of 10)			
	3079R (With resistor)			
Maximum Load	30A			
Current Draw	P/N 3079:	70mA	P/N 3079R:	90mA

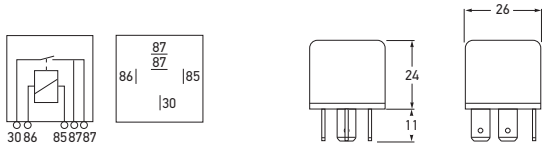
Normally Open Mini Relay



P/Ns 3079

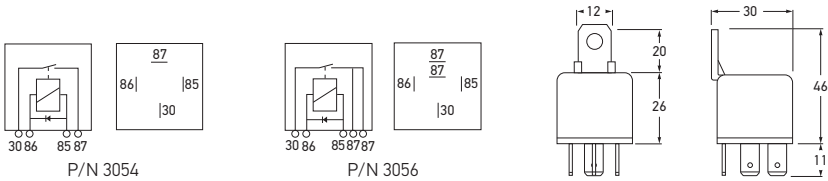


P/Ns 3079R



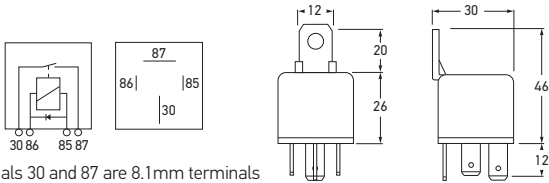
Part Number	3083	5 PIN	24 VOLT
	3083-BULK (Pack of 10)		
Maximum Load	20A		
Current Draw	70mA		

Normally Open Mini Relay - Without Bracket



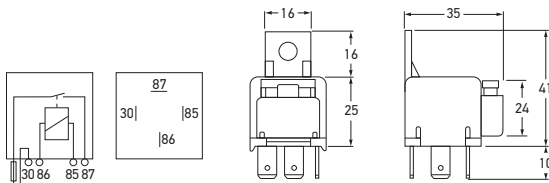
Part Number	3054	4 PIN	24 VOLT
	3056	5 PIN	
Maximum Load	22A		
Protection	Diode		
Current Draw	90mA		

Normally Open Mini Relay With Diode



Part Number	3060	4 PIN	24 VOLT
Maximum Load	30A		
Protection	Diode		
Current Draw	90mA		

Normally Open Mini Relay With Diode

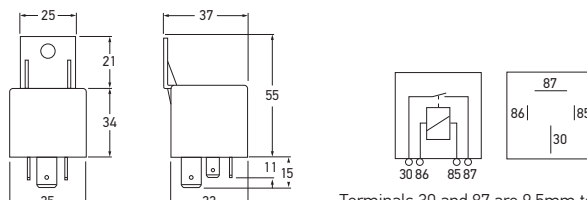


Part Number	3077	4 PIN	24 VOLT
Maximum Load	15A with 15A fuse		
Current Draw	80mA		

Normally Open Fused Relay

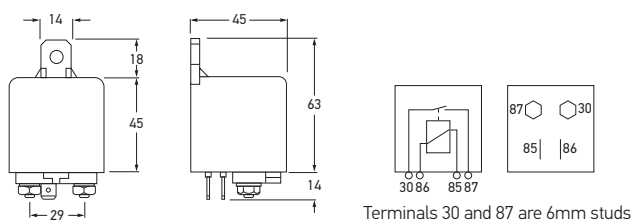


## High Capacity Normally Open Relay



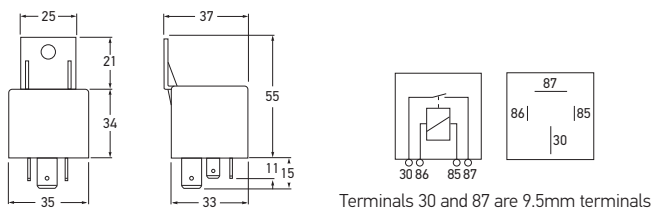
Part Number	3084	4 PIN	12 VOLT
Maximum Load	60A		
Current Draw	140mA		

## High Capacity Normally Open Relay



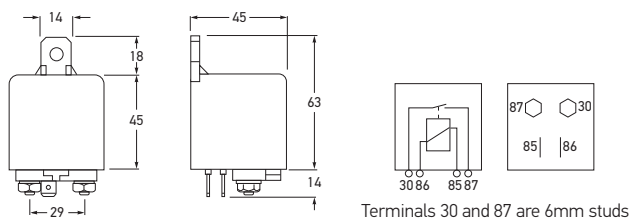
Part Number	3061	4 PIN	12 VOLT
Maximum Load	180A peak current (100A continuous)		
Current Draw	380mA		

## High Capacity Normally Open Relay



Part Number	3085	4 PIN	24 VOLT
Maximum Load	60A		
Current Draw	70mA		

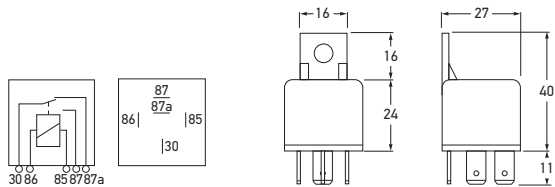
## High Capacity Normally Open Relay



Part Number	3062	4 PIN	24 VOLT
Maximum Load	80A peak current (60A continuous)		
Current Draw	180mA		



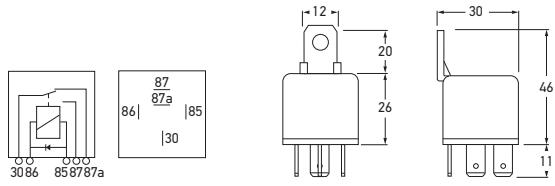
Change-over Relay



Part Number	3080	5 PIN	12 VOLT
	3080-BULK (Pack of 10)		
Maximum Load	30-87, 30A/30-87a, 20A		
Current Draw	140mA		



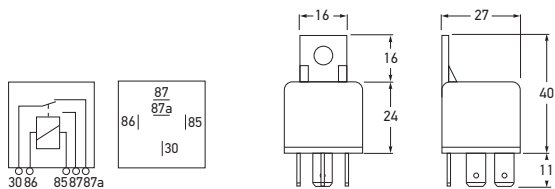
Change-over Relay with Diode



Part Number	3057	5 PIN	12 VOLT
Maximum Load	30-87, 40A/30-87a, 15A		
Protection	Diode		
Current Draw	170mA		



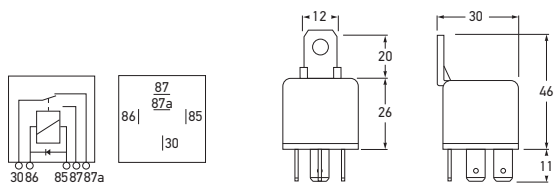
Change-over Relay



Part Number	3081	5 PIN	24 VOLT
	3081-BULK (Pack of 10)		
Maximum Load	30-87, 20A/30-87a, 10A		
Current Draw	70mA		



Change-over Relay with Diode

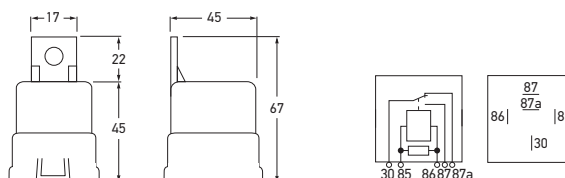


Part Number	3058	5 PIN	24 VOLT
Maximum Load	30-87, 22A/30-87a, 10A		
Protection	Diode		
Current Draw	90mA		



**Weatherproof Change-over Relay**

Change-over relay with matching plug to form a dust and weatherproof seal. Pre-wired connector with 300mm of 3 x 2.90mm<sup>2</sup> cable and 2 smaller signal cables (to be purchased separately).



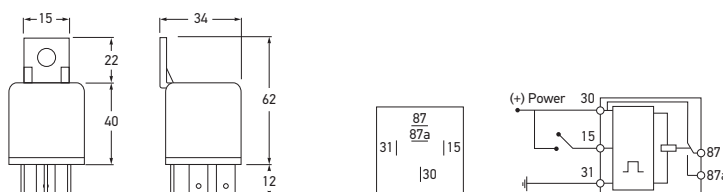
Part Number	3080S	5 PIN	12 VOLT
Maximum Load	30-87, 30A, 30-87a, 20A		
Current Draw	160mA		
Spare Part	4973S	Connector with cable	
Protection	Resistor		



P/N 4973S

**Time Control Unit with Drop-out Delay**

Relay with manually adjustable drop-out delay function, 0 – 900 seconds.

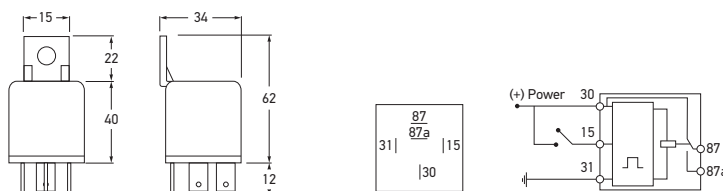


Part Number	3086	5 PIN	12 VOLT
	3086-24V		24 VOLT
Maximum Load	Contact opened 10A Contact closed 20A/30min		
Protection	IP 50 (Protection against dust)		

Switching terminal 15 starts timing.

**Time Control Unit with Pick-up Delay**

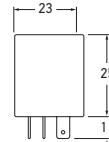
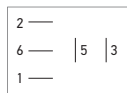
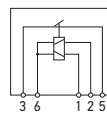
Relay with manually adjustable pick-up delay function, 0 – 900 seconds.



Part Number	3087	5 PIN	12 VOLT
	3087-24V		24 VOLT
Maximum Load	Contact opened 10A Contact closed 20A/30min		
Protection	IP 50 (Protection against dust)		

Switching terminal 15 starts timing.

## RELAYS AND FLASHER UNITS



Part Number	3064L	5 PIN	12 VOLT
Maximum Load	20A		
Current Draw	0.15A		

## Latching On/Off Micro Relay

Latching relay that will remain in its open or closed state when power is removed, i.e. it will remain on or off and not automatically return to off. A negative (-) voltage pulse is required on either terminal 1 or 2 to switch on or off.



Part Number	NORMALLY OPEN 3064	4 PIN	12 VOLT
Maximum Load	20A @ 12V		
Protection	Resistor		

## Micro Relay

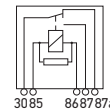
Micro relay with parallel resistor. P/N 3064 features two 4.8mm and two 6.3mm blade terminal contacts (terminals 3 and 5). Change-over relay P/N 3065 features three 4.8mm and two 6.3mm blade terminal contacts (terminals 3 and 5).



P/N 3064

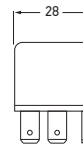
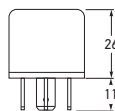
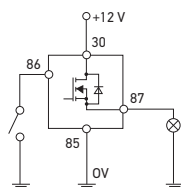


P/N 3065



Part Number	CHANGE-OVER 3065	5 PIN	12 VOLT
Maximum Load	3-5 20A/3-4 10A		
Protection	Resistor		

Terminal designations: 1 = 86, 2 = 85, 3 = 30, 4 = 87a, 5 = 87.



Part Number	3063	4 PIN	12 VOLT
Maximum Load	22A @ 12V		
Protection	IP 67 (Protection against dust and temporary water immersion)		

## FEATURES

- Suitable for resistive loads, lamp loads and inductive loads.
- Pulse width modulation allows regulation of the power for the loads.
- Maximum switching reliability, particularly suited for switching functions relevant for safety.
- Silent switching, e.g. in passenger compartment.
- Resistant to short-circuit and overload.
- Protection against polarity reversal and earth disconnection.
- Shock and vibration-resistant.
- Water-proof, potted design.
- Protection against overheating.
- Low quiescent current.

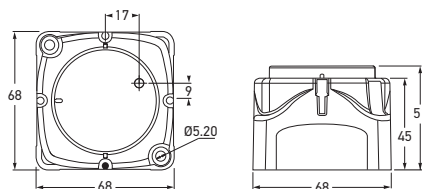
## Normally Open (Solid State) Relay

Solid-state relays are modern semi-conductor switches. Satisfies the increasing trend of controlling loads (e.g. fan motors, glow plugs, headlamp and heaters) with power regulation.



### Voltage Sensitive Relay Module

Digital voltage sensitive relay with dual sensing for 12 and 24 volt systems. Suitable for boats, caravans and 4WD vehicles, this relay allows a separate battery to be used independently from another battery permitting, for example, the starting battery not to be discharged. However when either battery is charged, the relay will connect both batteries to allow dual charging. The relay automatically detects either 12 or 24 volt operation. Very low power consumption (less than 2mA) or none in power storage mode.



Part Number	3099	12/24 VOLT
Voltage	Multivolt™, suitable for 12 and 24 volt systems.	
Mounting	Recess or surface mount.	
Maximum Continuous Load	140A	
Termination	2 x 6mm studs	

### Mini Relay Connector

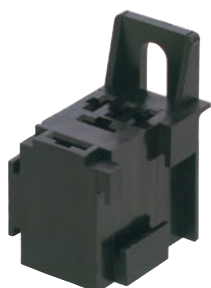
Single screw mounting. Sturdy plastic casing. Supplied with 5 blade terminals. Several holders may be joined together or mated with fuse holder P/N 8704.



Part Number	4973	
	4973-BULK	PACK OF 50
Mounting	Single screw mounting.	
To Suit	4 and 5 pin relays with 6.3mm flat pin connectors.	
P/Ns 3076 and 3077 are not suitable for multiple installation using this connector.		

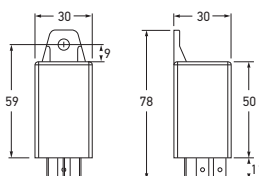
### Micro Relay Connector

For micro-relays with 5 pole SAE terminal arrangement. For receiving three 4.8mm and two 6.3mm blade terminal connectors. Made of black plastic.



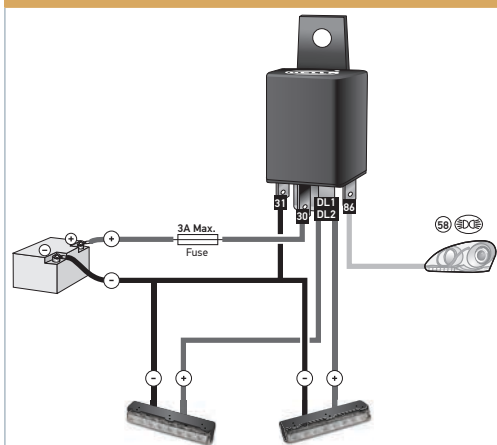
Part Number	4973-M	5 POLE
Socket	5 pole	
To Suit	P/Ns 3064, 3064L and 3065.	

## RELAYS AND FLASHER UNITS



Part Number	3090
Voltage	Multivolt™, suitable for 12 and 24 volt systems.
Maximum Continuous Load	20W
To Suit	HELLA LED Safety DayLights™ range.
Features a Safety DayLights™ OFF delay of approximately 10 seconds.	

## RECOMMENDED INSTALLATION DIAGRAM FOR WIRING



## WIRING SPECIFICATIONS

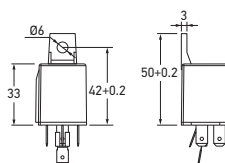
Terminal Number	Connect to
30	Battery (+)
31	Earth return (-)
86	Front position or headlamps (+)
DL1 & DL2	Safety DayLights™ (+)

## Safety DayLights™ Smart Controller

This smart controller is designed to simplify the installation of HELLA's LED Safety DayLights™ range by eliminating the need to wire the lamp, or changeover relay to ignition terminal 15.

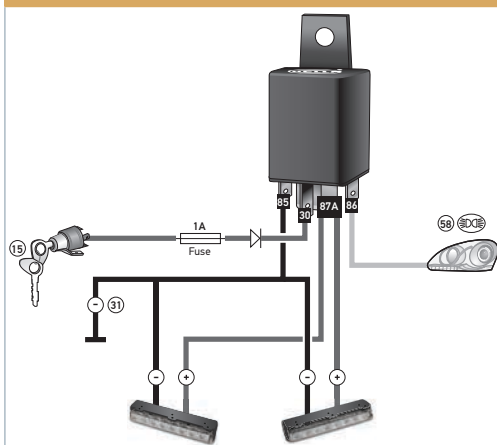
The Safety DayLights™ Smart Controller can be wired directly to the positive terminal of the battery, which saves the difficult and often time consuming task of finding the ignition feed. The smart controller monitors the voltage supply from the battery and will automatically switch the Safety DayLights™ ON when the engine is started, and automatically switch them OFF when the headlamps are activated, or the engine is turned OFF.

Safety DayLights™ Smart Controller may not function on hybrid vehicles or vehicles with stop/start systems.



Part Number	9.5630.03	12 VOLT
	9.5636.03	
	9.5630.04	
	9.5636.04	24 VOLT
To Suit	9.5630.03	P/N 1009, 5619, 5630, 5631
	9.5636.03	P/N 5636
	9.5630.04	P/N 1009-24V, 5619-24V, 5630-24V, 5631-24V
	9.5636.04	P/N 5636-24V

## RECOMMENDED INSTALLATION DIAGRAM FOR WIRING



## WIRING SPECIFICATIONS

Terminal Number	Connect to
30	Ignition (+)
85	Earth return (-)
86	Front position or headlamps (+)
87a	Safety DayLights™ (+)

## Dual Function Safety DayLights™ Controller

This controller is designed to turn your HELLA Safety DayLights™ into front position lamps at night. The dual function controller is connected and activated by the headlamp of the vehicle.

The dual function controller reduces the current to the Safety DayLights™ thus turning them into road legal\* front position lamps. Only one controller is required for a pair of HELLA Safety DayLights™.

\* Please note legally required spacing of front position lamps and only one pair of front position lamps is legally permitted.





# HELLA COMPATIBILITY SOLUTION

HELLA HCS lamps, electronic control and flasher units are designed to the latest ISO International Standard to provide compatibility with commercial vehicle indicator failure systems.

Vehicles driven on public roads require the operation of direction indicator lamps to be monitored and a fault instantly signalled to the driver. Direction indicator lamps are an important road safety feature, signalling the direction change of the vehicle. Failure to signal or failure to recognise a direction indicator signal poses a significant risk of causing an accident.

LED direction indicator lamps offer a reliable Fit and Forget solution and have become the choice for cost conscious transport operators. LED lamps with their low power consumption and Multivolt™ features, are often a challenge for existing lamp failure detection systems on modern trucks and buses.

Transport fleets often feature a mix of trailers equipped with bulb based lamps as well as trailers with full LED based lighting solutions. For the efficient operation of the fleet, each of these trailers should be compatible with the indicator failure detection systems of any of the trucks in the fleet, both now and in the future.

Some manufacturers recommend fitting additional resistive loads in parallel to the LED lamps, to simulate the 21 watts consumed by a traditional bulb lamp.

Such pure resistive load solutions can be problematic for the following reasons:

- They mask the possible failure of the actual LED signal lamp itself.
- In many cases such pure resistive solutions do not function as they provide a linear time/current response which is significantly different to the time/current response of a bulb filament when it heats up, as in the initial heat-up period the bulbs consume significantly more power than the rated 21 Watt.
- Additional parallel resistors consume a significant amount of energy and thus negate the lower power advantage that LED lamps offer.
- LED lamps marked with the HCS symbol feature patented indicator failure control technology which allows seamless communication with HELLA HCS control flasher units, or modern European trucks with body controllers compliant with the ISO 13207-1 standard.

## International Organisation for Standardisation

The International Organisation for Standardisation (ISO) is a network of national standards bodies working together to develop International Standards. Currently ISO has members from 162 countries and 3,368 technical bodies working to a common goal of making international trade and industry more effective and efficient. The standards operate by global consensus, with many governments adopting the standards into their legislation.



“HELLA New Zealand has been instrumental in the development of the HELLA Compatibility System (HCS)”

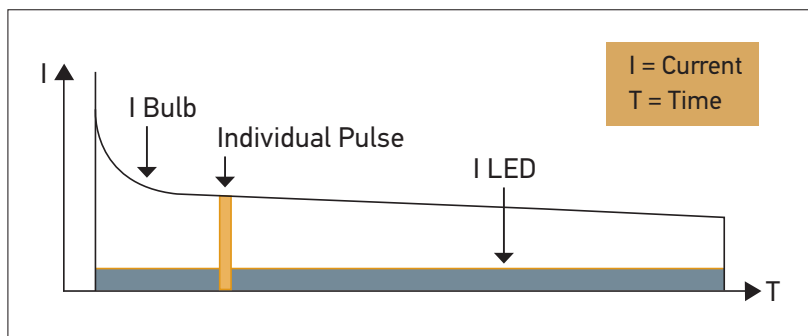
## ISO 13207-1 Standard

ISO 13207-1 specifies a precisely timed pulse for a low power LED lamp, which momentarily mimics the power consumption of a conventional incandescent bulb. This pulse is suppressed when the LED direction indicator diagnoses itself as faulty. An ISO 13207-1 compatible flasher or vehicle body controller interprets the pulse suppression and alerts the driver to a faulty lamp or faulty wiring. Body Control Modules or HCS flasher units together with LED lamps designed to ISO 13207-1 maintain the benefit of low power LED lamps, as opposed to a parallel resistor which increases the power consumption to that of a 21 watt bulb.

HELLA New Zealand has been instrumental in laying the groundwork for the development of the HELLA Compatibility System (HCS), which became the blueprint for the new ISO 13207-1 standard. HELLA HCS lamps are fully compliant with ISO 13207-1.

ISO 13207-1 has been agreed to by European truck manufacturers and will be incorporated into the vehicle monitoring electronics of European trucks. Astute transport fleet operators are already future-proofing their trailers by specifying HELLA HCS Fit and Forget LED lighting solutions which will be plug-and-play with the 24 volt European trucks of tomorrow.

HELLA lamps which incorporate HCS readily comply with ISO 13207-1.



The HCS innovation generates a pulse that simulates the current draw equivalent to an incandescent bulb.

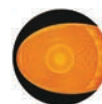
## HELLA HCS Lamps



HELLA products throughout this catalogue displaying the HCS logo incorporate HELLA Compatibility Solutions technology.



P/N 2391



P/N 2133-CS



P/N 2378-CS



P/N 2431-CS



P/N 2151-HCS

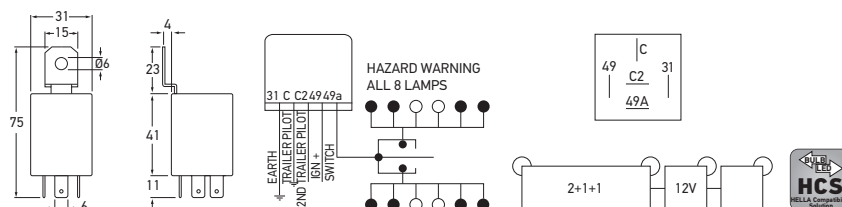


P/N 2146-HCS

A selection of HCS products.

### HCS Electronic Flasher Unit - 2+1+1

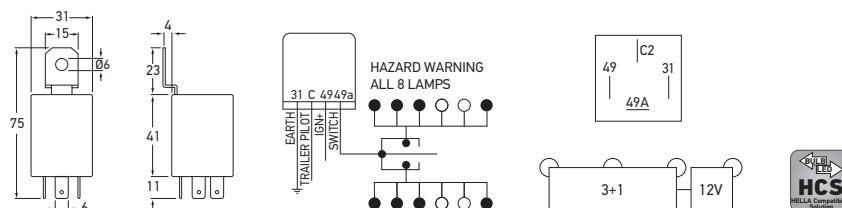
LED compatible flasher unit specifically designed for use with HCS (HELLA Compatibility Solution) LED indicator lamps. Provides stable flash rate and reliable bulb/LED lamp failure indication, for towing vehicles and trailers. Suitable to operate combinations of HCS LED and conventional 21W bulb-type lamps.



Part Number	3036	12 VOLT
Maximum Load	2+1+1(8) x 21W + 0-5W	
Frequency	90 +/- 30 flash signals per minute for direction indication and hazard warning.	
Protection	IP 53 (Protection against dust and water spray)	
See page 210 for further information on HCS technology.		

### HCS Electronic Flasher Unit - 3+1

LED compatible flasher unit specifically designed for use with HCS (HELLA Compatibility Solution) LED indicator lamps. Provides stable flash rate and reliable bulb/LED lamp failure indication, for towing vehicles and trailers. Suitable to operate combinations of HCS LED and conventional 21W bulb-type lamps.

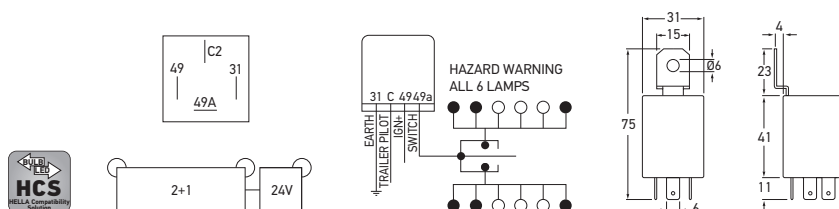


Part Number	3039	12 VOLT
Maximum Load	3+1 (8) x HCS or 21W	
Frequency	90 +/- 30 flash signals per minute for direction indication and hazard warning.	
Protection	IP 53 (Protection against dust and water spray)	
See page 210 for further information on HCS Technology.		

#### COMMON PIN DESIGNATIONS FOR FLASHER UNITS

Terminal Number	Description
49/X	Flasher input (+)
49a/L	Flasher output (+) to lamps or indicator switch
30b	Flasher input (+) from hazard switch
31	Earth (-)
C/C1/CP/P	Pilot lamp output (+)
C2	1st trailer pilot lamp output (+)
C3	2nd trailer pilot lamp output (+)

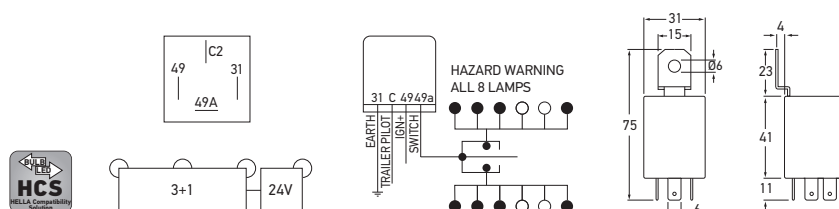
## RELAYS AND FLASHER UNITS



Part Number	3037	24 VOLT
Maximum Load	2+1 (6) x HCS or 21W + 0-5W	
Frequency	90 +/- 30 flash signals per minute for direction indication and hazard warning.	
Protection	IP 53 (Protection against dust and water spray)	
See page 210 for further information on HCS Technology.		

## HCS Electronic Flasher Unit - 2+1

LED compatible flasher unit specifically designed for use with HCS (HELLA Compatibility Solution) LED indicator lamps. Provides stable flash rate and reliable bulb/LED lamp failure indication, for towing vehicles and trailers. Suitable to operate combinations of HCS LED and conventional 21W bulb-type lamps.



Part Number	3038	24 VOLT
Maximum Load	3+1 (8) x HCS or 21W	
Frequency	90 +/- 30 flash signals per minute for direction indication and hazard warning.	
Protection	IP 53 (Protection against dust and water spray)	
See page 210 for further information on HCS Technology.		

## HCS Electronic Flasher Unit - 3+1

LED compatible flasher unit specifically designed for use with HCS (HELLA Compatibility Solution) LED indicator lamps. Provides stable flash rate and reliable bulb/LED lamp failure indication, for towing vehicles and trailers. Suitable to operate combinations of HCS LED and conventional 21W bulb-type lamps.



Part Number	5DS 009 602-001	24 VOLT
Protection	IP 53 (Protection against dust and water spray)	

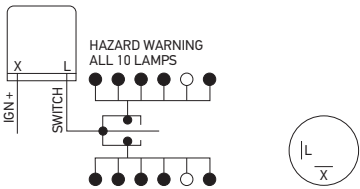
## HCS Electronic Cold Scan Unit

This relay is required if the vehicle is detecting indicator bulb function by scanning while the lamp is not activated (cold scanning). This scan may not be successful if the lamp is replaced with an LED lamp, however if a HELLA LED HCS lamp is used, the relay detects this and satisfies the scanning device to indicate lamp function. One relay required per lamp.



High Capacity Flasher Unit

High capacity electronic flasher unit. Complete with bracket. Designed to take up to 210W loads. Reverse polarity protection, polycarbonate cover and silver contacts. Clear audible signal.



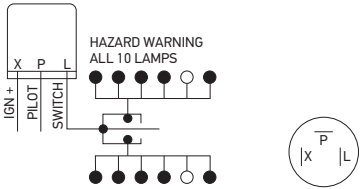
Part Number	3026	2 PIN	12 VOLT
Maximum Load	1-10 x 21W		

High Capacity Flasher Unit

High capacity electronic flasher unit. Complete with bracket. Designed to take up to 210W loads. Reverse polarity protection, polycarbonate cover and silver contacts. Clear audible signal.



P/N 3027



Part Number	3027	3 PIN	12 VOLT
	3028		24 VOLT
Maximum Load	1-10 x 21W		

Universal Mounting Bracket

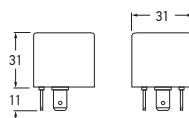
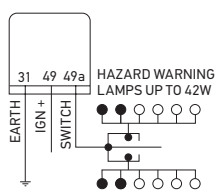
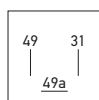
For mounting 32mm diameter HELLA flasher unit P/Ns 3026, 3027, 3028.



Part Number	8003
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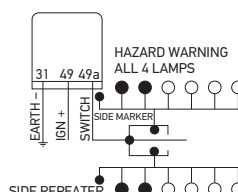
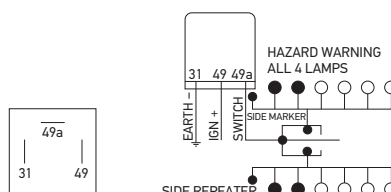
## RELAYS AND FLASHER UNITS



Part Number	3040	3 PIN
Voltage	9-33V DC (suitable for 12V DC and 24V DC)	
Maximum Load	42W max.	
Frequency	90 +/- 30 flash signals per minute for direction indication and hazard warning.	
Protection	IP 53 (Protection against dust and water spray)	

## Electronic Flasher Unit

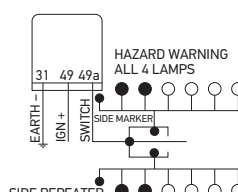
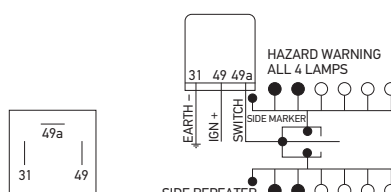
LED compatible flasher unit for universal connection of LED indicator lamps without electronic pulse. Maintains the standard flash rate of 90 +/- 30 fpm and operates on bulb and LED loads from 1W to 42W.



Part Number	3016	3 PIN	12 VOLT
No. of Bulbs	2(4) x 21W + 0 - 5W		

## Electronic Flasher Unit

To operate 2 or 3 lamps on either side of vehicle. Incorporates hazard warning flasher system when used in conjunction with HELLA switch P/N 5227.



Part Number	3016LED1	3 PIN	12 VOLT
	3016LED2		
No. of Bulbs	Front direction indicator lamp Supplementary side direction indicator lamp DuraLED® direction indicator lamp	1(2) x 21W 1(2) x 5W (P/N 3016LED2 only) 1(2) x 9W	

## LED Electronic Flasher Unit

Modified version of P/N 3016 electronic flasher unit. Specifically designed for use with DuraLED® rear direction indicator lamps on motor vehicles such as prime movers, trucks and motor homes, maintaining the mandatory bulb failure warning signal function.

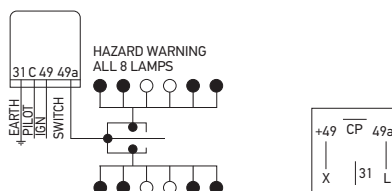


P/N 3016LED2



### High Capacity Flasher Unit

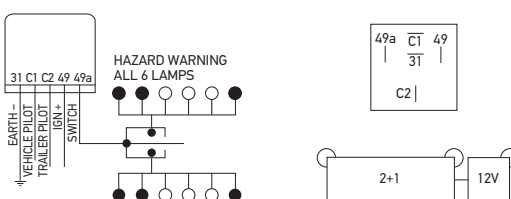
Heavy duty flasher unit manufactured to take up to 200W loads.



Part Number	3014	4 PIN	12 VOLT
	3015		24 VOLT
Load	10-200W		

### Electronic Flasher Unit - 2+1

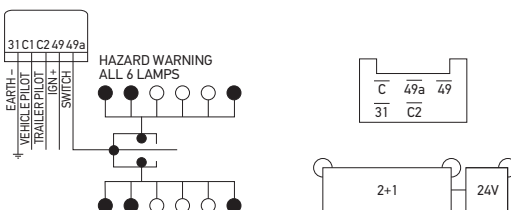
Flasher unit designed to operate 2 or 3 lamps on either side of a vehicle with caravan or trailer. Includes mounting bracket. Separate pilot lamp indicates operation of flasher lamp on the trailer. Incorporates hazard warning flasher system when used in conjunction with HELLA switch P/N 5227.



Part Number	3017	5 PIN	12 VOLT
No. of Bulbs	2+1 (6) x 21W		

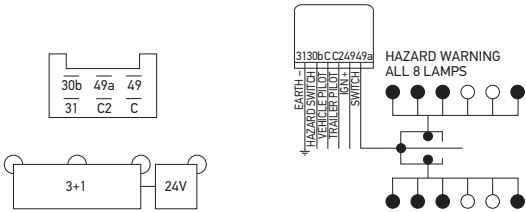
### Electronic Flasher Unit - 2+1

Flasher unit designed to operate 2 or 3 lamps on either side of a vehicle with caravan or trailer. Includes mounting bracket. Separate pilot lamp indicates operation of flasher lamp on the trailer. Incorporates hazard warning flasher system when used in conjunction with HELLA switch P/N 5227.



Part Number	3018	5 PIN	24 VOLT
No. of Bulbs	2+1 (6) x 21W		

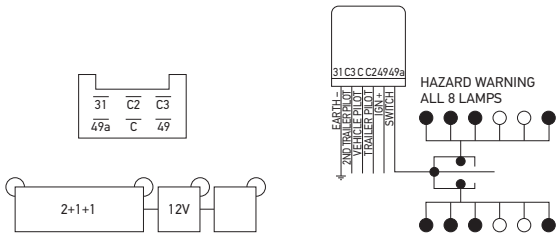
RELAYS AND FLASHER UNITS



Part Number	3032	6 PIN	24 VOLT
No. of Bulbs	3+1 (8) x 21W		

Electronic Flasher Unit - 3+1

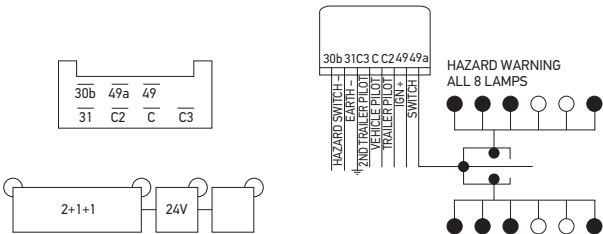
For heavy trucks with trailers. With mounting bracket. To operate 3 lamps on either side of towing vehicle, plus an additional lamp on either side of a trailer. Separate pilot lamp indicates operation of flasher lamp on the trailer. Incorporates hazard warning flasher system when used in conjunction with HELLA switch P/N 5227.



Part Number	3033	6 PIN	12 VOLT
No. of Bulbs	2+1+1 (8) x 21W		

Electronic Flasher Unit - 2+1+1

To operate 2 lamps on either side of a towing vehicle plus an additional lamp on either side of each of two trailers. Separate pilot lamps indicate operation of flasher lamps on the trailers.



Part Number	3034	7 PIN	24 VOLT
No. of Bulbs	2+1+1 (8) x 21W		

Electronic Flasher Unit - 2+1+1

To operate 2 lamps on either side of a towing vehicle plus an additional lamp on either side of each of two trailers. Separate pilot lamps indicate operation of flasher lamps on the trailers. Incorporates hazard warning flasher system when used in conjunction with HELLA switch P/N 5227.



FLASHER UNITS

HELLA quality switches suitable for all your applications.



HELLA fuses, designed to meet the requirements of the automotive industry.

Push-in Wire and CoolsplICE Connectors, Fast, Easy and Reliable.

# Accessories

All HELLA accessory products are extensively tested for quality, durability and function prior to being offered under the HELLA brand.



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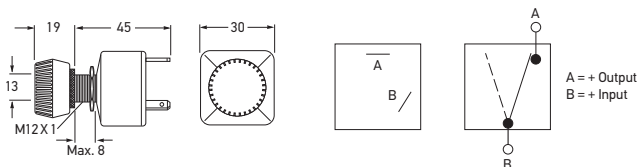
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## Rotary Switch - Off-On

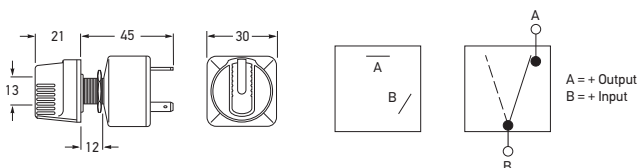
Rotary switch with round knob.



Part Number	4020	OFF-ON
Mounting	12.5mm diameter opening.	
Maximum Load	15A @ 12V 7.5A @ 24V	
Protection	IP 53 (Protection against dust and water spray)	

## Rotary Switch - Off-On

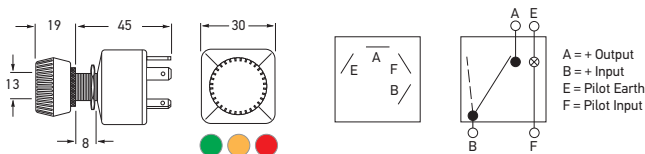
Rotary switch with flat knob.



Part Number	4021	OFF-ON
Mounting	12.5mm diameter opening.	
Maximum Load	15A @ 12V 7.5A @ 24V	
Protection	IP 53 (Protection against dust and water spray)	

## Illuminated Rotary Switch, Off-On - 12 Volt

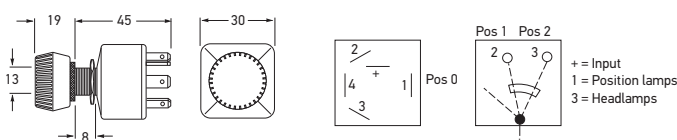
Illuminated by inbuilt 12V capillary bulb, complete with red, amber and green lenses.



Part Number	4022	OFF-ON
Mounting	12.5mm diameter opening.	
Maximum Load	15A @ 12V	
Protection	IP 53 (Protection against dust and water spray)	
Suitable for 12V only. Bulb not replaceable.		

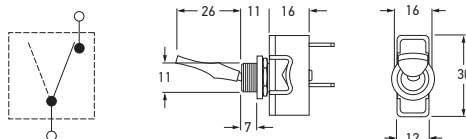
## Rotary Headlamp Switch - Off-On-On

Rotary switch with round knob.



Part Number	4023	OFF-ON-ON
Mounting	12.5mm diameter opening.	
Maximum Load	23A @ 12V 11.5A @ 24V	
Protection	IP 53 (Protection against dust and water spray)	

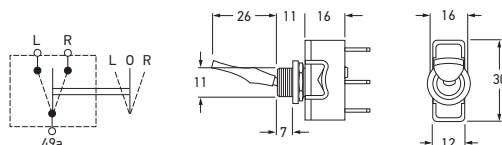
## Toggle Switch - Off-On



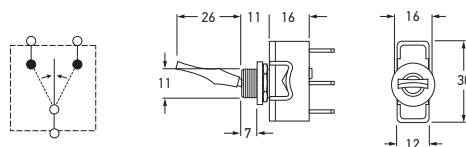
<b>Part Number</b>	<b>4456</b>	<b>OFF-ON</b>
Mounting	13mm diameter opening.	
For Panels	Up to 6mm thick.	
Maximum Load	15A @ 12V 7.5A @ 24V	



## Toggle Switch - On-Off-On



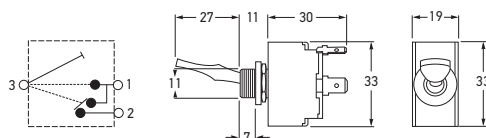
<b>Part Number</b>	<b>4202</b>	<b>ON-OFF-ON</b>
Mounting	13mm diameter opening.	
For Panels	Up to 6mm thick.	
Maximum Load	15A @ 12V 7.5A @ 24V	

Momentary Spring Return Switch  
- (On)-Off-(On)

<b>Part Number</b>	<b>4460</b>	<b>(ON)-OFF-(ON)</b>
Mounting	13mm diameter opening.	
For Panels	Up to 6mm thick.	
Maximum Load	15A @ 12V 7.5A @ 24V	



## Headlamp Switch - Off-On-On



<b>Part Number</b>	<b>4056</b>	<b>OFF-ON-ON</b>
Mounting	13mm diameter opening.	
For Panels	Up to 6mm thick.	
Maximum Load	20A @ 12V 10A @ 24V	

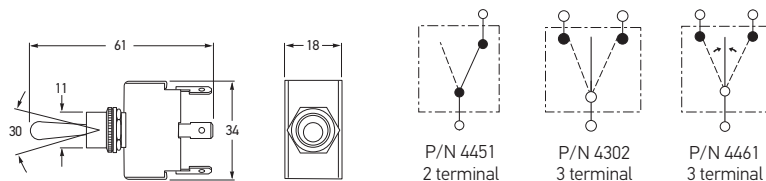
Three position switch:  
Upper = Off  
Centre = Position lamps  
Lower = Headlamps and position lamps



## Metal Shaft Toggle Switch



P/N 4451



Part Number	4451	OFF-ON
	4302	ON-OFF-ON
	4461 (Momentary spring return)	(ON)-OFF-(ON)
Mounting	12mm diameter opening.	
For Panels	Up to 5mm thick.	
Maximum Load	20A @ 12V 10A @ 24V	

## Metal Shaft Toggle Switch - Off-On



Part Number	4203	OFF-ON
Mounting	12mm diameter opening.	
For Panels	Up to 5mm thick.	
Maximum Load	15A @ 12V 7.5A @ 24V	

## Aircraft Style Switch Cover - Red

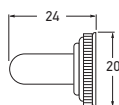
Red aircraft style switch cover to prevent accidental switch operation.



Part Number	4455	RED
To Suit	P/Ns 4451 and 4203.	

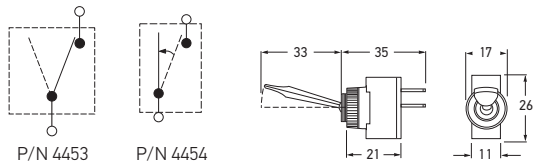
## Toggle Boot

To be used with toggle switches.



Part Number	4452	
	4452-BULK	PACK OF 10
To Suit	Toggle switch P/Ns 4302, 4451 and 4461.	

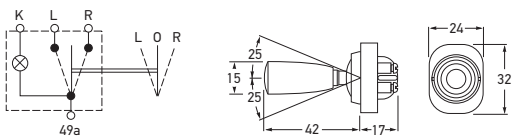

Plastic Toggle Switch



Part Number	4453	OFF-ON
	4454 (Momentary spring return)	OFF-(ON)
Mounting	13mm diameter opening.	
For Panels	Up to 6mm thick.	
Maximum Load	8A @ 12V	



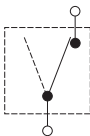
Illuminated Toggle Switch, On-Off-On



Part Number	4206	ON-OFF-ON
Mounting	19mm diameter opening.	
For Panels	Up to 2mm thick.	
Maximum Load	6A @ 12V	
Bulb to Suit	12V	292



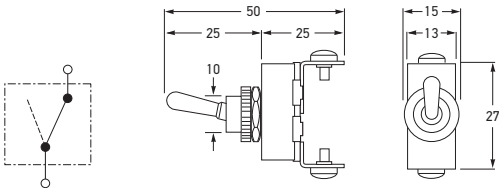
Pre-wired Toggle Switch - Off-On



Part Number	4457	OFF-ON
Mounting	12mm diameter opening.	
For Panels	Up to 6mm thick.	
Maximum Load	6A @ 12V	



Brass Toggle Switch - Off-On



Part Number	2762	OFF-ON
Mounting	11mm diameter opening.	
For Panels	Up to 6mm thick.	
Maximum Load	20A @ 12V 10A @ 24V	
Toggle boot P/N 4452 does not fit this switch.		



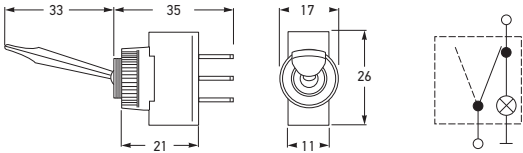
Illuminated Toggle Switch,  
Off-On - 12 Volt



P/N 4434

P/N 4435

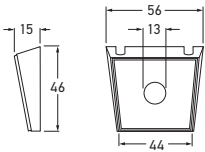
P/N 4436



Part Number	4433	RED
	4434	GREEN
	4435	AMBER
	4436	BLUE
Mounting	12.5mm diameter opening.	
For Panels	Up to 6mm thick.	
Maximum Load	10A @ 12V	
Suitable for 12V only. Bulb not replaceable.		

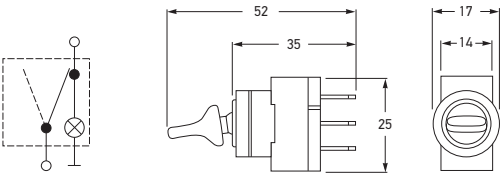
Switch Mounting Panel

Single switch mounting panel. Plastic moulded with black grain finish.



Part Number	4437	SINGLE
Mounting	12.5mm diameter opening.	





Illuminated Duckbill Switch,  
Off-On - 12 Volt

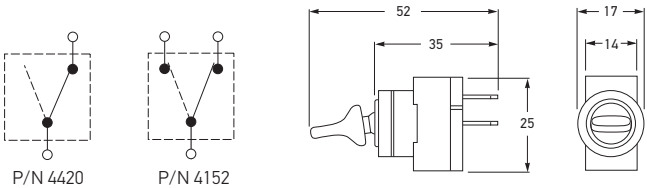
Part Number	4421	RED
	4422	GREEN
	4423	BLUE
	4424	AMBER
Mounting	12.5mm diameter opening.	
For Panels	Up to 6mm thick.	
Maximum Load	10A @ 12V	
Suitable for 12V only. Bulb not replaceable.		



P/N 4422

P/N 4423

P/N 4424



Duckbill Switch

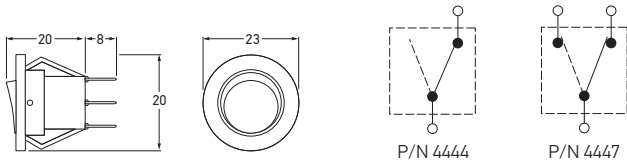
Part Number	4420	OFF-ON
	4152	ON-ON
Mounting	12.5mm diameter opening.	
For Panels	Up to 6mm thick.	
Maximum Load	10A @ 12V 5A @ 24V	



P/N 4152

Rocker Switch

Panel push fit.



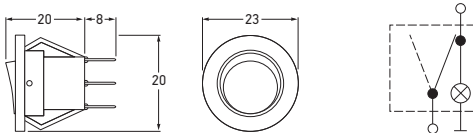
Part Number	4444	OFF-ON
	4447	ON-ON
Mounting	20mm diameter opening.	
For Panels	Up to 4mm thick.	
Maximum Load	10A @ 12V	

Illuminated Rocker Switch,  
Off-On - 12 Volt

Panel push fit.



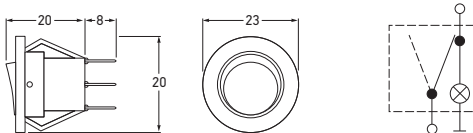
P/N 4446



Part Number	4445	AMBER
	4446	RED
Mounting	20mm diameter opening.	
For Panels	Up to 4mm thick.	
Maximum Load	10A @ 12V	
Suitable for 12V only. Bulb not replaceable.		

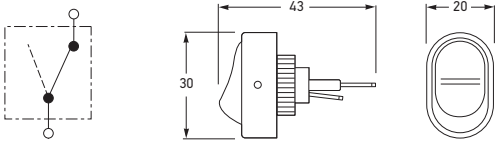
LED Rocker Switch,  
Off-On - 12 Volt

Panel push fit.



Part Number	4448	RED
Mounting	20mm diameter opening.	
For Panels	Up to 4mm thick.	
Maximum Load	10A @ 12V	
Suitable for 12V only. LED included, not replaceable.		

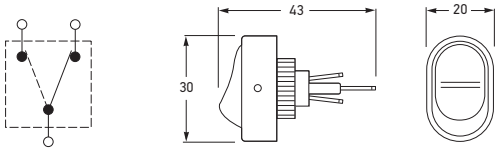
Rocker Switch - Off-On



Part Number	4470	OFF-ON
Mounting	12mm diameter opening.	
For Panels	Up to 5mm thick.	
Maximum Load	10A @ 12V	



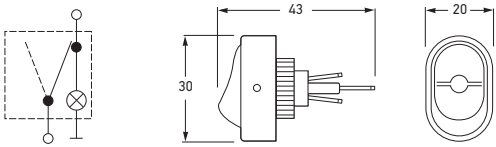
Rocker Switch - On-On



Part Number	4475	ON-ON
Mounting	12mm diameter opening.	
For Panels	Up to 5mm thick.	
Maximum Load	10A @ 12V	



Illuminated Rocker Switch,  
Off-On - 12 Volt



Part Number	4471	AMBER
	4472	BLUE
	4473	GREEN
	4474	RED
Mounting	12mm diameter opening.	
For Panels	Up to 5mm thick.	
Maximum Load	10A @ 12V	
Suitable for 12V only. Bulb not replaceable.		



P/N 4472

P/N 4473

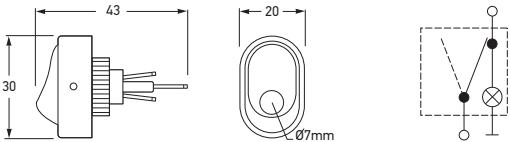
P/N 4474

Illuminated Rocker Switch,  
Off-On - 12 Volt



P/N 4477

P/N 4478



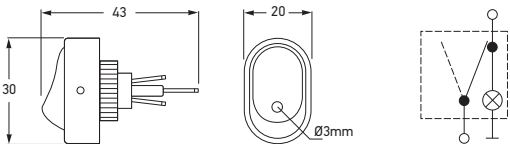
Part Number	4476	AMBER
	4477	GREEN
	4478	RED
Mounting	12mm diameter opening.	
For Panels	Up to 5mm thick.	
Maximum Load	10A @ 12V	
Suitable for 12V only. Bulb not replaceable.		

LED Rocker Switch, Off-On  
- 12 Volt



P/N 4480

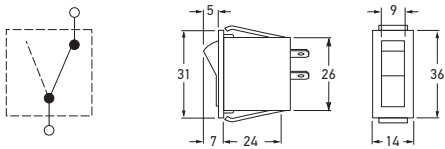
P/N 4481



Part Number	4479	AMBER
	4480	GREEN
	4481	RED
Mounting	12mm diameter opening.	
For Panels	Up to 5mm thick.	
Maximum Load	10A @ 12V	
Suitable for 12V only. LED included, not replaceable.		

Rocker Switch - Off-On

Panel push fit.

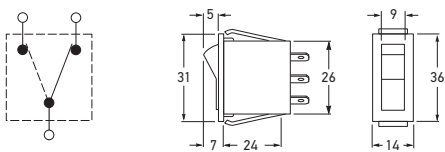


Part Number	4426	OFF-ON
Mounting	29 x 12mm opening.	
Maximum Load	10A @ 12V 5A @ 24V	



Rocker Switch - On-On

Panel push fit.

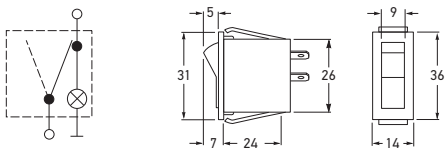


Part Number	4151	ON-ON
Mounting	29 x 12mm opening.	
Maximum Load	10A @ 12V 5A @ 24V	



Illuminated Rocker Switch, Off-On - 12 Volt

Panel push fit.



Part Number	4427	RED
	4428	GREEN
	4429	BLUE
	4430	AMBER
Mounting	29 x 12mm opening.	
Maximum Load	10A @ 12V	
Suitable for 12V only. Bulb not replaceable.		



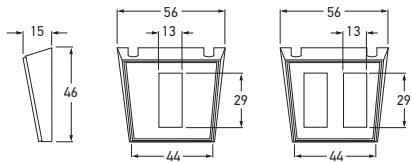
P/N 4428

P/N 4429

P/N 4430

Rocker Switch Mounting Panel

Plastic moulded with black grain finish.



Part Number	4431	SINGLE
	4432	DOUBLE
To Suit	Rocker switch P/Ns 4426, 4427, 4428, 4429, 4430 and 4151.	



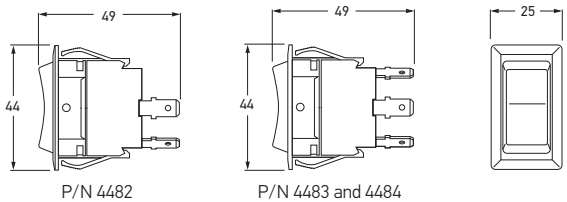


Heavy Duty Rocker Switch

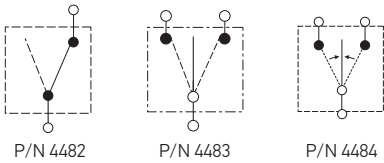
Extremely robust rocker switch featuring push-on terminals and weather resistant black plastic housing. Panel push fit.



P/N 4483

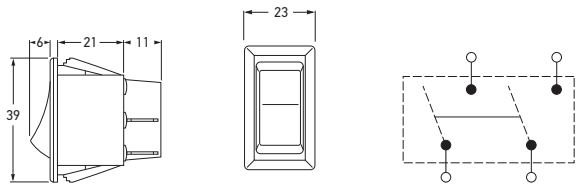


Part Number	4482	OFF-ON
	4483	ON-OFF-ON
	4484 (Momentary spring return)	(ON)-OFF-(ON)
Mounting	20 x 36mm opening.	
For Panels	Up to 4mm thick.	
Maximum Load	25A @ 12V 12.5A @ 24V	



Rocker Switch, Black  
- Double Pole

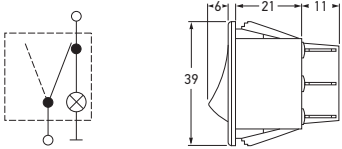
Panel push fit.



Part Number	4485	OFF-ON
Mounting	20 x 35mm opening.	
For Panels	Up to 4mm thick.	
Maximum Load	20A @ 12V (10A per pole)	

LED Illuminated Rocker Switch,  
Off-On - 12 Volt

Panel push fit.



Part Number	4486A	AMBER
	4486G	GREEN
	4486R	RED
Mounting	20 x 35mm opening.	
For Panels	Up to 4mm thick.	
Maximum Load	10A @ 12V	
Suitable for 12V only. LED included, not replaceable.		

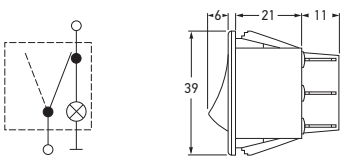


P/N 4486G

P/N 4486R

Illuminated Rocker Switch,  
Off-On - 12 Volt

Panel push fit.



Part Number	4487A	AMBER
	4487B	BLUE
	4487G	GREEN
	4487R	RED
Mounting	20 x 35mm opening.	
For Panels	Up to 4mm thick.	
Maximum Load	10A @ 12V	
Suitable for 12V only. Bulb not replaceable.		



P/N 4487B

P/N 4487G

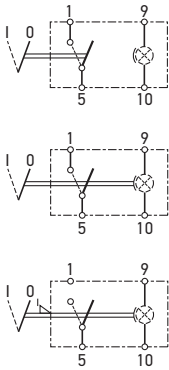
P/N 4487R

HELLA Universal Rocker Switches

HELLA universal flush-fit rocker switches are readily adaptable to 12 and 24V applications. This large and varied range covers nearly all switching types and connections. A wide selection of symbols ensures proper labelling of all main switching and monitoring functions. The switching and control displays can be illuminated.

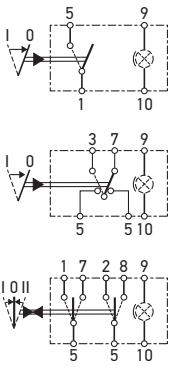
Mounting	Mounted directly to properly dimensioned opening (1 - 2.5mm thick) or by mounting panels (for more information see page 234).
Maximum Load	16A @ 12V, 8A @ 24V.

Connectors, symbols, mounts and bulb holders are to be purchased separately.



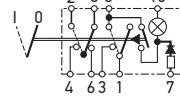
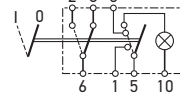
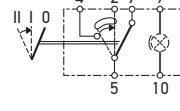
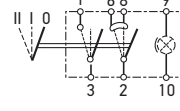
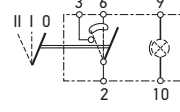
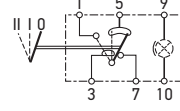
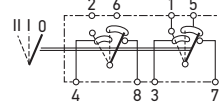
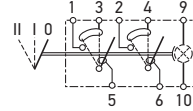
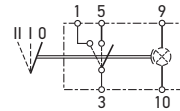
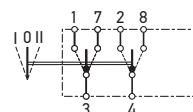
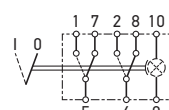
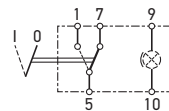
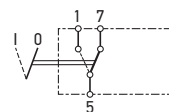
Location lamp illuminates lamp with park lights. Pilot lamp illuminates when switch is in the 'on' position.

ON-OFF SWITCHES			
Part Number	Symbol	Description	Function
6EH 007 832-011	LOCATION	Suitable for use with location light.	ON-OFF
6EH 007 832-021	PILOT	Suitable for use with location and pilot light.	
	LOCATION		
6EH 007 832-041	PILOT	With mechanism for blocking operation. Suitable for use with location light and pilot light.	
	LOCATION		



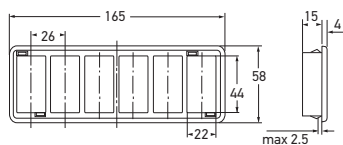
MOMENTARY SPRING RETURN SWITCHES			
6GM 007 832-191	LOCATION	Suitable for use with location light.	OFF-(ON)
6GM 007 832-221	LOCATION	Suitable for use with location light.	CHANGE-OVER
6GM 007 832-251	LOCATION	Suitable for use with location light.	(ON)-OFF-(ON)

CHANGE-OVER SWITCHES			
Part Number	Symbol	Description	Function
6FH 007 832-051		Without location light, without pilot light.	ON-ON
6FH 007 832-061	LOCATION	Suitable for use with location light.	
6FH 007 832-101	PILOT LOCATION	Suitable for use with location light and pilot light.	
6FH 007 832-161		Without location light, without pilot light.	ON-OFF-ON
6RH 007 832-351	PILOT LOCATION	Suitable for use with location light and pilot light.	OFF-ON-ON
6RH 007 832-377	PILOT LOCATION	Suitable for use with location light and pilot light.	
6RH 007 832-381		Without location light, without pilot light.	
6RH 007 832-391	LOCATION	Max. load 16A @ 12V, 8A @ 24V. Suitable for use with location light, without pilot light.	
6RH 007 832-441	LOCATION	Suitable for use with location light.	
6RH 007 832-461	LOCATION	Suitable for use with location light.	OFF-ON-MOMENTARY ON
6RH 007 832-411	LOCATION	Suitable for use with location light.	
6HH 007 832-281	PILOT	Max. load 10A @ 12V and 24V. Without location light. Includes pre-fitted 12V bulb. Hazard flasher switch.	HAZARD
6HH 007 832-301	PILOT LOCATION	With location light and pilot light. Includes pre-fitted 24V bulb. Hazard flasher switch.	



See page 236  
for the range of  
coloured symbols.

### Accessories for Switches in Model Range 007 832-...



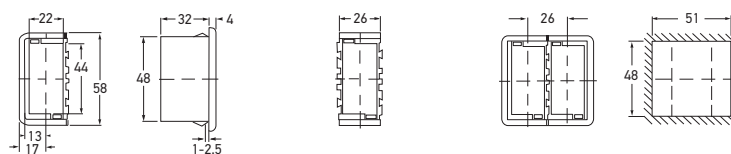
Part Number	MOUNTING PANELS	
	8HG 713 626-001 (156.1 x 48.2mm)	SIX SWITCHES
	8HG 714 504-001 (77.6 x 48.2mm)	THREE SWITCHES



P/N 8HG 716 734-001



P/N 8HG 716 735-001



P/N 8HG 716 734-001

P/N 8HG 716 735-001

Part Number	MODULAR MOUNTING-PANEL SYSTEM	
	8HG 716 734-001	END PIECE
	8HG 716 735-001	MIDDLE PIECE

Two end pieces are required to make a mounting panel.  
By adding middle pieces, this panel can be extended as required.



Part Number	BLANKING PLUG FOR EMPTY SWITCH APERTURES
	9HB 713 629-001



## ACCESSORIES



Part Number	WARNING LIGHTS	
	2AA 713 628-021	12 VOLT
	2AA 713 628-031	24 VOLT
	2AA 713 628-041 (LED)	12/24 VOLT
Bulbs to Suit	12V 24V	W121.2 W241.2



Part Number	WARNING LIGHTS	
	9FF 713 627-001	12 VOLT
	9FF 713 627-011	24 VOLT
	9FF 713 627-031 (LED)	12/24 VOLT
Bulbs to Suit	12V 24V	W121.2 W241.2



Part Number	CONNECTORS	
	8JA 713 631-001 (For switch)	8 POLE
	8JA 715 600-001 (For bulb holder)	2 POLE
	8573 (For connectors - Pack of 100)	BRASS TERMINALS












































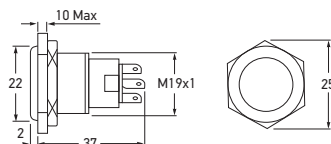
P/N 8JA 713 631-001



P/N 8JA 715 600-001

## SYMBOL CARDS FOR SWITCHES 007 832...

Part Number	Symbol	Symbol Card	Part Number	Symbol	Symbol Card
9XT 713 630-001	Green	Without symbol	9XT 714 300-201		Battery
9XT 713 630-011	Black	Without symbol	9XT 714 300-191		Temperature
9XT 713 630-021	Red	Without symbol	9XT 713 630-181		Window lift
9XT 713 630-031	Yellow	Without symbol	9XT 713 630-101		Windscreen
9XT 713 630-301		Light	9XT 713 630-121		Window wiper/wash
9XT 714 300-131		Main beam	9XT 713 630-131		Windscreen wash
9XT 713 630-351		Fog lamp	9XT 713 630-231		Heated rear window
9XT 713 630-421		Work lamp front	9XT 713 630-481		Heated outside mirror
9XT 713 630-701		Work lamp rear	9XT 713 630-521		Defroster
9XT 714 300-141		Flasher lamp	9XT 713 630-461		Air horn
9XT 713 630-391		Warning lamp	9XT 713 630-291		Fresh air
9XT 713 630-511		Map lamp	9XT 713 630-681		Roof fan
9XT 713 630-491		Driving compartment lighting	9XT 713 630-201		Heater
9XT 713 630-641		Boot lighting	9XT 713 630-221		Heater fan
9XT 713 630-261		Main light	9XT 713 630-401		Fast
9XT 713 630-371		Work light	9XT 713 630-691		Slow
9XT 713 630-281		Rotating beacon	9XT 713 630-551		Front door
9XT 713 630-711		Rotating beacon	9XT 713 630-561		Rear door
9XT 714 300-181		Lubrication	9XT 713 630-621		Lower
9XT 714 300-011		Parking brake	9XT 714 300-051		Change-over tanks
Interior Lighting			Fan		
9XT 713 630-271		High	9XT 713 630-251		Fast
9XT 714 300-031		Medium	9XT 713 630-531		Slow
9XT 713 630-501		Low			



Part Number	12 VOLT	24 VOLT	
	8HG 958 455-001	8HG 958 455-101	RED
	8HG 958 455-011	8HG 958 455-111	BLUE
Mounting	19mm diameter opening.		
Maximum Load	5A		
Protection	IP 67 (Protection against dust and temporary water immersion)		
For Panels	Up to 10mm thick.		

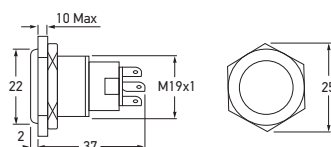


**Stainless Steel Latching Switch with LED Ring - Off-On**

Exterior durable, 304 stainless steel switches featuring a ring of LED light. These through panel mount switches are ideal for switching lighting or installing into custom switch panels. The light rings may be wired to show power to a system or signal circuit activation.



P/N 8HG 958 455-011



Part Number	12 VOLT	24 VOLT	
	8HG 958 455-201	8HG 958 455-301	RED
	8HG 958 455-211	8HG 958 455-311	BLUE
Mounting	19mm diameter opening.		
Maximum Load	5A		
Protection	IP 67 (Protection against dust and temporary water immersion)		
For Panels	Up to 10mm thick.		



### Stainless Steel Momentary Switch with LED Ring - Off-(On)

Exterior durable, 304 stainless steel switches featuring a ring of LED light. These through panel mount switches are ideal for switching lighting or installing into custom switch panels. The light rings may be wired to show power to a system or signal circuit activation.



P/N 8HG 958 455-211



Part Number	12 VOLT	24 VOLT	
	8HG 958 456-001	8HG 958 456-101	RED
Mounting	19mm diameter opening.		
Sound Level	>80dB (1m)		
Protection	IP 50 (Protection against dust)		
For Panels	Up to 10mm thick.		

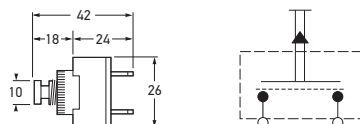


### Stainless Steel Buzzer with LED Ring

Exterior durable, 304 stainless steel warning buzzer to match stainless steel switches (above). Also feature a ring of LED light.

### Momentary Spring Return Switch - Off-(On)

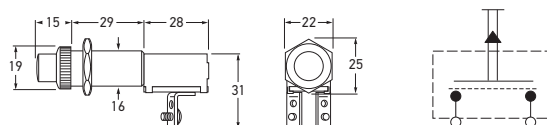
Off-momentary on push button (spring return).



Part Number	4507	OFF-(ON)
Mounting	12mm diameter opening.	
For Panels	Up to 4mm thick.	
Maximum Load	6A @ 12V	

### Momentary Spring Return Push Button Starter Switch - Off-(On)

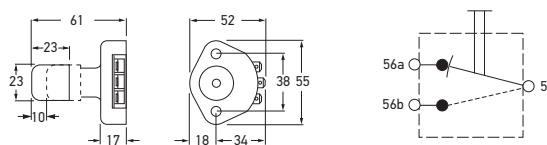
Brass construction. Chrome plated face nut and button. Off-momentary on push button (spring return).



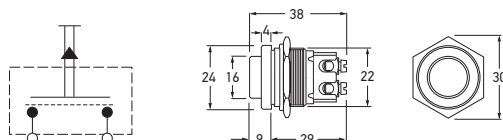
Part Number	2763	OFF-(ON)
Mounting	16mm diameter opening.	
For Panels	Up to 25mm thick.	
Maximum Load	20A @ 12V 10A @ 24V	

### Foot Operated Dipper Switch

Push on terminals. Latching spring return mechanism.



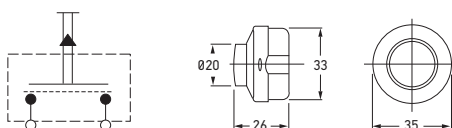
Part Number	4100	ON-ON
Mounting	Surface mount.	
Maximum Load	12A @ 12V 6A @ 24V	



<b>Part Number</b>	<b>4501</b>	<b>OFF-(ON)</b>
Mounting	22.5mm diameter opening.	
For Panels	Up to 6mm thick.	
Maximum Load	16A @ 12V 8A @ 24V	

### Momentary Spring Return Push Button Switch - Off-(On)

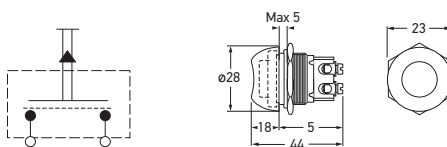
Off-momentary on push button (spring return) switch.



<b>Part Number</b>	<b>4502</b>	<b>OFF-(ON)</b>
Mounting	Surface mount.	
Maximum Load	10A @ 12V 5A @ 24V	

### Momentary Spring Return Push Button Switch - Off-(On)

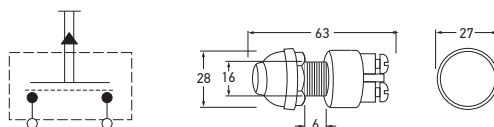
Chrome body. Off-momentary on push button (spring return) switch.



Part Number	4503	OFF-(ON)
Mounting	22.5mm diameter opening.	
For Panels	Up to 2mm thick.	
Maximum Load	16A @ 12V 8A @ 24V	
Do not remove rubber cap/front face nut when fitting.		

### Momentary Spring Return Push Button Switch - Off-(On)

Water resistant push button type switch with rubber cap. Off-momentary on push button (spring return).



<b>Part Number</b>	<b>4506</b>	<b>OFF-(ON)</b>
Mounting	16mm diameter opening.	
For Panels	Up to 10mm thick.	
Maximum Load	60A @ 12V 40A @ 24V	

### Momentary Spring Return Push Button Switch - Off-(On)

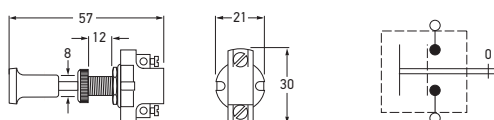
Water resistant starter switch. Off-momentary on push button (spring return).





### Long Reach Switch - Off-On

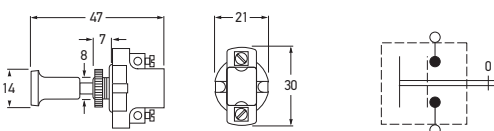
Two position long reach switch.



Part Number	4400	OFF-ON
Mounting	9mm diameter opening.	
For Panels	Up to 12mm thick.	
Maximum Load	10A @ 12V 5A @ 24V	

### Short Reach Switch - Off-On

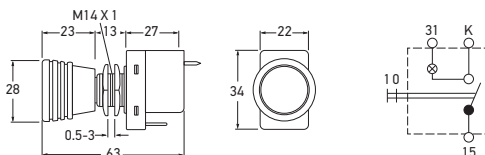
Two position short reach switch.



Part Number	4403	OFF-ON
Mounting	9mm diameter opening.	
For Panels	Up to 2mm thick.	
Maximum Load	10A @ 12V 5A @ 24V	

### Illuminated Switch - Off-On

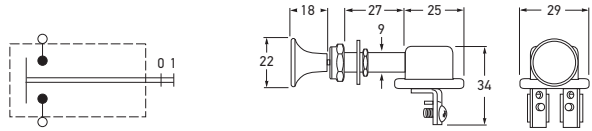
Knob incorporates red or green pilot lamp.



Part Number	4411	GREEN
	4412	RED
Mounting	14mm diameter opening.	
For Panels	Up to 6mm thick.	
Maximum Load	10A @ 12V 5A @ 24V	
Bulb to Suit	12V 24V	W121.2 W241.2

Brass Switch - Off-On

Chrome knob and face nut. Brass construction.

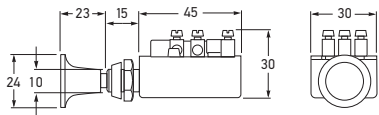


Part Number	2761	OFF-ON
Mounting	10mm diameter opening.	
For Panels	Up to 25mm thick.	
Maximum Load	20A @ 12V 10A @ 24V	

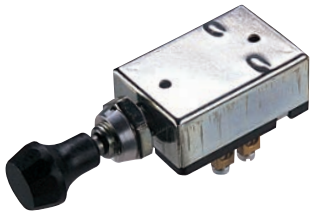


Headlamp Switch - Off-On-On

Three position headlamp switch without pilot lamp. Features black grip and 20 amp glass fuse.

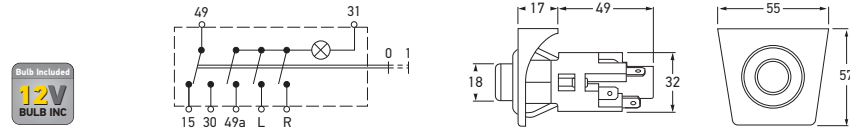


Part Number	4055	OFF-ON-ON
Mounting	11mm diameter opening.	
For Panels	Up to 10mm thick.	
Maximum Load	10A @ 12V 5A @ 24V	



Hazard Warning Switch

For cars, trucks, buses with and without trailers. Black plastic mounting panel. Red knob with pilot lamp. Includes 8 pole multiple adaptor. Push-on 6mm terminals supplied. Wiring diagram and instructions are included.

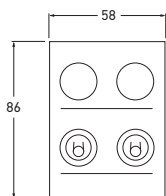


Part Number	5227	OFF-ON
Mounting	29mm diameter opening.	
Maximum Load	7A @12V	
For Panels	Up to 3mm thick.	
Bulbs to Suit	12V	J122
	24V	J243



### Micro Switch Panel - LED Backlight

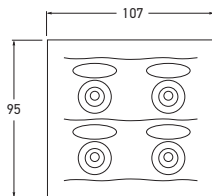
Micro switch panel modules can be added together horizontally or vertically giving numerous installation options. Each module also has red and green LED backlighting. Circular labels allow vertical, horizontal, left or right mounting.



Part Number	2687	2 X OFF-ON
	2688	1 X OFF-ON 1 X ON-OFF-ON
	2689	1 X OFF-ON 1 X (ON)-OFF-(ON)
Voltage	Multivolt™, suitable for 12 and 24 volt systems.	
Housing	Impact resistant plastic.	
Switches	Toggle, momentary or 3 way (on-off-on).	
Maximum Load	20A @ 12V	

### Compact Switch Panel - Off-On

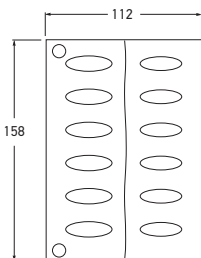
Splash proof switch panel protected with neoprene rubber boots. Inline fuse holders with fuses behind panel.



Part Number	2690 (4 way)	OFF-ON
	2691 (6 way)	
Housing	Impact resistant plastic.	
Switches	4 or 6 off-on toggle switches.	
Maximum Load	20A @ 12V	

### Switch Panel, LED Backlight - Off-On

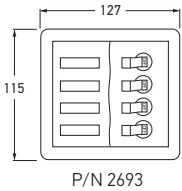
Splash proof switch panel featuring LED backlit labels. Protected by neoprene rubber boots. Removable cover plate over switches conceals screws.



Part Number	2692 (6 way)	OFF-ON
Voltage	Multivolt™, suitable for 12 and 24 volt systems.	
Housing	Impact resistant plastic.	
Switches	6 off-on toggle switches.	
Maximum Load	20A @ 12V	



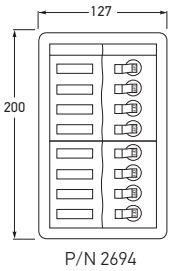
Part Number	2693 (4 way)		OFF-ON
	2694 (8 way vertical)		
	2695 (8 way horizontal)		
Voltage	Multivolt™, suitable for 12 and 24 volt systems.		
Configuration	4 Way 8 Way	1 x 5A/2 x 10A/1 x 15A 2 x 5A/2 x 10A/3 x 15A/1 x 20A	



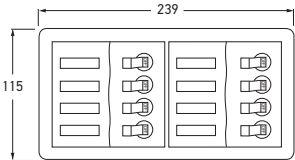
P/N 2693

Switch Panel With Integrated Circuit Breakers and LED Backlight

Pre-wired switch panel with integrated circuit breakers and LED backlit labels. Pre-wired and suitable for 12 or 24V systems. Powder coated aluminium base plate.



P/N 2694



P/N 2695

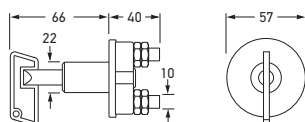


P/N 2694

P/N 2695

### Battery Master Switch

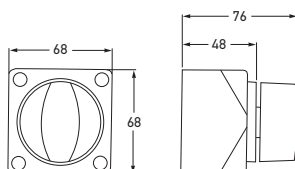
Suitable for cars and medium sized trucks.  
Complete with removable key. For interrupting circuits (prevents theft and short circuit).



Part Number	4650	OFF-ON
Mounting	24mm diameter opening	
Maximum Load	12V 24V	1000A for up to 10 seconds. 500A for up to 10 seconds.
Maximum Continuous Load	12/24V - 50A at a maximum ambient temperature of 80°C with 35mm <sup>2</sup> lead, connected with ring-type terminals.	
Termination	2 x 10mm studs.	
Spare Part	4652	Spare key
Switch not designed for Marine applications.		

### Battery Master Switch

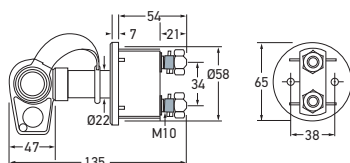
Suitable for cars and medium sized trucks.  
Complete with removable key.



Part Number	4640	OFF-ON
Mounting	Recess or surface mount.	
Maximum Load	12/24V	1250A for up to 10 seconds
Maximum Continuous Load	12/24V	275A
Termination	2 x 10mm studs.	
Spare Part	4641	Spare key

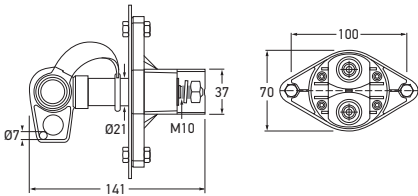
### Battery Master Switch

Suitable for cars and medium sized trucks,  
with a continuous rating of 250 amps.  
Provides effective protection against theft  
and fire in case of accidents. With sealing cap  
when not in use which doubles as a key holder.



Part Number	4649	OFF-ON
Mounting	22mm diameter opening.	
Maximum Load	24V	2000A for 5 seconds
Maximum Continuous Load	12/24V	250A
Termination	2 x 10mm studs.	
Protection	IP 65 (Protection against dust and water jets)	

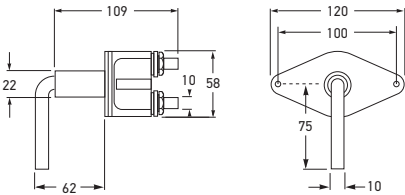




Part Number	4648		OFF-ON
Mounting	22mm diameter opening.		
Maximum Load	24V	2500A for 10 seconds	
Maximum Continuous Load	12/24V	500A	
Termination	2 x 10mm studs.		
Protection	IP 65 (Protection against dust and water jets)		

High Capacity Battery Master Switch

Suitable for trucks and other commercial machinery, with a high continuous rating of 500 amps. Provides effective protection against theft and fire in case of accidents. With sealing cap when not in use which doubles as a key holder.



Part Number	4653		OFF-ON
Mounting	22mm diameter opening.		
Maximum Load	12V 24V	5000A for 10 seconds. 2500A for 10 seconds	
Maximum Continuous Load	12/24V	100A continuous at a maximum ambient temperature of 60°C with 50mm² lead connected with ring-type terminals.	
Termination	2 x 10mm studs.		
Protection	IP X4 (Protection against water splashing)		
Spare Part	4654	Spare key	
Switch not designed for Marine applications.			

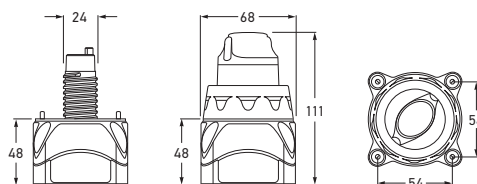
Heavy Duty Battery Master Switch

For trucks, buses and earth moving equipment. Complete with removable key.



### Battery Master Switch

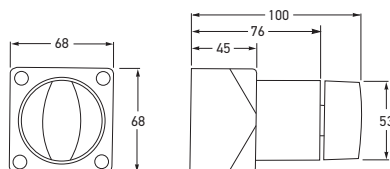
Battery master switch with threaded collar. Suitable for cars and medium sized trucks. Complete with removable key, labelled handle and removable back cover. For interrupting circuits (prevents theft and short circuit).



Part Number	4722	OFF-ON
Mounting	Recess or surface mount. 25mm diameter opening.	
Maximum Load	12/24V	1250A for up to 10 seconds.
Maximum Continuous Load	12/24V	275A
Termination	2 x 10mm studs.	
Protection	IP 56 (Protection against solid foreign objects up to 1mm and powerful water jets)	

### Remote Operated Battery Master Switch

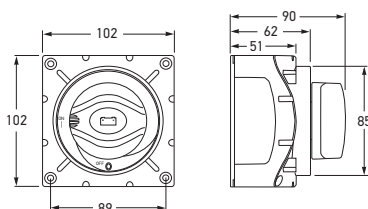
Battery switch with tin-plated copper studs and nuts. Can be operated manually or remotely with a separate switch (not supplied). Suitable for mounting alongside battery reducing cable lengths to starter motor. Complete with removable key and 3 way DTM plug.



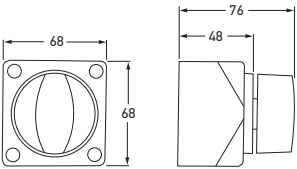
Part Number	4724	OFF-ON
Mounting	Recess or surface mount. 55mm diameter opening.	
Voltage	12/24V	
Power Consumption	2W @ 12V when operating, 0.25W static.	
Maximum Load	12/24V	1250A for up to 10 seconds.
Maximum Continuous Load	12/24V	275A
Termination	2 x 10mm studs.	
Cable Length	500mm	

### Heavy Duty Battery Master Switch

For commercial use. Features sliding contact for self cleaning.



Part Number	4720	OFF-ON
Mounting	Recess or surface mount. 85mm diameter opening.	
Maximum Load	12/24V	2500A for up to 10 seconds.
Maximum Continuous Load	12/24V	600A
Termination	2 x 12mm studs.	
Protection	IP 56 (Protection against solid foreign objects up to 1mm and powerful water jets)	

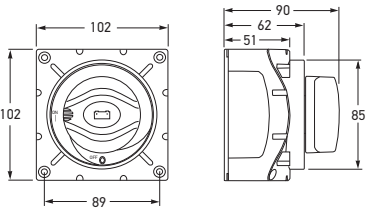


Part Number	4723	OFF-B1-BOTH-B2
Mounting	Recess or surface mount.	
Maximum Load	12/24V	1000A for up to 10 seconds.
Maximum Continuous Load	12/24V	200A
Termination	3 x 5/16" studs.	
Protection	IP 56 (Protection against solid foreign objects up to 1mm and powerful water jets)	



Battery Selector Switch

Battery switch to select either from two power sources or combine together. Will also isolate from the power sources.



Part Number	4721		OFF-B1-BOTH-B2
Mounting	Recess or surface mount. 85mm diameter opening.		
Maximum Load	12/24V	1500A for 10 seconds	
Maximum Continuous Load	12/24V	350A	
Termination	3 x 10mm studs.		
Protection	IP 56 (Protection against solid foreign objects up to 1mm and powerful water jets)		
Switch can be locked using 6mm diameter padlock with 75mm reach.			

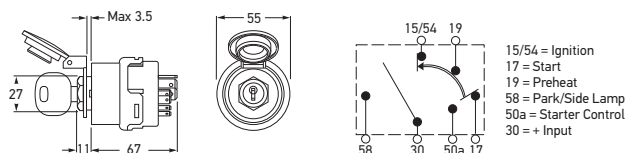


Battery Selector Switch

Battery switch to select either from two power sources or combine together. Will also isolate from the power sources.

### Diesel Pre-heating Starter Switch

Pre-heating starter switch supplied with two keys. Key removes in park and off.



Part Number	4005
Mounting	26.5mm diameter opening.
For Panels	Up to 3.5mm thick.
Function	5 position switch (park, off, driving, pre-heat, start).

TERMINAL	POSITION	FUNCTION	CURRENT @ 24V
30-58	P	Park Lamps	4A
30-15/54	1	Driving	18A
30-19	2	Preheat	35A
30-50a/17	3	Start	5A/35A

### Ignition and Starter Switch

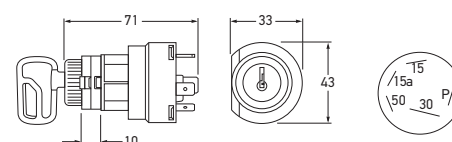
Switch with spring loaded return.  
Supplied with two keys.



Part Number	4008
Mounting	19mm diameter opening.
For Panels	Up to 19mm thick.
Maximum Load	@12V ignition 25A, start 12A, accessory 15A.
Spare Part	Blank key number Silica BH4.
Function	Four position switch (accessory, off, ignition, start).

### Heavy Duty Ignition and Starter Switch

Heavy duty ignition and starter switch, featuring plastic outer construction for maximum protection against damage.  
Supplied with two keys.



Part Number	4008HD
Mounting	19mm diameter opening.
For Panels	Up to 10mm thick.
Maximum Load	@12V park 20A, ignition 20A, start 25A.
Function	Four position switch (park, off, ignition, start). Key removes in park and off.

Ignition and Starter Switch

Two keys supplied. Start-lockout mechanism to prevent accidental engagement of starter.



Part Number	4009	22MM SHAFT
	4010	18MM SHAFT
Mounting	4009	22.5mm diameter opening
	4010	18.5mm diameter opening
For Panels	Up to 19mm thick.	
Maximum Load	@12V ignition 25A, start 50A, accessory 20A.	
Function	Four position switch (accessory, off, ignition, start).	

Ignition and Starter Switch

Four position switch with spring loaded return.  
Four screw terminals.

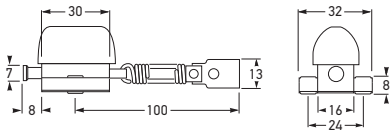


Part Number	2766
Mounting	21mm diameter opening.
For Panels	Up to 25mm thick.
Maximum Load	@12V ignition 10A, start 5A, accessory 10A.
Function	Four position switch (accessory, off, ignition and start)



Stop Lamp Switch - Off-On

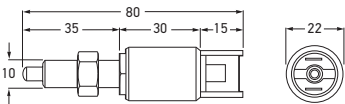
Normally open, contacts are closed when tension is applied to the spring. Complete with splash proof rubber cap. Brake linkage clamp 6mm diameter.



Part Number	4560	OFF-ON
Maximum Load	10A @ 12V 5A @ 24V	

Stop Lamp Switch - On-Off

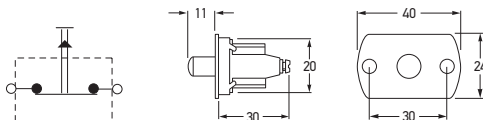
Thread M10 x 1.25. Suits most Japanese vehicles.



Part Number	4562	ON-OFF
Maximum Load	10A @ 12V	

**Door Contact Switch - On-Off**

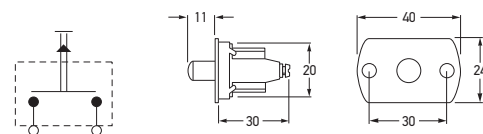
Switch closes circuit if door is opened.



<b>Part Number</b>	<b>4550</b>	<b>ON-OFF</b>
Mounting	21mm diameter opening.	
Maximum Load	2A @ 12V 1A @ 24V	

**Door Contact Switch - Off-On**

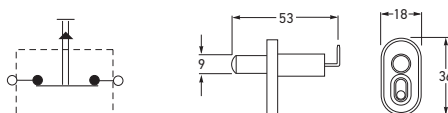
Switch opens circuit if door is opened.  
May be used as safety cut-off switch.



<b>Part Number</b>	<b>4551</b>	<b>OFF-ON</b>
Mounting	21mm diameter opening.	
Maximum Load	2A @ 12V 1A @ 24V	

**Door Contact Switch - On-Off**

Switch closes circuit if door is opened.  
Corrosion proof black plastic. Rubber seal.  
Push-on terminal.

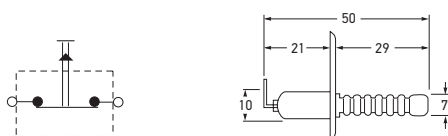


<b>Part Number</b>	<b>4553</b>	<b>ON-OFF</b>
Mounting	12mm diameter opening and screw.	
Maximum Load	3.5A @ 12V	

Plunger automatically adjusts to door gap on initial operation.

**Door Contact Switch - On-Off**

Extended arm which may be cut to length to suit opening.

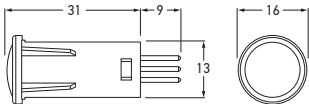


<b>Part Number</b>	<b>4554</b>	<b>ON-OFF</b>
Mounting	10mm diameter opening and screw.	
Maximum Load	5A @ 12V	



Pilot Lamp - 12 Volt

Panel push fit pilot lamp with non-replaceable bulb. See page 253 for function descriptions.



P/N 2709

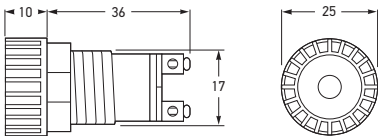
P/N 2710

P/N 2711

Part Number	2708	RED
	2709	GREEN
	2710	BLUE
	2711	AMBER
Mounting	12.5mm diameter opening.	
Voltage	12V	
Suitable for 12V only. Bulb not replaceable.		

Pilot Lamp

Pilot lamp utilizing bayonet based bulb for use under heavy duty conditions. See page 253 for function descriptions.



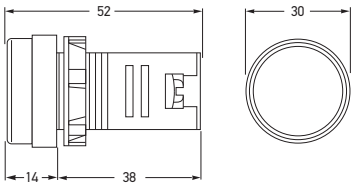
P/N 2713

P/N 2714

P/N 2715



Part Number	2712	RED
	2713	GREEN
	2714	BLUE
	2715	AMBER
Mounting	17mm diameter opening.	
Bulbs to Suit	12V 24V	H122 H242



Part Number	2716	RED
	2716-24V	
	2717	GREEN
	2717-24V	
	2718	AMBER
	2718-24V	
	2719	WHITE
	2719-24V	
	2720	BLUE
	2720-24V	
Mounting	22mm diameter opening.	
For Panels	Up to 38mm thick.	
Voltage	12V or 24V AC/DC	
Protection	IP 65 (Protection against dust and water jets) when installed.	

LED Pilot Lamp

Heavy duty multi-chip LED pilot lamp featuring shock-resistant one-piece construction for long service life and polycarbonate lens. See below for function descriptions.



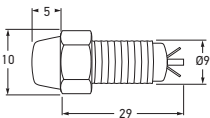
P/N 2717

P/N 2718



P/N 2719

P/N 2720



Part Number	2721	RED
	2722	GREEN
	2723	BLUE
	2724	AMBER
Mounting	8mm diameter opening.	
For Panels	Up to 10mm thick.	
Suitable for 12V only. LED included, not replaceable.		

LED Pilot Lamp, Chrome Body - 12 Volt

Pilot lamp featuring chrome body and available in four colour variants. See below for function descriptions.



P/N 2722

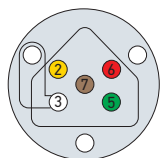
P/N 2723

P/N 2724

RED	Ignition, handbrake and hazard warning lamps
GREEN	Indicator lamps
BLUE	Main beam and auxiliary headlamps
AMBER	Fog lamps

## Trailer Connector Wiring Specifications

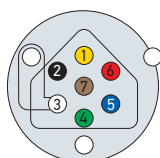
### Cable Entry View



5 Pole Socket



5 Pole Plug

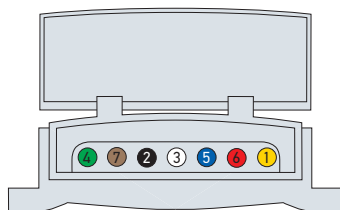


7 Pole Socket

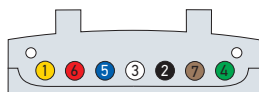


7 Pole Plug

### Front View



7 Pole Flat Socket



7 Pole Flat Plug

### 5 POLE CONNECTOR WIRING SPECIFICATIONS

Terminal Number	Connect to
2	Left-hand flasher lamps
3	Earth return
5	Right-hand flasher lamps
6	Stop lamps
7	Rear position, number plate and clearance lamps

### 7 POLE CONNECTOR WIRING SPECIFICATIONS

Terminal Number	Connect to
1	Left-hand flasher lamps
2	Reversing lamps
3	Earth return
4	Right-hand flasher lamps
5	Service brakes (or Auxiliary)
6	Stop lamps
7	Rear position, number plate and clearance lamps

Where service brakes are not fitted, terminal no.5 may be used for auxiliaries.

## Trailer Plug Holder

Minimises potential damage to plug,  
to suit P/Ns 4902 and 4911.



### Part Number

8000

Mounting

Simple screw mounting on caravan/trailer drawbar or any convenient location.

## Trailer Socket Bracket

Zinc plated steel. To suit P/Ns 4901 and 4912.



### Part Number

8005

## Trailer Socket Bracket

Zinc plated steel. To suit P/Ns 4901 and 4912.



### Part Number

8022



7 Pole Plastic Socket

Black plastic socket with removable contact set.  
P/N 4901X with disconnecting contact for rear fog  
or rear parking sensors.

Part Number	4901	
	4901X	
Maximum Load	16A @ 12V with 1.5mm <sup>2</sup> cable (total). 25A @ 12V with 2.5mm <sup>2</sup> cable (total).	
Accessory	9.4901.05	Gasket with cable exit



P/N 9.4901.05

7 Pole Plastic Plug

Black plastic plug with strain relief.

Part Number	4902	
Maximum Load	16A @ 12V with 1.5mm <sup>2</sup> cable (total) 25A @ 12V with 2.5mm <sup>2</sup> cable (total)	



7 Pole Plastic Socket

Simply stores in boot until required.  
Requires no permanent bumper mounting.

Part Number	4909	
Maximum Load	16A @ 12V with 1.5mm <sup>2</sup> cable (total) 25A @ 12V with 2.5mm <sup>2</sup> cable (total)	



7 Pole Metal Plug

Solid metal plug with cable strain relief.

Part Number	4911	
	4911-BULK	PACK OF 25
Maximum Load	16A @ 12V with 1.5mm <sup>2</sup> cable (total). 25A @ 12V with 2.5mm <sup>2</sup> cable (total).	



7 Pole Metal Socket

Solid metal socket with removable contact set.

Part Number	4912	
	4912-BULK	PACK OF 25
Maximum Load	16A @ 12V with 1.5mm <sup>2</sup> cable (total). 25A @ 12V with 2.5mm <sup>2</sup> cable (total).	



## 7 Pole Flat Socket

Impact resistant, UV stabilised plastic spring loaded lid. Nickel plated contacts for excellent electrical performance.



Part Number	4920	
	4920-BULK	PACK OF 50
Maximum Load	20A @ 12V (total) 10A @ 24V (total)	

## 7 Pole Flat Plug

Impact resistant, UV stabilised plastic. Nickel plated contacts for excellent electrical performance.



Part Number	4921	
	4921-BULK	PACK OF 50
Maximum Load	20A @ 12V (total) 10A @ 24V (total)	

## Flat Trailer Plug Holder

Flat plug holder to suit P/N 4921.



Part Number	8009	
	8009-BULK	PACK OF 20

## ACCESSORIES



Part Number	8JB 007 645-021	CRIMP
	8JB 007 645-031	SCREW
Mounting	54mm diameter opening.	
Maximum Load	25A @ 24V (total)	
Cable	Suitable for cable 9 - 16mm in diameter.	
Spare Parts	9MK 726 762-831	Crimp contact set – 5 x 1.5mm <sup>2</sup> , 2 x 4.0mm <sup>2</sup> , 2 x 6.0mm <sup>2</sup> , 2 x Blanks.

### 5/7 Pole ABS Socket

Made of black fibreglass reinforced nylon.



Part Number	8JA 007 644-041	CRIMP
	8JA 007 644-051	SCREW
Maximum Load	25A @ 24V (total)	
Spare Parts	9MK 726 759-831	Crimp contact set – 5 x 1.5mm <sup>2</sup> , 2 x 4.0mm <sup>2</sup> , 2 x 6.0mm <sup>2</sup> , 2 x Blanks.
Cable	Suitable for cable 11 - 13mm in diameter.	

### 5/7 Pole ABS Plug

Made of black fibreglass reinforced nylon.



Part Number	8PD 004 508-031
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### Plug-in Socket Tester

Designed for testing ABS sockets (ISO 1185).



Part Number	8PE 863 807-001
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### Crimp Tool

Professional crimping tool for crimp contact pins and sleeves measuring from 1.5-6mm<sup>2</sup>.



Part Number	8KA 007 648-001 (ABS)	5 PIN
	8KA 007 648-021 (EBS)	7 PIN
Cable	5 Pin 7 Pin	3 x 1.5mm <sup>2</sup> + 2 x 4.0mm <sup>2</sup> 5 x 1.5mm <sup>2</sup> + 2 x 4.0mm <sup>2</sup>
Cable Length	Up to 4.0m	

### ABS/EBS Spiral Cable - 24 Volt

Spirally coiled cable with 2 plugs and guard grommets. Extremely resistant to high and low temperatures as well as weathering. High resistance to oils and chemicals. Made to withstand repeated bending.



## 7 Pole Heavy Duty Plug and Socket

Plug and socket made from metal, with screw terminals (ISO 1185).



Part Number	4907	SOCKET
	4908	PLUG
Maximum Load	15A @ 24V with 1.5mm <sup>2</sup> cable (total) 20A @ 24V with 2.5mm <sup>2</sup> cable (total)	
Cable	Suitable for cable 9.5 - 12.5mm in diameter.	



P/N 4908

## 13 Pole Plug and Socket

Socket with lid made from black plastic (ISO 11 446). Screw contacts.



Part Number	8JB 005 949-001	SOCKET
	8JA 005 951-001	PLUG
Maximum Load	16A @ 24V with 1.5mm <sup>2</sup> cable (total) 25A @ 24V with 2.5mm <sup>2</sup> cable (total)	



P/N 8JA 005 951-001

## 13 Pole to 7 Pole Adaptors

Adaptors for connecting a 13 pole vehicle socket with a 7 pole trailer plug.



Part Number	8JA 005 952-001
Maximum Load	16A @ 12V (total)
To suit late model vehicles with 13 pole plugs to standard round 7 pole, 250mm long.	



Part Number	8JA 008 969-001
Maximum Load	16A @ 12V (total)
To suit late model vehicles with 13 pole plugs to standard round 7 pole.	



Part Number	8JA 005 952-005
Maximum Load	16A @ 12V (total)
To suit late model vehicles with 13 pole plugs to standard flat 7 pole, 250mm long.	



Part Number	8JA 007 241-021	SCREW
	8JA 007 241-031	CRIMP
Maximum Load	16A @ 24V with 1.5mm <sup>2</sup> cable (total) 25A @ 24V with 2.5mm <sup>2</sup> cable (total)	
Cable	Suitable for cable diameter measuring 12 - 18mm.	

### 15 Pole Plastic Plug

Plastic plug with rubber gasket and nickel-plated pins. Featuring fibre glass reinforced polyamide housing and mechanical strain relief. Secure arrest with rust resistant metal bail (ISO 12 098).



Part Number	8JB 007 242-011	SCREW
	8JB 007 242-021	CRIMP
Maximum Load	16A @ 24V with 1.5mm <sup>2</sup> cable (total) 25A @ 24V with 2.5mm <sup>2</sup> cable (total)	
Cable	Suitable for cable diameter measuring 12 - 18mm.	

### 15 Pole Plastic Socket

Plastic socket with lid, rubber gasket and nickel-plated pins. Featuring fibre glass reinforced polyamide housing. PC gland for cable exit.



Part Number	8KA 007 648-041
Cable	12 x 1.5mm <sup>2</sup> plus 3 x 2.5mm <sup>2</sup> leads.
Cable Size	4m (stretched).

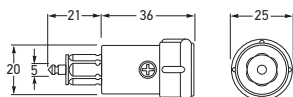
### 15 Pole Spiral Cable - 24 Volt

Spirally coiled cable with 2 plugs and guard grommets. Extremely resistant to high and low temperatures as well as weathering. Maximum resistance to oils and chemicals. Made to withstand repeated bending.



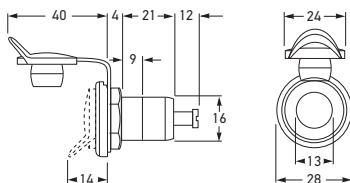


## 2 Pole Plug

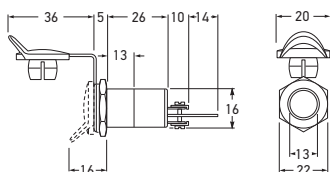


Part Number	4914	PLUG
Maximum Load	32A @ 12V 16A @ 24V	
Sockets to Suit	P/Ns 4915, 4916, 4917 and 4918.	

## 2 Pole Socket with Cover

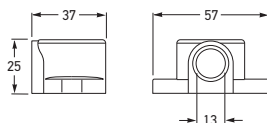


Part Number	4915	SOCKET
Mounting	19mm diameter opening.	
Maximum Load	16A @ 12V 8A @ 24V	

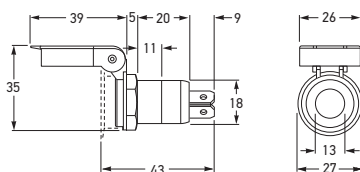
2 Pole Socket with Cover  
- Insulated Earth

Part Number	4916	SOCKET
Mounting	19mm diameter opening.	
Maximum Load	16A @ 12V 8A @ 24V	

## 2 Pole Surface Mount Socket



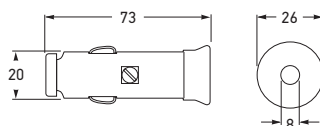
Part Number	4917	SOCKET
Mounting	Surface mount.	
Maximum Load	32A @ 12V 16A @ 24V	

2 Pole Socket with Metal Earth  
Tab and Cover

Part Number	4918	SOCKET
Mounting	22mm diameter opening.	
Maximum Load	16A @ 12V 8A @ 24V	

## 2 Pole Power Plug

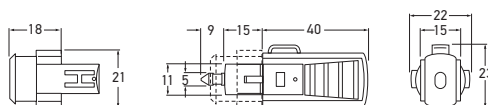
Suitable for standard cigarette sockets.



Part Number	4950	PLUG
Maximum Load	8A @ 12V 4A @ 24V	
Socket to Suit	4943-R	



## 2 Pole Universal Power/DIN Plug

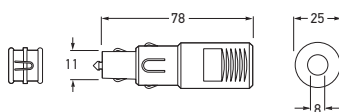


Part Number	4951	PLUG
Maximum Load	8A @ 12V 4A @ 24V	
Sockets to Suit	P/Ns 4915, 4916, 4917, 4918 and 4943-R.	



## 2 Pole Fused Power/DIN Plug

Combination lighter/DIN 2 pole plug with in-built 8A ceramic type fuse suitable for both cigarette lighter and DIN ISO 4165 sockets (standard 2 pole sockets).

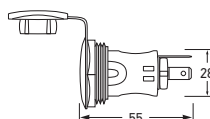


Part Number	4952	PLUG
Maximum Load	8A @ 12V	
Sockets to Suit	P/Ns 4915, 4916, 4917, 4918 and 4943-R.	



## 2 Pole Power Socket

2 pole lighter size power socket with protective cover for connection of a variety of electrical accessories.

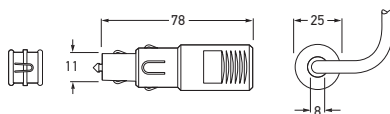


Part Number	4943-R	SOCKET
Maximum Load	15A @ 12V	



## 2 Pole Power Socket - Twin DIN Output

Twin Power Socket featuring two DIN 1465 output sockets for connection of accessories. Plugs into standard vehicle cigarette lighter sockets. Primary lighter plug connection features a removable extension piece allowing the unit to also plug into DIN 2 pole sockets if required.



Part Number	4939	SOCKET
Maximum Load	10A	



### Super Tone Horn - Set of 2

Traffic blaster, generates a penetrating strong tone. Robust housing in a first-class design with striking grille. P/N 6037 also suitable for off-road use.

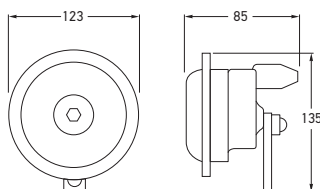


P/N 6036



P/N 6037

Rear view



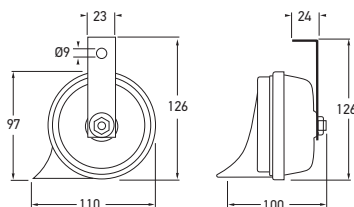
Part Number	6036	12 VOLT
	6037	
	6037-24V	24 VOLT
Power Consumption	6036 6037 6037-24V	66W x 2 78W x 2 84W x 2
Frequency	P/N 6036 P/N 6037/6037-24V	300/500Hz 375/500Hz
Sound Level	118dB	

### Twin Tone Scroll Horn - Set of 2

Includes 12 volt relay.



Packaging



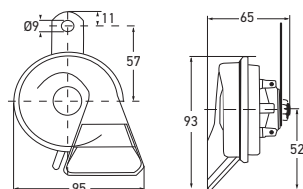
Part Number	6004	12 VOLT
Power Consumption	72W x 2	
Voltage	12V	
Frequency	High Tone Low Tone	500Hz 400Hz
Sound Level	Combined 110dB @ 2.0m	

### Twin Tone Scroll Horn - Set of 2

Galvanised metal housing and plastic trumpet. Safe from corrosion.



Packaging



Part Number	6005	12 VOLT
Power Consumption	72W x 2	
Voltage	12V	
Frequency	High Tone Low Tone	500Hz 400Hz
Sound Level	Combined 110dB @ 2.0m	

## ACCESSORIES

## Low Tone Disc Horn

Single bolt mount. 92mm diameter.

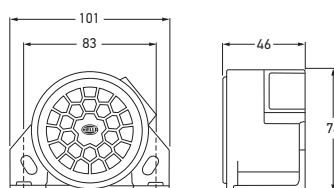
Part Number	6001	12 VOLT
	6002	24 VOLT
Power Consumption	72W	
Frequency	335Hz	
Sound Level	110dB @ 2.0m	



## High Tone Disc Horn

Single bolt mount. 92mm diameter.

Part Number	6003	12 VOLT
	6020	24 VOLT
Power Consumption	72W	
Frequency	435Hz	
Sound Level	110dB @ 2.0m	



## Multivolt™ Reversing Alarm and Signal Horn

Heavy duty reversing alarm with integrated, dual-tone signal horn. Reverse polarity and transient voltage spike protection.

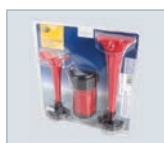
Part Number	6012	102dB
Mounting	Integrated universal mounting bracket for upright, pendant or surface mounting.	
Voltage	12-24V	
Current Draw	0.3A	
Frequency	Back-up alarm 100 - 1500Hz High Tone 1000 - 1500Hz Low Tone 80Hz (+/- 37%)	
Sound Level	102 +/- 4dB at 1.2m	
Temperature Range	-40°C to + 85°C	
Protection	IP 66 (Protection against dust and high pressure washing)	
Spare Part	6041	Activating switch (see page 265)
Compliance	SAE J994 Type F	



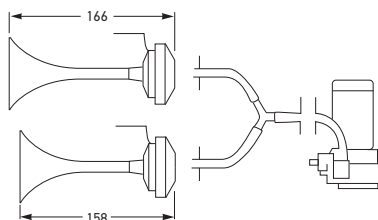
P/N 6041

## Dual Trumpet Air Horn Kit

Installation accessories included.



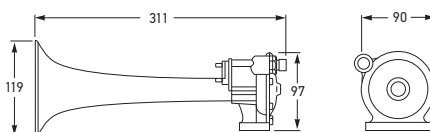
Blister packaging



Part Number	6014	12 VOLT
	6027	24 VOLT
Mounting	Installation accessories included.	
Current Draw	20A @ 12V 10A @ 24V	
Frequency	840/795Hz	
Sound Level	117dB	
Operating Pressure	110Kpa (16psi)	

## Compressed Air Operated Horn

Ideal for trucks and buses. Grey shock-proof and corrosion resistant trumpet. This horn is designed to operate directly from the truck's air supply via the existing horn-button or separate switch.

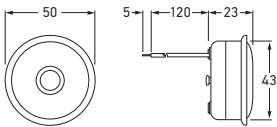


Part Number	6025	12 VOLT
	6026	24 VOLT
Power Consumption	36W @ 12V, 48W @ 24V	
Frequency	400Hz	
Sound Level	118dB (at 2.0m)	
Operating Pressure	620-860Pa (90 - 125psi)	
Air Tube: 10mm internal diameter.		



Warning Buzzer

Piercing continuous sound. Suitable for a variety of applications e.g. headlamp, oil, handbrake, indicator, temperature, door close/open, brake fluid, etc.

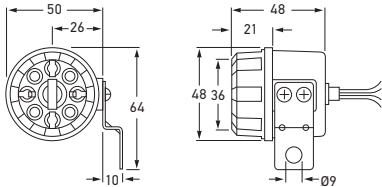


Part Number	6021		85dB
	6022		
Voltage	P/N 6021	12V	
	P/N 6022	24V	
Power Consumption	6W		
Current Draw	12V	Less than 50mA	
	24V	Less than 25mA	
Sound Level	85dB		



Multivolt™ Reversing Alarm

Durable intermittent reversing alarm. Easily fitted to any car or truck's reversing lamp wiring system or wire to a switch on your dashboard.



Part Number	6023		89dB
Voltage	12-36V		
Current Draw	Less than 50mA.		
Sound Level	89 +/- 2dB (at 1.2m)		



Activating Switch

Single direction. Off-on switch. Suits all reversing alarms and buzzers.

Part Number	6041		OFF-ON
Mounting	Adjacent to the gear shift lever or linkage.		
Protection	IP 55 (Protection against dust and water jets)		

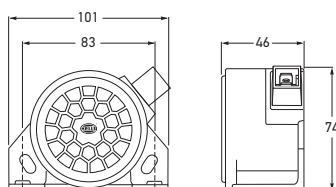


## Heavy Duty Reversing Alarm

Heavy duty reversing alarm with integral AMP connection and fixed sound pressure levels between 90 and 107dB @ 1.2 metres. Epoxy encapsulated circuit boards offer protection against humidity, dirt and vibration.



P/N 9.6008.06



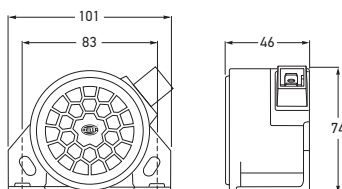
Part Number	6008	90dB
	6009	97dB
	6010	107dB
	6011	97dB
Mounting	Integrated universal mounting bracket for upright, pendant or surface mounting.	
Voltage	12-24V (P/N 6011 - 12-48V)	
Current Draw	P/N 6011	0.1A
	P/N 6008/6009	0.2A
	P/N 6010	0.3A
Frequency	60 signals per minute ( $\pm 20\%$ ).	
Sound Level	P/N 6008	90 $\pm$ 4dB @ 1.2m
	P/N 6009	97 $\pm$ 4dB @ 1.2m
	P/N 6010	107 $\pm$ 4dB @ 1.2m
	P/N 6011	97 $\pm$ 4dB @ 1.2m
Temperature	Operating range -40°C to 85°C.	
Protection	IP 66 (Protection against dust and high pressure washing)	
Spare Part	9.6008.06	Plug and lead
Compliance	SAE J994	

## Heavy Duty Reversing Alarm

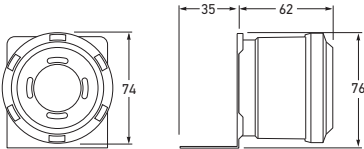
Heavy duty reversing alarm with integral AMP connection. Automatically adjusts sound pressure level to changing noise environments. Solid state electronics, self-adjusting to the minimum of 5dB above surrounding noise levels effectively reducing irritation. Epoxy encapsulated circuit boards offer protection against humidity, dirt and vibration.



P/N 9.6008.06



Part Number	6013	82-102dB
Mounting	Integrated universal mounting bracket for upright, pendant or surface mounting.	
Voltage	12-24V	
Current Draw	0.4A	
Frequency	60 signals per minute ( $\pm 20\%$ ).	
Sound Level	82 - 102 $\pm$ 4dB @ 1.2m	
Temperature	Operating range -40°C to 85°C.	
Protection	IP 66 (Protection against dust and high pressure washing)	
Spare Part	9.6008.06	Plug and lead
Compliance	SAE J994	



Part Number	6042	87dB
	6043	97dB
	6044	112dB
Mounting	Universal mounting comes complete with heavy-gauge plated steel mounting bracket. Can be installed on positive and negative ground vehicles.	
Voltage	12-24V (P/N 6043/6044 - 12-48V)	
Current Draw	Less than 0.20A	
Frequency	80 signals per minute +/- 20%	
Sound Level	P/N 6042	87dB @ 1.2m
	P/N 6043	97dB @ 1.2m
	P/N 6044	112dB @ 1.2m
Temperature	Operating range -40°C to 74°C	
Protection	Protection against dust and high pressure washing	
Compliance	SAE J994	

Evacuator Plus Heavy Duty Reversing Alarm

The Evacuator Plus heavy duty reversing and warning alarm features a lightweight piezoelectric output circuit.

The reduced weight of just 129 grams makes the Evacuator Plus virtually immune to vibration damage. Unique nickel plated conductive terminal inserts, which provide power to the alarm, are hermetically sealed, giving superior water resistant performance.

The housing is constructed of high impact ABS plastic resin and is environmentally sealed against moisture, dust and corrosion. Evacuator Plus reversing and warning alarms are steam cleanable.



### Broadband Reversing Alarm

Reversing alarm with multi-frequency broadband sound.



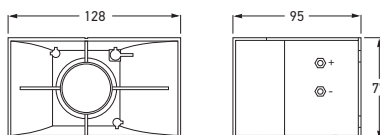
Part Number	6050-SA	77-97dB
Mounting	Integrated universal mounting bracket for upright, pendant or surface mounting.	
Voltage	12-24V	
Current Draw	Less than 1A.	
Frequency	White noise/broadband.	
Sound Level	P/N 6050-SA	77-97 ± 4dB @ 1.2m
Temperature	Operating range -40 to 85°C.	
Protection	IP 68 (Protection against dust and water immersion)	
Compliance	SAE J994	CE

### Broadband Reversing Alarm

Reversing alarm with multi-frequency broadband sound.



Part Number	6051	92dB
	6052	97dB
Mounting	Integrated universal mounting bracket for upright, pendant or surface mounting.	
Voltage	12-24V	
Current Draw	Max. 0.5A	
Frequency	White noise/broadband.	
Sound Level	P/N 6051	92 ± 4dB @ 1.2m
	P/N 6052	97 ± 4dB @ 1.2m
Temperature	Operating range -40 to 85°C.	
Protection	IP 68 (Protection against dust and water immersion)	
Compliance	SAE J994	CE



Part Number	6047	82-107dB AUTO
Mounting	Universal mounting brackets.	
Voltage	12-48V	
Current draw	Less than 0.25A	
Frequency	80 signals per minute.	
Sound level	82 to 107dB @ 1.2m	
Temperature	-40°C to 77°C	
Protection	IP 55 (Protection against dust and water jets)	
Compliance	SAE J994	

### Reversing Alarm

Reactor heavy duty reversing and warning alarm automatically adjusts to changing noise environments. State-of-the-art, solid-state electronics self-adjust to a minimum of 5dB above surrounding noise levels, thus reducing irritation, complaints and hearing impairment.

Reactor alarms feature integral universal mounting brackets and high impact ABS plastic resin housing and are totally environmentally sealed in epoxy to guard against moisture, dirt and vibration.



Part Number	6048	87-112dB AUTO
Mounting	Universal mounting brackets.	
Voltage	12-24V	
Current draw	Less than 0.50A	
Frequency	80 signals per minute.	
Sound level	87 to 112dB @ 1.2m	
Temperature	-40°C to 77°C	
Protection	IP 55 (Protection against dust and water jets)	
Compliance	SAE J994	

### Reversing Alarm

Durable intermittent reversing alarm. Easily fitted to any car or truck's reversing lamp wiring system or wire to a switch on your dashboard.



Part Number	6049	107/112dB MANUAL
Mounting	Universal mounting brackets.	
Voltage	12-24V	
Current draw	Less than 0.8A	
Frequency	80 signals per minute.	
Sound level	107 or 112dB @ 1.2m	
Temperature	-40°C to 77°C	
Protection	IP 55 (Protection against dust and water jets)	
Compliance	SAE J994	

Reactor alarms comply with SAE J994 requirements and OSHA regulations.

### Reversing Alarm

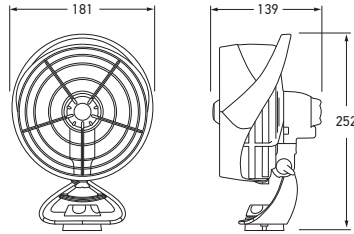
Durable intermittent reversing alarm. Easily fitted to any car or truck's reversing lamp wiring system or wire to a switch on your dashboard.





## Oscillating Turbo 2.0 Fan - Two Speed

Highly regarded HELLA turbo fans are strengthened by the arrival of the Turbo 2.0 series, now featuring an oscillating function to deliver refreshingly cool air circulation on board. Turbo 2.0 fans continue with HELLA's benchmark quiet operation, low power consumption and proven durable materials.

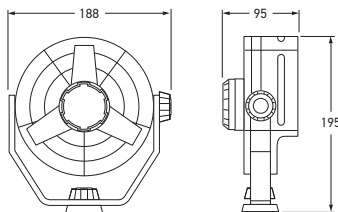


Part Number	8EV 003 366 012 (Black)	12 VOLT
	8EV 003 366-022 (White)	
Switch	Integrated 2 stage rotary	
Output	Speed 1: 70 litre/sec. Speed 2: 95 litre/sec.	
Power Consumption	<4W (<0.33A@12V)	
Cable Length	Pre-wired with 1.8m of cable.	



## Turbo Fan

Turbo fans provide high capacity at low power consumption. Features include impact resistant housing, low-noise operation and soft plastic impellers, shielded by sturdy protective grille for added safety. Fans can be turned in all directions, and locked in position. Airflow can be regulated by two-stage switch.



Part Number	8EV 003 361-002	12 VOLT
	8EV 003 361-022 (White)	
	8EV 003 361-012	24 VOLT
Power Consumption	6.5W	
Cable Length	Pre-wired with 140mm of cable.	
Min. Service Life	5000 hours (tested under extreme conditions)	

Part Number	CRIMPING TOOL - INSULATED TERMINALS
	8271

Specially designed for the handyman and hobbyist, a useful crimping tool that cuts cable, strips cable insulation and crimps all popular insulated terminals.

Part Number	CRIMPING TOOL - INSULATED TERMINALS
	8272

Spring return hand grips. Cuts and strips insulation from cable measuring 2.5-6mm in diameter (0.75-6mm<sup>2</sup>). Crimps all popular insulated and non-insulated terminals. Cuts bolts with metric threads M2.6, M3, M3.5, M4, M5.

Part Number	CRIMPING TOOL - INSULATED TERMINALS
	8273

Adjustable ratchet mechanism and spring release ensures a perfect crimp every time for insulated terminals.

Part Number	CRIMPING TOOL - NON-INSULATED TERMINALS
	8274

Adjustable ratchet mechanism and spring release ensures a perfect crimp every time for open barrel non-insulated terminals.

Part Number	CRIMPING TOOL - DT TERMINALS
	8275

Specially designed crimping tool with multiple jaws for an even crimp of DT terminals. See pages 272-273 for DT connectors.

Part Number	CRIMPING TOOL - SUPER SEAL TERMINALS
	8298

Crimping tool designed for use with super seal connector terminals. See pages 274-275 for super seal connectors.

Part Number	CRIMPING TOOL - ABS TERMINALS
	8PE 863 807-001

Crimping tool designed for use with ABS connectors. See page 257 for ABS plugs, sockets and connectors.



DT Connectors

Environmentally sealed connectors rated at -55° to 125°C.  
Supplied with solid copper crimp contacts, locking wedges  
and large I.D. removable contacts, 1.9mm in diameter.

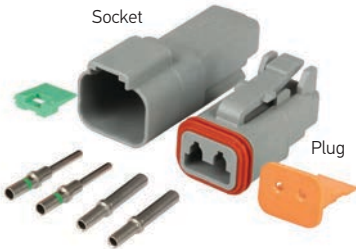
Maximum Load	13A - all contacts	
Spare Parts	9.4960.01	Small I.D. female contact to suit plug
	9.4960.02	Small I.D. male contact to suit socket
	9.4960.03	Large I.D. female contact to suit plug
	9.4960.04	Large I.D. male contact to suit socket
	9.4960.05	Sealing plug



Small I.D. = 1.6mm diameter. Large I.D. = 1.9mm diameter. Plug and socket kits come complete with terminals and seals.

2 Pole Plug and Socket

Supplied with 4 solid copper crimp contacts  
and 2 locking wedges. Bulk pack supplied  
with 2 pole connectors and contacts to suit.



Part Number	2 POLE PLUG AND SOCKET	
	4960	
	2 POLE PLUG	
	4960MF	PACK OF 10
	2 POLE SOCKET	
	4960FM	PACK OF 10
	2 POLE PLUG KIT	
	4960-P	

3 Pole Plug and Socket

Supplied with 6 solid copper crimp contacts  
and 2 locking wedges.



Part Number	4961
-------------	------

4 Pole Plug and Socket

Supplied with 8 solid copper crimp contacts  
and 2 locking wedges.



Part Number	4962
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6 Pole Plug and Socket

Supplied with 12 solid copper crimp contacts and 2 locking wedges.

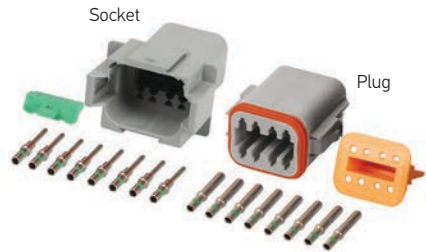
Part Number	4963
	6 PIN PLUG KIT
	4963-P



8 Pole Plug and Socket

Supplied with 16 solid copper crimp contacts and 2 locking wedges.

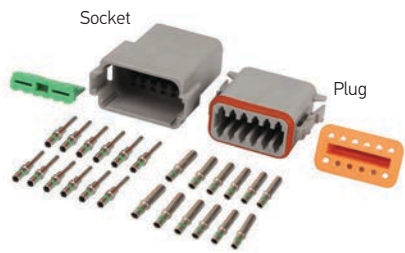
Part Number	4964
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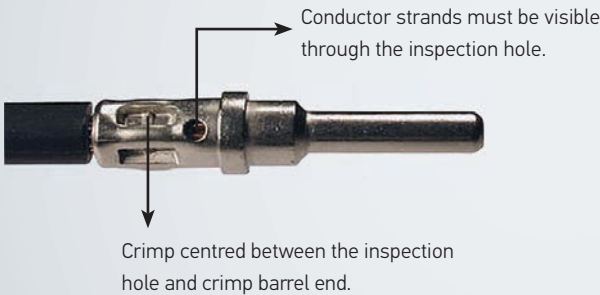
12 Pole Plug and Socket

Supplied with 24 solid copper crimp contacts and 2 locking wedges.

Part Number	4965
-------------	------



A PROPER CRIMP



Visual Inspection Checklist

- ✓ NO damaged wire strands.
- ✓ NO missing wire strands.
- ✓ ALL strands entered into contact barrel.

## Super Seal Connectors

Super seal connector housings were developed to satisfy increasing requirements for safety and reliability in the field of electrical connections. The connectors can be connected to existing components and used with the equipment presently in use in the automotive industry (sensors, oil pressure sensors, water temperature monitoring circuits, etc.).

- IP 67 (Protection against dust and temporary water immersion)
- Robust and reliable contact. Max. current 14A.
- Prefabricated secondary lock ensures that the terminal is plugged into the housing correctly and prevents slipping out of the connector.



For 'P' and 'S' versions only the bare connector is supplied. Select appropriate seals and terminals to suit. Plug and socket kits come complete with terminals and seals.



P/N 4981-P



P/N 4981-S

1 POLE PLUG AND SOCKET		
Part Number	4981-P (Pack of 4)	PLUG
	4981-S (Pack of 4)	SOCKET



P/N 4982-P



P/N 4982-S

2 POLE PLUG AND SOCKET		
Part Number	4982 (Kit)	PLUG AND SOCKET
	4982-P (Pack of 4)	PLUG
	4982-S (Pack of 4)	SOCKET

Spare Part 9.4982.05 Rubber sealing boot – cable support



P/N 4983-P



P/N 4983-S

3 POLE PLUG AND SOCKET		
Part Number	4983 (Kit)	PLUG AND SOCKET
	4983-P (Pack of 3)	PLUG
	4983-S (Pack of 3)	SOCKET

Spare Part 9.4983.05 Rubber sealing boot – cable support



P/N 4984-P



P/N 4984-S

4 POLE PLUG AND SOCKET		
Part Number	4984 (Kit)	PLUG AND SOCKET
	4984-P (Pack of 3)	PLUG
	4984-S (Pack of 3)	SOCKET



P/N 4985-P



P/N 4985-S

5 POLE PLUG AND SOCKET		
Part Number	4985-P (Pack of 2)	PLUG
	4985-S (Pack of 2)	SOCKET



P/N 4986-P



P/N 4986-S

6 POLE PLUG AND SOCKET		
Part Number	4986-P (Pack of 2)	PLUG
	4986-S (Pack of 2)	SOCKET



Part Number	4980
Contents	5 of each connector, plug and socket 100 9.4980.02 Socket terminals 100 9.4980.04 Plug terminals 100 9.4980.06 Yellow seals 100 9.4980.09 Red cavity plugs

Part Number	FEMALE TERMINALS FOR PLUG - PACK OF 50	
	9.4980.01	
	9.4980.02	
To Suit	P/N 9.4980.01	0.35 - 0.50mm <sup>2</sup> cable
	P/N 9.4980.02	0.50 - 1.50mm <sup>2</sup> cable

Part Number	MALE TERMINALS FOR SOCKET - PACK OF 50	
	9.4980.03	
	9.4980.04	
To Suit	P/N 9.4980.03	0.35 - 0.50mm <sup>2</sup> cable
	P/N 9.4980.04	0.50 - 1.50mm <sup>2</sup> cable

Part Number	SEALS FOR PLUG/SOCKET - PACK OF 50	
	9.4980.05	GREEN SEAL
	9.4980.06	YELLOW SEAL
	9.4980.07	RED SEAL
	9.4980.09	RED CAVITY PLUG (NO HOLE)
To Suit	P/N 9.4980.05	Cable insulation 1.2 - 1.6mm diameter
	P/N 9.4980.06	Cable insulation 1.7 - 2.4mm diameter
	P/N 9.4980.07	Cable insulation 2.5 - 3.3mm diameter
	P/N 9.4980.09	Red cavity plug (no hole)

Part Number	RUBBER SEALING BOOT - CABLE SUPPORT	
	9.4982.05	
	9.4983.05	
To Suit	P/N 9.4982.05	2 pin connector
	P/N 9.4983.05	3 pin connector

Part Number	SUPER SEAL TOOLS	
	9.4980.20	CONTACT EXTRACTION TOOL
	9.4980.21	SECONDARY LOCK TOOL

Extraction tools for the popular super seal range of connectors, to assist in disassembly if required.

Part Number	CRIMPING TOOL - SUPER SEAL TERMINALS	
	8298	

Crimping tool designed for use with super seal connector terminals.

## Super Seal Connector Kit

Kit contains a variety of super seal connectors.





PUSH-ON FEMALE TERMINALS				
Part Number	Type	Quantity Per Pack	Size	Cable
8200	BLISTER PACK	20	6.3mm	2.5 to 3mm cable 0.75 to 1.13mm <sup>2</sup> cable
8500	BULK PACK	100		
8201	BLISTER PACK	20	6.3mm	4mm cable. 1.84mm <sup>2</sup> cable
8501	BULK PACK	100		
8202	BLISTER PACK	15	6.3mm	5 to 6mm cable 2.9 to 4.59mm <sup>2</sup> cable
8502	BULK PACK	100		
8203	BLISTER PACK	12	9.5mm	
8503	BULK PACK	100		
FULLY INSULATED FEMALE TERMINALS				
8204	BLISTER PACK	12	6.3mm	2.5 to 3mm cable 0.75 to 1.13mm <sup>2</sup> cable
8504	BULK PACK	100		
8205	BLISTER PACK	12	6.3mm	4mm cable. 1.84mm <sup>2</sup> cable
8505	BULK PACK	100		
PUSH-ON 2-WAY MALE AND FEMALE TERMINALS				
8210	BLISTER PACK	15	6.3mm	2.5 to 3mm cable 0.75 to 1.13mm <sup>2</sup> cable
8510	BULK PACK	100		
8211	BLISTER PACK	12	6.3mm	4mm cable. 1.84mm <sup>2</sup> cable
8511	BULK PACK	100		
8212	BLISTER PACK	15	6.3mm	
8512	BULK PACK	100		
BLADE MALE TERMINALS				
8213	BLISTER PACK	15	6.3mm	2.5 to 3mm cable 0.75 to 1.13mm <sup>2</sup> cable
8513	BULK PACK	100		
8214	BLISTER PACK	12	6.3mm	4mm cable. 1.84mm <sup>2</sup> cable
8514	BULK PACK	100		
8215	BLISTER PACK	10	6.3mm	5 to 6mm cable 2.9 to 4.59mm <sup>2</sup> cable
8515	BULK PACK	100		
BULLET SINGLE MALE CONNECTORS				
8220	BLISTER PACK	12		2.5 to 3mm cable 0.75 to 1.13mm <sup>2</sup> cable
8520	BULK PACK	100		
8221	BLISTER PACK	14		4mm cable. 1.84mm <sup>2</sup> cable
8521	BULK PACK	100		
BULLET SINGLE FEMALE CONNECTORS				
8222	BLISTER PACK	12		2.5 to 3mm cable 0.75 to 1.13mm <sup>2</sup> cable
8522	BULK PACK	100		
8223	BLISTER PACK	14		4mm cable. 1.84mm <sup>2</sup> cable
8523	BULK PACK	100		

## ACCESSORIES

CABLE CONNECTORS					
Part Number	Type	Quantity Per Pack	Size	Cable	
8224	BLISTER PACK	13		Suited for brass bullet terminals.	
8524	BULK PACK	100			
8230	BLISTER PACK	15		2.5 to 3mm cable 0.75 to 1.13mm² cable	
8530	BULK PACK	100			
8231	BLISTER PACK	15		4mm cable. 1.84mm² cable	
8531	BULK PACK	100			
8232	BLISTER PACK	10		5 to 6mm cable 2.9 to 4.59mm² cable	
8532	BULK PACK	100			
QUICK CONNECT CABLE CONNECTORS					
8235	BLISTER PACK	15		With the use of pliers, connects splices and insulates 0.75 to 1.13mm² (2.5 to 3mm) cable.	
8535	BULK PACK	50			
EYE TERMINALS					
8240	BLISTER PACK	25	4.3mm	2.5 to 3mm cable 0.75 to 1.13mm² cable	
8540	BULK PACK	100			
8241	BLISTER PACK	20	5mm		
8541	BULK PACK	100			
8242	BLISTER PACK	15	6.3mm	4mm cable. 1.84mm² cable	
8542	BULK PACK	100			
8243	BLISTER PACK	20	5mm		
8543	BULK PACK	100			
8244	BLISTER PACK	20	6.3mm	5 to 6mm cable 2.9 to 4.59mm² cable	
8544	BULK PACK	100			
8245	BLISTER PACK	15	8.4mm		
8545	BULK PACK	100			
8246	BLISTER PACK	12	6.3mm	5 to 6mm cable 2.9 to 4.59mm² cable	
8546	BULK PACK	100			
8247	BLISTER PACK	12	8.4mm		
8547	BULK PACK	100			
8248	BLISTER PACK	10	9.5mm	5 to 6mm cable 2.9 to 4.59mm² cable	
8548	BULK PACK	100			
8249	BLISTER PACK	10	5mm		
8549	BULK PACK	100			
NON-INSULATED BRASS LUCAR TERMINAL - WITH LOCK TAB					
8573	BULK PACK	100	6.3mm	1.84mm² cable	



## Insulated Terminal Assortment

Pack of 16 and 31 popular HELLA connectors/terminals.



Part Number	8280	PACK OF 16
	8281	PACK OF 31

## Garage/Auto Electrical Assortment Kit - 188 Piece

Assortment containing 12 types of HELLA connectors/terminals specifically designed to meet the requirements of the automotive industry.



Part Number	8282	
Contents	A quantity of 12 complete packs.	
Part Number	Description	Quantity
8200	Push-on female terminal	20
8201	Push-on female terminal	20
8202	Push-on female terminal	15
8203	Push-on female terminal	12
8210	Push-on 2-way male and female terminal	15
8211	Push-on 2-way male and female terminal	12
8230	Cable connector	15
8231	Cable connector	15
8232	Cable connector	10
8241	Eye terminal	20
8244	Eye terminal	20
8247	Eye terminal	12

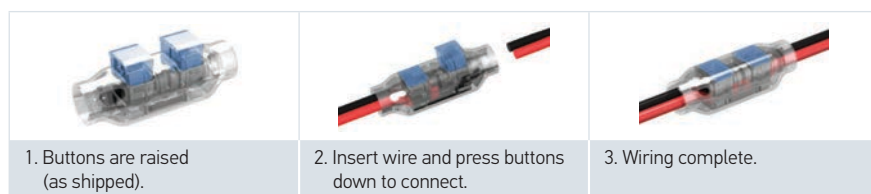
## Insulated Terminal and Connector Kit - 800 Piece

Assortment containing 16 types of HELLA connectors/terminals specifically designed to meet the requirements of the automotive industry. Kit includes crimp tool P/N 8272.



Part Number	8284	
Contents	16 types of HELLA connectors/terminals.	
Part Number	Description	Quantity
8200	Push-on female terminal	50
8201	Push-on female terminal	50
8204	Fully Insulated female terminal	50
8205	Fully Insulated female terminal	50
8213	Blade male terminal	50
8214	Blade male terminal	50
8220	Bullet single male connector	50
8221	Bullet single male connector	50
8222	Bullet single female connector	50
8223	Bullet single female connector	50
8230	Cable connector	50
8231	Cable connector	50
8235	Quick connect cable connector	50
8241	Eye terminal	50
8244	Eye terminal	50
8247	Eye terminal	50
8272	Crimping tool – Insulated terminals	1

Part Number	8234S Clear		PACK OF 4
	8234SY Yellow		
Conductors	2 in - 2 out.		
Cable	8234S 8234SY	0.82mm <sup>2</sup> 0.5mm <sup>2</sup>	
Max. Insulation Size	7.4mmØ		
Max. Current	8234S 8234SY	5A 3.5A	
Protection	IP 65 (Protection against dust and water jets) IP 67 (Protection against dust and temporary water immersion)		



### CoolSplice Sealed Connector

This connector can easily make a permanent wire-to-wire cable termination. Designed for a single use, it allows for positive and negative conductors in the same connector (2 in and 2 out, and insulated from each other).

Both sides can be terminated separately and independently from each other, making the connector suitable on a pig-tail. No special tools are required, a standard pair of pliers will do.

The CoolSplice connector is UL and KEMA approved. It is recommended that the connector is housed inside an enclosure if used outdoors.



### Heat Shrink Insulated Crimp Terminals - Pack of 10

Fully insulated cable terminals with shrink-on nylon cap either with hot air gun or other heat source. Shrinking temperature 135°C.

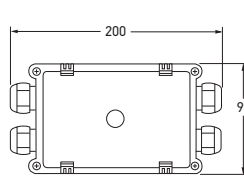
Part Number	Type	Colour	Cable Size	Description
8204S	BLADE RECEPTACLES	RED	0.5 - 1mm <sup>2</sup>	To suit blade terminals 6.3 x 0.8mm. Fully insulated.
8205S		BLUE	1.5 - 2.5mm <sup>2</sup>	
8213S	BLADE TERMINALS	RED	0.5 - 1mm <sup>2</sup>	Size of blade terminal 6.3 x 0.8mm.
8214S		BLUE	1.5 - 2.5mm <sup>2</sup>	
8240S	RING CONNECTORS	RED	0.5 - 1mm <sup>2</sup>	To suit M4 pins.
8236S		BLUE	1.5 - 2.5mm <sup>2</sup>	
8241S	RING CONNECTORS	RED	0.5 - 1mm <sup>2</sup>	To suit M5 pins.
8243S		BLUE	1.5 - 2.5mm <sup>2</sup>	
8249S		YELLOW	4 - 6mm <sup>2</sup>	
8244S	RING CONNECTORS	BLUE	1.5 - 2.5mm <sup>2</sup>	To suit M6 pins.
8246S		YELLOW	4 - 6mm <sup>2</sup>	
8245S	RING CONNECTORS	BLUE	1.5 - 2.5mm <sup>2</sup>	To suit M8 pins.
8247S		YELLOW	4 - 6mm <sup>2</sup>	
8230S	BUTT CONNECTORS	RED	0.5 - 1mm <sup>2</sup>	
8231S		BLUE	1.5 - 2.5mm <sup>2</sup>	
8232S		YELLOW	4 - 6mm <sup>2</sup>	



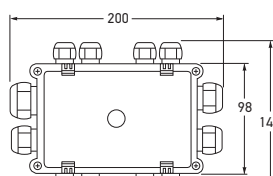


### Cable Junction Box

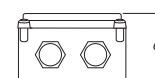
Compact cable junction box with the option of 4 or 12 inlet/outlets, and outer cable size from Ø10mm to Ø17mm. Complete with connecting cartridge allowing 14 separate groups of connections (6 x 8-way and 8 x 4-way) all using 6.3mm flat blade connectors. The heavy duty nylon housing will withstand common lubricants found underneath truck and trailers, and is safe to clean with high pressure washing equipment.



P/N 2770



P/N 2771



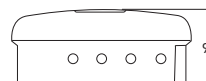
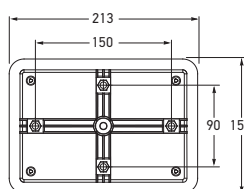
Part Number	2770	4 OUTLETS
	2771	12 OUTLETS
Fittings	2770 2771	4 x Ø13mm 1 x Ø17mm + 3 x Ø13mm + 8 x Ø10mm
Protection	IP 69K (Protection against dust and high pressure/steam jet cleaning)	
Plug Cartridge	14 separate connection groups.	



Connecting cartridge

### Junction Box - Heavy Duty

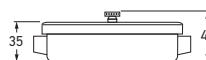
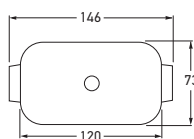
Heavy duty nylon junction box. Box can be opened without tools via a single stainless steel bolt. Large sealing gasket withstands high pressure water blasting. Internal mounting plate for fitment of connector blocks and/or relays by self-tapping screws. Large size allows for multiple connections.



Part Number	2755
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### Cable Junction Box

8 Screw connections.



Part Number	2757
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Cable Suitable for medium cable up to 6mm<sup>2</sup> cross-sectional area.

### Cable Junction Box

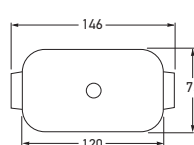
8 pole, 8 double flat plug connection.



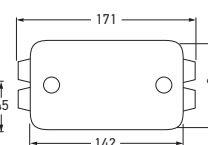
P/N 2759



P/N 2758



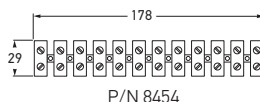
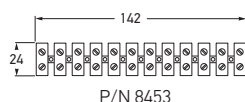
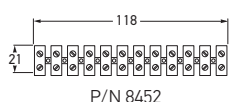
P/N 2758



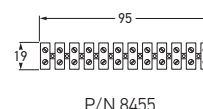
P/N 2759

Part Number	2758	
	2759	

To Suit P/N 2758 Suitable for medium cable up to 6mm<sup>2</sup> cross-sectional area.  
P/N 2759 Suitable for heavy cable up to 10mm<sup>2</sup> cross-sectional area.

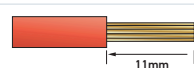
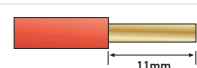
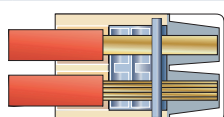


Part Number	8455	SET OF 12
	8452	
	8453	
	8454	
To Suit	P/N 8455	Cables up to 2.5mm (0.75mm <sup>2</sup> )
	P/N 8452	Cables up to 3mm (1.13mm <sup>2</sup> )
	P/N 8453	Cables up to 4mm (2.90mm <sup>2</sup> )
	P/N 8454	Cables up to 6mm (4.59mm <sup>2</sup> )



Part Number	8250-2 (2 Pole)	PACK OF 8
	8250-4 (4 Pole)	PACK OF 6
	8250-6 (6 Pole)	PACK OF 4
Cable	Suitable for cable 0.5mm <sup>2</sup> - 2.5mm <sup>2</sup> cross-sectional area.	
Max. Current	24A @ 24V	

Recommended wire strip dimensions.



### Push-in Wire Connectors

Push-in wire connectors used for fast, easy and reliable connection and distribution of cables and conductors. The cables are commonly connected together inside the connector.

Available in 2, 4 and 6 pole versions and colour coded for easy identification, these connectors are suitable for a wide variety of applications. They are made from non-corrosive materials and are recommended for use in a clean and dry environment to prevent corrosion.



Part Number	4991	1 POLE
	4992	2 POLE
	4993	3 POLE
	4994	4 POLE
	4995	6 POLE
	4996	8 POLE
Max. Load	10A per terminal.	
Max. Cable Size	2.0mm <sup>2</sup>	



### Connector Kits

White connector kits. Includes brass terminals.



### Self Bonding Rubber Tape - Black

Self bonding adhesive tape. Supple, waterproof, permanently resilient and high stretch. This self bonding adhesive tape is used for assembling cable sleeves and repairing damaged cable and leads and is also suitable for sealing hoses. For optimum insulation and self bonding, a minimum 50% overlap and tensile stretch of at least 50% is recommended.



Part Number	8300	19MM X 5M
Tape Thickness	1.0 +/- 0.2mm	
Elongation at Break	55%	
Temperature Range	-40°C to 105°C	

### Insulation Tape - Black

Black insulation tape. Made from lead free PVC. Suitable for fine wire, cables and applications requiring non-corrosive tape.



Part Number	8312	18MM X 20M
Tape Thickness	0.18mm	
Elongation at Break	215%	

### Duct Tape - Black

Premium quality plastic coated rayon fabric backing, with a high tack aggressive rubber based adhesive on one side.



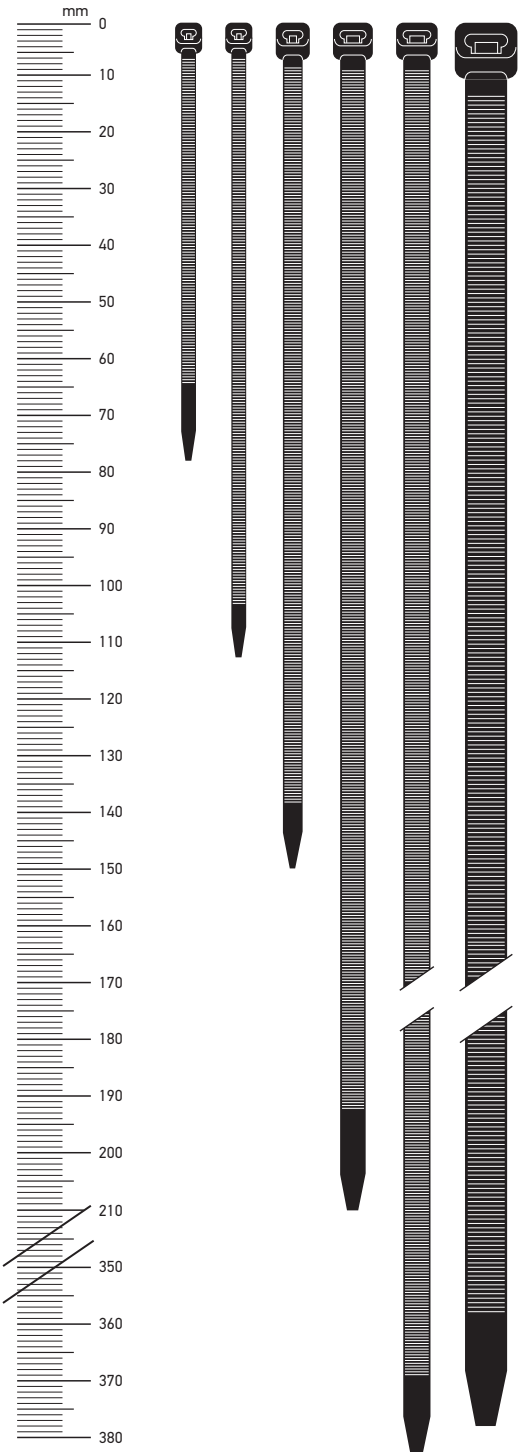
Part Number	8320	48MM X 30M
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Nylon Cable Ties

100% 6/6 nylon cable ties. Very flexible locking latch. Bell-mouthed head allows easier threading than previous ties. Strongest possible locking power without damaging the serrations of the tie. Quick fastening and simple locking mechanism. Black ties are UV resistant.

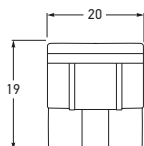
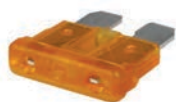
WHITE CABLE TIES		
Quantity 100 Per Pack	Length	Width
8341	78mm	2.5mm
8342	103mm	2.5mm
8343	143mm	3.2mm
8344	191mm	4.8mm
8345	368mm	4.8mm
8346	378mm	7.6mm

BLACK UV RESISTANT CABLE TIES				
Quantity 10 Per Pack	Quantity 100 Per Pack	Quantity 1000 Per Pack	Length	Width
8331UV	8341UV		80mm	2.5mm
	8342UV	8342UV-BULK	103mm	2.5mm
8333UV	8343UV	8343UV-BULK	147mm	3.2mm
8334UV	8344UV	8344UV-BULK	208mm	4.6mm
8335UV	8345UV	8345UV-BULK	390mm	4.8mm
8336UV	8346UV	8346UV-BULK	380mm	7.6mm



## Standard Blade Fuses (ATS)

- Pack of 10



P/N 8772

P/N 8773

P/N 8774



P/N 8775

P/N 8776

P/N 8777

Part Number	8771	TAN	5A
	8772	BROWN	7.5A
	8773	RED	10A
	8774	BLUE	15A
	8775	YELLOW	20A
	8776	WHITE	25A
	8777	GREEN	30A

## Motorist Fuse Assortment (ATS)

- Pack of 10

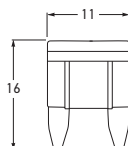
10 popular blade fuses – ideal for the glove box.



Part Number	8779
Contents	1 x 7.5A 2 x 10A 2 x 15A 2 x 20A 2 x 25A 1 x 30A

## Mini Blade Fuses (ATN) - Pack of 10

10 popular blade fuses – ideal for the glove box.



P/N 8772MINI

P/N 8773MINI

P/N 8774MINI



P/N 8775MINI

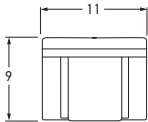
P/N 8776MINI

P/N 8777MINI

Part Number	8771MINI	TAN	5A
	8772MINI	BROWN	7.5A
	8773MINI	RED	10A
	8774MINI	BLUE	15A
	8775MINI	YELLOW	20A
	8776MINI	WHITE	25A
	8777MINI	GREEN	30A



Low Profile Blade Fuses (ATT)  
- Pack of 10



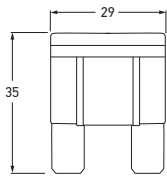
Part Number	8771LP	TAN	5A
	8772LP	BROWN	7.5A
	8773LP	RED	10A
	8774LP	BLUE	15A
	8775LP	YELLOW	20A
	8776LP	WHITE	25A
	8777LP	GREEN	30A



P/N 8772LP      P/N 8773LP      P/N 8774LP



P/N 8775LP      P/N 8776LP      P/N 8777LP



Maxi Blade Fuses (ATM)  
- Single Pack

Part Number	8790	YELLOW	20A
	8791	GREEN	30A
	8792	ORANGE	40A
	8793	RED	50A
	8794	BLUE	60A
	8796	BROWN	70A
	8795	WHITE	80A

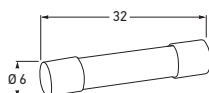


P/N 8791      P/N 8792      P/N 8793



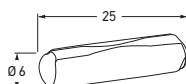
P/N 8794      P/N 8796      P/N 8795

## Glass Fuses (3AG) - Pack of 5



Part Number	8755	3 AMP
	8756	5 AMP
	8757	7.5 AMP
	8754	10 AMP
	8758	15 AMP
	8759	20 AMP
	8760	25 AMP
	8761	30 AMP

## Ceramic Fuses - Pack of 5



Part Number	8750	8 AMP
	8753	16 AMP
	8751	25 AMP



P/N 8751

P/N 8753

## Circuit Breakers - Standard Blade Fuse Replacement

Compact single pole, heavy duty thermal circuit breakers with push-to-reset mechanism and separate (colour coded) manual release for extra low voltage wiring systems on all types of vehicles and marine craft. Fitted with blade terminals for plug-in mounting and retaining clips and ribs for increased pull-out force and vibration resistance. Ideal replacement for blade fuses in heavy duty applications.



Part Number	8736	PURPLE	3A
	8737	GREEN	6A
	8738	RED	10A
	8739	BLUE	15A
	8740	YELLOW	20A
	8741	WHITE	25A

Voltage

Max. 28V (Min. 10V)



P/N 8737

P/N 8738

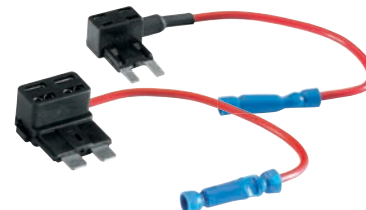
P/N 8739

P/N 8740

P/N 8741

### Auxiliary Blade Fuse Holder

Add on fuse holder. Fuse holder allows you to piggy back off the original fuse with an additional holder and separate fused circuit. Comes complete with 4 fuses (3A, 5A, 7.5A and 10A).



Part Number	8701	MINI
	8703	STANDARD/ATS
To Suit	Mobile phones, stereos, amplifiers, navigation systems and fridges.	

### Pre-wired Blade Fuse Holders

Part Number	8713	MINI
	8714	STANDARD
	8715	MAXI



P/N 8714

P/N 8715

### Pre-wired Glass Fuse Holders

Part Number	8765	MAX. 30A
	8766	MAX. 10A



### Glass Fuse Holder - Panel Mount

Part Number	8768	SOLDER TERMINALS
	8769	PUSH-ON TERMINALS
Mounting	15mm diameter opening.	



P/N 8769

### Single Blade Fuse Holder

Several holders may be joined together or mated with P/N 4973 (relay holder). Comes complete with 2 terminals.



Part Number	8704
Cable	Suitable for cable up to 2.5mm <sup>2</sup> cross sectional area.

### Single Maxi Blade Fuse Holder

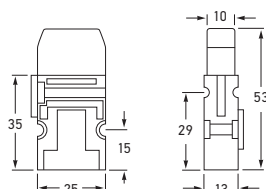
Splash-proof fuse holder with plastic cover. For loads up to 60A. Complete with 2 sets of terminals, set one for 2.5 - 6mm<sup>2</sup> and set two for 5 - 10mm<sup>2</sup>.



Part Number	8707
Cable	Suitable for cables up to 2.5mm <sup>2</sup> - 10mm <sup>2</sup> cross sectional area.

### Single Blade Fuse Holder

30 amps maximum. May be interlocked face to face or end to end. Complete with transparent dust cover lid and snap-in terminals.



Part Number	8718
Cable	Suitable for cable up to 2.90mm <sup>2</sup> cross sectional area.

### Single In-line Blade Fuse Holder

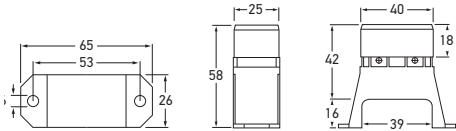
20 amps maximum. Complete with 15A blade fuse. Quick connect type, manufactured by 3M U.S.A.



Part Number	8719
Cable	Suitable for cable up to 1.84mm <sup>2</sup> cross sectional area.

Blade Fuse Box - 4 Fuses

Black plastic housing with transparent snap-fit lid. Flat plug connections.

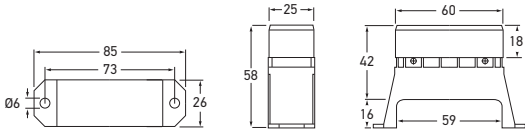


Part Number	8720	
	8720-S	SIDE CONNECTORS
Number of Fuses	4	
Fuse Type	2 x 10A 2 x 15A	



Blade Fuse Box - 6 Fuses

Black plastic housing with transparent snap-fit lid. Flat plug connections.

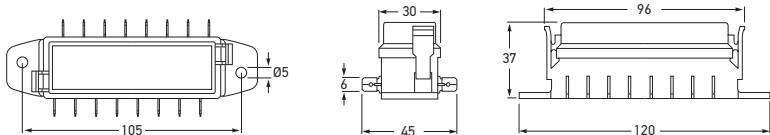


Part Number	8721	
	8721-S	SIDE CONNECTORS
Number of Fuses	6	
Fuse Type	3 x 10A 3 x 15A	



Blade Fuse Box - 8 Fuses

Black plastic housing with transparent snap-fit lid. Flat plug connections.



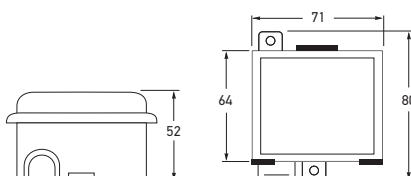
Part Number	8722	
	8722-S	SIDE CONNECTORS
Number of Fuses	8	
Fuse Type	4 x 10A 4 x 15A	





### Blade Fuse Box - 12 Fuses

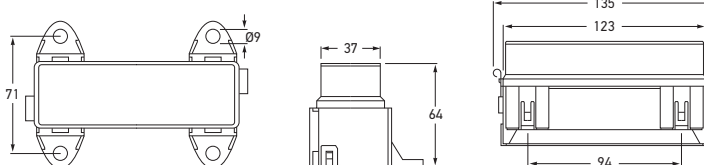
Black plastic housing with transparent snap fit lid incorporating sealing gasket. Provision for storing 4 spare fuses. Special sealing gland for cable entry.



Part Number	8723
Number of Fuses	12
Fuse Type	4 x 10A 4 x 15A 2 x 20A 2 x 25A

### Blade Fuse Box - 16 Fuses

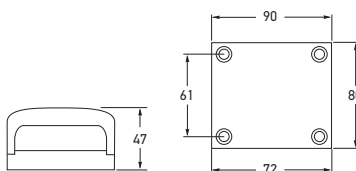
16-way fuse box featuring black plastic housing with secondary locks, transparent cover and sealing gasket. Supplied with mounting brackets (male and female).



Part Number	8724
Number of Fuses	16
Fuse Type	6 x 10A 6 x 15A 2 x 20A 2 x 25A

### Blade Fuse Box - 6 Fuses

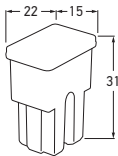
Black plastic housing with transparent snap-fit lid and 6.3mm male blade terminals. 6mm diameter stud input. Complete with 2 spare fuse holders and label set.



Part Number	8725
Number of Fuses	6
Fuse Type	3 x 10A 3 x 15A

Fusible Link - Female

Female plug-in fuse link.



Part Number	8790-FLFS	LIGHT BLUE	20A
	8791-FLFS	PINK	30A
	8792-FLFS	GREEN	40A
	8793-FLFS	RED	50A
	8794-FLFS	YELLOW	60A
	8795-FLFS	BROWN	70A
	8796-FLFS	BLACK	80A
	8797-FLFS	BLUE	100A



P/N 8790-FLFS

P/N 8797-FLFS



P/N 8791-FLFS

P/N 8792-FLFS

P/N 8793-FLFS

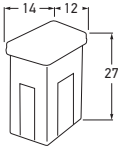
P/N 8794-FLFS

P/N 8795-FLFS

P/N 8796-FLFS

Mini Fusible Link - Female

Female mini plug-in fuse link.



Part Number	8790-FLFE	LIGHT BLUE	20A
	8791-FLFE	PINK	30A
	8792-FLFE	GREEN	40A
	8793-FLFE	RED	50A
	8794-FLFE	YELLOW	60A
	8795-FLFE	BROWN	70A
	8796-FLFE	BLACK	80A



P/N 8790-FLFE

P/N 8791-FLFE



P/N 8792-FLFE

P/N 8793-FLFE

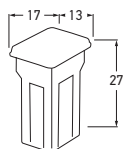
P/N 8794-FLFE

P/N 8795-FLFE

P/N 8796-FLFE

### Mini Fusible Link - Female

Mini female plug-in fuse link.

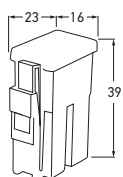


Part Number	8790-FLFM	LIGHT BLUE	20A
	8791-FLFM	PINK	30A
	8792-FLFM	GREEN	40A
	8793-FLFM	RED	50A
	8794-FLFM	YELLOW	60A
	8795-FLFM	BROWN	70A
	8796-FLFM	BLACK	80A
	8797-FLFM	BLUE	100A



### Fusible Link with Lock Tab - Female

Female plug-in fuse link with lock.

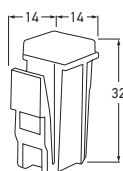


Part Number	8792-FLMKP	RED	45A
	8794-FLMKP	BLACK	65A
	8796-FLMKP	GREY	75A



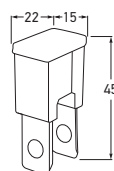
### Mini Fusible Link with Lock Tab - Female

Mini female plug-in fuse link with lock.



Part Number	8790-FLMNP	BROWN	25A
	8791-FLMNP	GREEN	30A

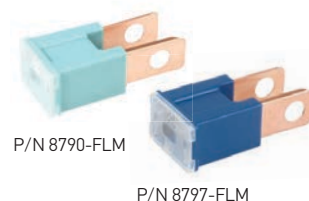




### Fusible Link - Male

Male bolt-in fuse link.

Part Number	8790-FLM	LIGHT BLUE	20A
	8791-FLM	PINK	30A
	8792-FLM	GREEN	40A
	8793-FLM	RED	50A
	8794-FLM	YELLOW	60A
	8795-FLM	BROWN	70A
	8796-FLM	BLACK	80A
	8797-FLM	BLUE	100A
	8798-FLM	WHITE	120A

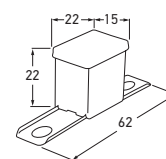
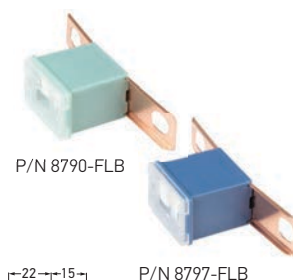


P/N 8791-FLM P/N 8792-FLM P/N 8793-FLM P/N 8794-FLM P/N 8795-FLM P/N 8796-FLM P/N 8798-FLM

Part Number	8790-FLB	LIGHT BLUE	20A
	8791-FLB	PINK	30A
	8792-FLB	GREEN	40A
	8793-FLB	RED	50A
	8794-FLB	YELLOW	60A
	8795-FLB	BROWN	70A
	8796-FLB	BLACK	80A
	8797-FLB	BLUE	100A
	8798-FLB	WHITE	120A

### Fusible Link, Male - L-Type Long

Male L-type fuse link with long leg.

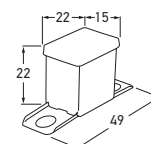
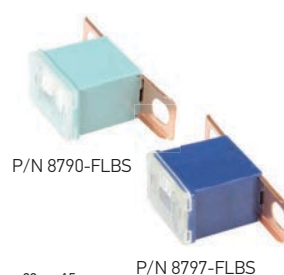


P/N 8791-FLB P/N 8792-FLB P/N 8793-FLB P/N 8794-FLB P/N 8795-FLB P/N 8796-FLB P/N 8798-FLB

Part Number	8790-FLBS	LIGHT BLUE	20A
	8791-FLBS	PINK	30A
	8792-FLBS	GREEN	40A
	8793-FLBS	RED	50A
	8794-FLBS	YELLOW	60A
	8795-FLBS	BROWN	70A
	8796-FLBS	BLACK	80A
	8797-FLBS	BLUE	100A
	8798-FLBS	WHITE	120A

### Fusible Link, Male - L-Type Short

Male L-type fuse link with short leg.



P/N 8791-FLBS P/N 8792-FLBS P/N 8793-FLBS P/N 8794-FLBS P/N 8795-FLBS P/N 8796-FLBS P/N 8798-FLBS





# HELLA Workshop

HELLA offers a comprehensive range of high quality inspection lamps and testing equipment that is designed to meet the needs of discerning do-it-yourself and professional technicians.





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## LED Inspection Lamps – Functional and Durable

HELLA LED Inspection Lamps have been designed with the workshop in mind. With high power efficient LEDs providing evenly spread natural light; a range of styles designed for a variety of situations; and construction to last – HELLA Inspection Lamps will become your most valued workplace tool.

- High power LEDs.
- Easy to use.
- Impact and shock resistant.
- Natural light – colour similar to daylight.
- Low current consumption, high efficacy.
- Strong, sturdy and resistant to water, oil and chemicals.



### LED Inspection Lamp - Miniform

Multifunctional pocket sized rechargeable LED inspection lamp. Features a strong magnetic base, retractable swivel hook and a flexible 180° head for powerful uniform lighting at any angle. Complete with 240V charger.



Retractable swivel hook




180° flexible head

Part Number	2XM 910 415-001	
Light Output	110 lumen for up to 3 hours.	
Temperature Range	-10° to +40°C	
Protection	IP 20	
Dimensions	117mm x 59mm x 31mm	
Battery	3.7V/1200 mAh Li-ion rechargeable. 2.5 hour charging time.	
Accessory	2XM 910 424-001	Car adapter 12-24V
Compliance	N19090	



P/N 2XM 910 424-001




Part Number	2XM 910 414-001	
Light Output	Main:	220 lumen for up to 4 hours
	Spot (top):	40 lumen for up to 8 hours
Temperature Range	-10° to +40°C	
Protection	IP 68 (Protection against dust and temporary water submersion)	
Dimensions	Ø55mm x 280mm	
Battery	3.7V/2000 mAh Li-ion rechargeable. 3-4 hour charging time.	
Compliance	 N19090	

### LED IP 68 Inspection Lamp - Sun

Induction rechargeable high power LED inspection lamp and flashlight. 6 x 0.5W high power LEDs project a soft white, natural and intense light similar to daylight. Sun illuminates an area four times wider than traditional LED inspection lights by spreading light in an 80° arc. Easy charging is achieved with an induction charge base. Also features an adjustable and retractable suspension hook and LED charge indicator. Complete with 240V charger.



Part Number	2XM 910 412-001	
Light Output	200 lumen for up to 3 hours.	
Temperature Range	-10° to +40°C	
Protection	IP 65 (Protection against dust and water jets)	
Dimensions	63mm x 190mm x 38mm	
Battery	3.7V/2200 mAh Li-ion rechargeable. 4 hour charging time.	
Accessory	2XM 910 424-001	Car adapter 12-24V
Compliance	 N19090	

### LED Inspection Lamp - Uniform

Rechargeable LED inspection lamp featuring rubber housing, intelligent battery indicator, swivel hook and magnetic-based charging unit. Delivers a powerful and uniform light output. Complete with 240V charger.



P/N 2XM 910 424-001



Shown in charger

## LED Magnetic Inspection Lamp - Mag 3

High power rechargeable LED inspection lamp and torch. Features 3 strong magnets, 2 swivel hooks, and a 180° flexible head for powerful lighting at any angle. Complete with 240V charger.



Part Number	2XM 910 413-001	
Light Output	Main:	240 lumen for up to 3 hours
	Spot (top):	60 lumen for up to 8 hours
Temperature Range	-10° to +40°C	
Protection	IP 20	
Dimensions	56mm x 250mm x 45mm	
Battery	3.7V/2100 mAh Li-ion rechargeable 4 hour charging time	
Accessory	2XM 910 423-001	Car adapter 12-24V
Compliance	N19090	



3 magnets and  
2 swivel hooks



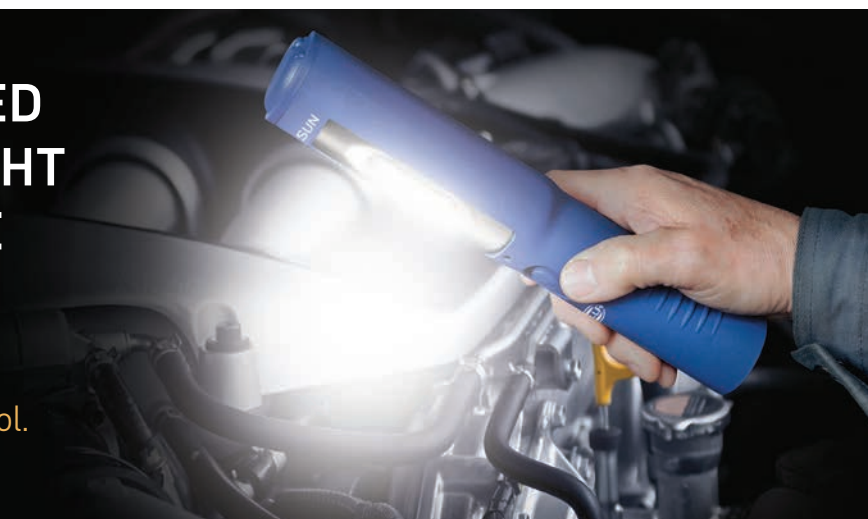
180° flexible head



P/N 2XM 910 423-001

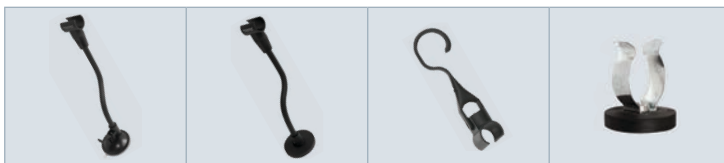
## WHEN YOU NEED POWERFUL LIGHT PERFORMANCE

HELLA LED Inspection  
Lamps will become your  
most valued workplace tool.





Part Number	2XM 910 427-001	
Light Output	Main:	180 lumen for up to 4 hours
	Spot (top):	80 lumen for up to 6 hours
Temperature Range	-10° to +40°C	
Protection	IP 54 (Protection against dust and water splash)	
Dimensions	Ø25mm x 475mm	
Battery	7.4V/1400 mAh Li-ion rechargeable 4 hour charging time	
Accessories	2XM 910 418-001	Flexible arm suction clip
	2XM 910 419-001	Flexible arm magnet clip
	2XM 910 420-001	Clip holder
	2XM 910 421-001	Magnet holder
Compliance	N19090	



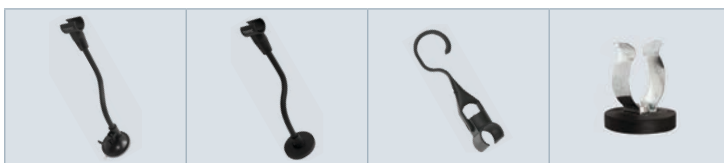
P/N 2XM 910 418-001 P/N 2XM 910 419-001 P/N 2XM 910 420-001 P/N 2XM 910 421-001

## LED Inspection Lamp - Line Light R

Rechargeable inspection lamp with top spot light. Features strong protective rubber grip, clip holder with hook and magnet, slim 25mm diameter and a flexible suspension holder with both hook and magnet for precise positioning. Additional suspension solutions are available as accessories. 75° beam angle can be rotated in the holder to avoid blinding. Complete with 240V charger.



Part Number	2XM 910 428-001	
Light Output	600 lumen.	
Power Consumption	5W	
Temperature Range	-10° to +40°C	
Voltage	240V AC/50Hz	
Cable Length	Pre-wired with 5m of cable.	
Protection	IP 54 (Protection against dust and water splash)	
Dimensions	Ø25mm x 1025mm	
Accessories	2XM 910 418-001	Flexible arm suction clip
	2XM 910 419-001	Flexible arm magnet clip
	2XM 910 420-001	Clip holder
	2XM 910 421-001	Magnet holder
Compliance	N19090	



P/N 2XM 910 418-001 P/N 2XM 910 419-001 P/N 2XM 910 420-001 P/N 2XM 910 421-001

## LED Bonnet Lamp - Line Light

Powerful bonnet lamp providing bright illumination of the entire engine bay. Line light bonnet lamp is supplied with an adjustable 1.2–1.7m telescopic holder and a soft cover to protect vehicle paintwork.





LED Pen Light - Flash Pen

Powerful 1W LED pencil flashlight with soft slide focus function, providing a 15° to 70° beam angle range. Solid metal construction.



Part Number	2XM 910 416-001
Light Output	80 lumen for up to 8 hours.
Temperature Range	-10° to +40°C
Dimensions	Ø16mm x 142mm
Protection	IP 54 (Protection against dust and water splash)
2 x AAA batteries included.	




LED Pen Light - Mag Pen

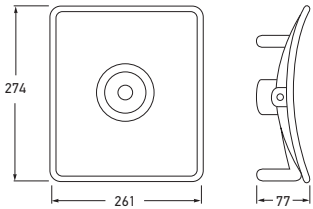
Rechargeable pencil LED inspection lamp with spot flashlight. Features pocket clip, rubber housing and magnetic mount, this is the ideal inspection tool for difficult access areas. Complete with 240V charger.



P/N 2XM 910 492-001


Part Number	2XM 910 411-001
Light Output	Main: 60 lumen for up to 4 hours Spot (top): 15 lumen for up to 5 hours
Battery	3.7V/750 mAh Li-ion rechargeable 3 hour charging time
Temperature Range	-10° to +40°C
Dimensions	Ø23mm x 168mm
Protection	IP 20
Accessory	2XM 910 492-001 Car adapter 12-24V
Compliance	 N19090





LED Work Lamp - Nova 30

Highly shockproof and innovative, high output 30W LED work lamp for the professional workshop. Features protective rubber frame and flexible stand that allows for angle adjustment and suspension.

Part Number	2XM 910 426-001
Light Output	3300 lumen.
Power Consumption	32W
Temperature Range	-10° to +40°C
Voltage	240V AC/50Hz
Cable Length	Pre-wired with 5m of cable.
Protection	IP 67 (Protection against dust and water splash)
Compliance	 N19090



Side view

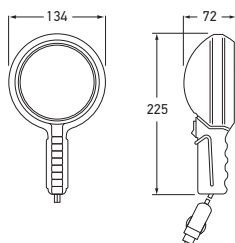


**Hand Held Spot Lamp - Blue Body**

Blue hand held long range spot lamp range.  
Includes plug, spiral cable (extendable to 2m)  
and on-off switch.



P/N 9.1520.06



Part Number	LONG RANGE HAND HELD SPOT LAMP	
	1520	12 VOLT
Voltage	12V sealed beam included.	
Power Consumption	100W	
Spare Parts	1089 9.1520.06 9.1520.07	Sealed beam Switch - on-off Spiral cable

Part Number	HAND HELD SPOT LAMP	
	1521	12 VOLT
Voltage	12V sealed beam included.	
Power Consumption	30W	
Spare Parts	1087 9.1520.06 9.1520.07	Sealed beam Switch - on-off Spiral cable

Part Number	HAND HELD SPOT LAMP	
	1525	24 VOLT
Voltage	24V sealed beam included.	
Power Consumption	50W	
Spare Parts	1092 9.1520.06 9.1520.07	Sealed beam Switch - on-off Spiral cable

**Hand Held Spot Lamp - Black Body**

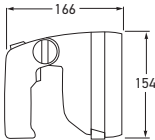
Black hand held long range spot lamp range.  
Includes plug, spiral cable (extendable to 2m)  
and momentary pressure contact on-off switch.



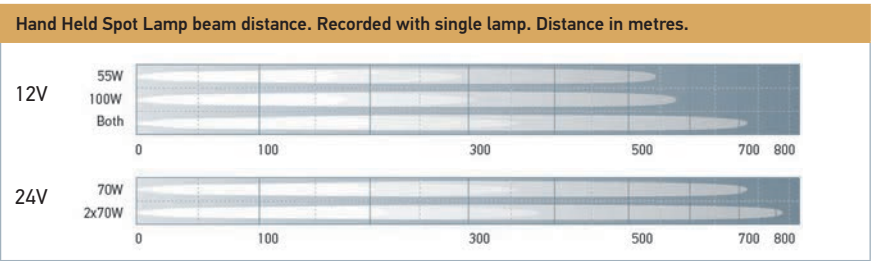
P/N 9.1524.06

Part Number	LONG RANGE HAND HELD SPOT LAMP	
	1524	12 VOLT
Voltage	12V sealed beam included.	
Power Consumption	100W	
Spare Parts	1089 9.1524.06 9.1520.07	Sealed beam Switch - momentary Spiral cable

Part Number	HAND HELD SPOT LAMP	
	1524S	24 VOLT
Voltage	24V Sealed beam included.	
Power Consumption	50W	
Spare Parts	1092 9.1524.06 9.1520.07	Sealed beam Switch - momentary Spiral cable



Part Number	1H3 998 502-001		12 VOLT
Protection	IP X6K (Protection against powerful water jets at increased pressure)		
Bulbs to suit	12V YC1255 YC12100	24V YC2470 (2 bulbs)	
Spare Parts	9.2864.01 9.2864.08	Insert Mounting bracket	



P/N 9.2864.08

Part Number	7037
Measuring Tolerance	Less than +/- 1%.
Does not measure Glycol concentration. Measures freezing point depression of Glycol-based coolant.	

Anti-Freeze Tester

Professional tester for measuring the freezing point of the water in automobile cooling systems. The new suction system design prevents bubbles from forming and keeps water from flowing back.







1. Digital indication of illuminance.



2. Laser alignment (DLX version).



3. Spirit level for accurate testing on uneven floors (DLX version).



# HELLA BEAMSETTERS

Regulatory authorities use the HELLA Beamsetter range as the industry benchmark for design and accuracy. Fully supported within New Zealand by HELLA with calibration service, spare parts and repair service. The Beamsetter range is well known for its ease of use, durability and quality.

The HELLA Beamsetter is a precision workshop instrument designed to accurately check vehicle headlamps. It was developed especially for use in professional workshops and vehicle testing stations.

The HELLA Beamsetter provides high accuracy in lighting checks and is also able to test the latest technology headlamps. The Beamsetter box, the heart of the unit, is constructed of impact-resistant, corrosion proof plastic which even withstands the aggressive fluids used in workshops. Its functional design allows quick, precise and simple headlamp adjustment.

Features include:

- Wide band sight aligner.
- Combination volt and light output meter.
- Sturdy base.
- Large viewing screen.
- Easy height adjustment.
- Spare parts availability.

## HELLA Beamsetter

Standard Beamsetter with digital voltage and lux readings.

Part Number	SEG 700L
Also Available	HELLA's Beamsetter calibration service designed to calibrate your Beamsetter in line with the manufacturer's standard and to comply with industry ISO Certification.

## HELLA Beamsetter - Deluxe

Deluxe Beamsetter with digital voltage and lux readings.

Part Number	SEG 700DLX	DELUXE
Features	1. Digital indication of illuminance. 2. Laser alignment. 3. Height adjustment lever complete with spirit level for uneven floors.	
Also Available	HELLA's Beamsetter calibration service designed to calibrate your Beamsetter in line with the manufacturer's standard and to comply with industry ISO Certification.	

### HELLA BEAMSETTER SPARE PARTS

Spare Parts	9EV 861 038-001	Window
	9ST 861 074-001	Locking knob
	9XS 862 004-001	Wheel set
	9XS 861 736-001	Rail kit 1.5 metres (uses standard wheels)

### BEAMSETTER CALIBRATION ENQUIRIES PLEASE CONTACT:

HELLA-New Zealand Limited  
81-83 Ben Lomond Crescent, Pakuranga,  
PO Box 51-427, Auckland 2140, New Zealand

Sales/Customer Service:  
Tel: +64 (0) 9 577 0366  
Fax: +64 (0) 9 576 8202  
nzsales@hella.co.nz





# Automotive Bulbs

HELLA's automotive bulbs are renowned for their uncompromising adherence to the highest quality and safety standards.



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# SUPERIOR ILLUMINATION

HELLA offers the most comprehensive range of automotive bulbs to suit almost any function, from passenger vehicle to heavy duty applications. The range includes incandescent, halogen and HID bulbs.



At HELLA, we have been designing, developing and manufacturing automotive lighting solutions since the motorcar was first produced. Today HELLA automotive bulbs are renowned for their uncompromising adherence to the highest quality and safety standards. There's a HELLA bulb to suit almost every requirement.

## Incandescent Bulbs

Incandescent bulbs produce light when an electric current passes through a thin filament, heating it and causing it to emit light. Incandescent bulbs become progressively dimmer over the course of their service life; heating the filament results in its erosion, vapour from this erosion condenses on the cooler glass and reduces transmission through the glass casing.

## Halogen Bulbs

Halogen bulbs contain a gas mixture which consists of halogen compounds (usually compounds of iodine or bromine). Much like the incandescent bulb, light is produced by passing a current through a tungsten filament, heating it which causes it to emit light. When particles burn off the filament, they are returned by a chemical process assisted by the halogen in the bulb. This results in a relatively consistent brightness over the course of the bulb's service life. Halogen bulbs are approximately 50% more efficient than an incandescent bulb.

## Xenon Gas Discharge Bulbs

Xenon bulbs produce light when an electric arc is ignited between two electrodes and subsequently passes through Xenon gas. This technology is significantly more energy efficient than the incandescent or the halogen bulb. The colour temperature emitted is comparable to daylight. As the human eye has evolved to see in daylight, Xenon lighting causes less eye strain than other bulb types, making it a more convenient and safer night lighting option. Xenon based forward lighting further assists safe driving at night by increasing the reflections of road signs and markings.

## Advantages of Xenon Lighting

- Over twice the light output compared to standard halogen bulbs.
- 77% less power consumption than standard halogen bulbs.
- Light colour very similar to daylight – reduces strain on the eye.
- Steady brightness levels even if power supply varies.
- Impact and vibration resistant light arc ensures a bulb service life five times longer than standard bulbs.

## Maximising Bulb Life

To maximise the operational life of an automotive bulb there are some important points to consider.

## Rule of Thumb:

- 5% overvoltage halves the bulb life.
- Headlamp bulbs are rated at 13.2 volts. Signal and marker bulbs are rated at 13.5 volts.
- The light output of a tungsten filament light source is dependent on voltage.
- Low voltage causes low output and lower operational life of halogen bulbs as regeneration does not occur.
- Overvoltage causes excessive tungsten erosion and significantly shortens bulb life.





**Truckstar®**

Truckstar® bulbs are a new generation of high-performance halogen bulbs specifically designed to cope with the heavy duty demands of 24 volt heavy commercial transport applications.

Utilising innovative single-coil filaments, Truckstar® halogen bulbs offer significantly increased service life of up to 100% when compared to standard halogen bulbs. They also feature superior vibration resistance during extended periods of operation, leading to reduced vehicle servicing costs and downtime.

In addition to extended service life and improved durability, Truckstar® halogen bulbs provide up to 100% increased illumination of the road ahead when compared to a standard halogen bulb. This results in improved vision and clearer visibility of objects and traffic situations in the distance ahead, effectively reducing eyestrain and driver fatigue, adding valuable seconds to driver reaction times for improved night driving safety.

**Safe for Modern Headlamps**

All halogen bulb filaments produce UV radiation. If the glass casing of the bulb does not filter the UV radiation it will be harmful to the polycarbonate lenses used on most of today's vehicles.

Excessive UV radiation from the halogen or HID bulb will result in discolouration and substantially diminished light transmission of the headlamp lens. All HELLA halogen and HID automotive bulbs are UV-reduced and are safe for use in modern headlamps with polycarbonate lenses.

**Replacement Bulbs**

The New Zealand lighting rules state that all certified legal lamps (headlamps or tail lamps) must be fitted with an approved light source to remain legal, if the light source is replaced.

Most HELLA bulbs will be marked with an 'E mark' to show compliance. Some bulbs, to suit older vehicles or imports not originally destined for our market, may have different standards such as JIS (Japanese Industrial Standard). HELLA shows compliant bulbs under the category column in the bulb section

**LED Replacement Bulbs**

LED replacement bulbs are generally illegal for use in marker, signal and headlights as they do not come with a compliance marking.

To avoid failing a Warrant/Certificate of Fitness inspection, all lighting equipment must comply with the law and meet approved standards.

LIGHT OUTPUT	
Operating Voltage %	Light Output %
85	53
90	67
95	83
100	100

Based on a mean operating voltage of 100% = 13.5V or 28V.

As the operating voltage drops, so does the light output. If voltage drops from 13.5V to 12.8V (-5%) then light output drops to 83%.

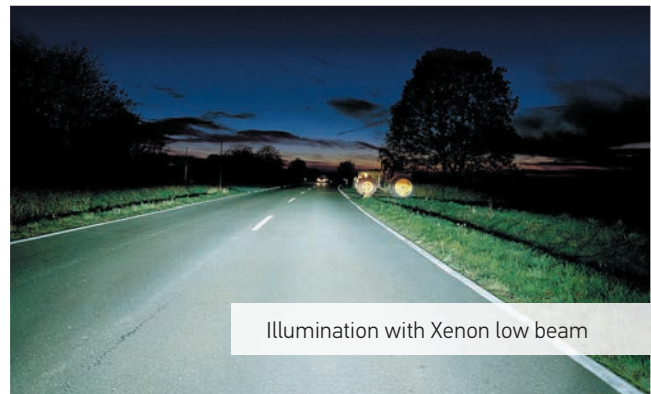
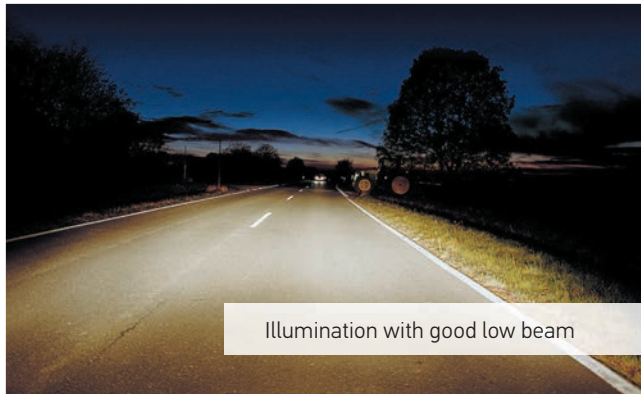
Hours of testing ensures a quality product HELLA is renowned for.





# XENON GAS DISCHARGE LAMPS

Xenon based front lighting systems are among the best lighting systems available in terms of both quality and quantity.



The Xenon gas discharge, or high intensity discharge (HID) bulb illuminates via a light arc that is ignited between two electrodes. This technology requires a complex electronic ballast.

To optimise and maintain a safe lighting system, additional system features are often required e.g. headlamp cleaning systems, automatic headlight range adjustment and levelling systems for ECE type approved systems.

## Advantages of Xenon Light Compared to Halogen Bulbs:

- Over twice the luminous flux (light quantity/light power).
- Superior light performance (photometric efficiency).
- Significantly lower power consumption of only 35W (plus 7W for ballast).
- Lower thermal load on the system.
- Considerably longer service life.
- Light colour is closer to daylight.

## Additional Regulations for Xenon Low Beam

In the ECE region, headlights with Xenon low beams may only be used in conjunction with automatic or dynamic headlight range adjustment and levelling system as well as a headlight cleaning system. This regulation takes into account the intense luminous performance of the Xenon bulb and is designed to ensure the safety of all road users.

## How They Work

A sophisticated ballast supplies the ignition voltage required to ignite the gas between two electrodes. This ignition voltage can be up to 30kV in 4th generation ballasts. Inside the bulb is a mixture of inert Xenon gas, metals and metal halides, which are ionised upon ignition resulting in a powerful light arc.

During the controlled supply of alternating current (at approx. 400Hz) the liquid and solid substances evaporate, due to high internal temperatures. The lamp only achieves its full brightness after a few seconds when all the components have been ionised. To prevent destruction of the lamp through uncontrolled increases in current, the current is limited by a ballast. Once the full light output has been reached, an operating voltage (not the ignition voltage) of only 85V is necessary to maintain the physical process. The luminous flux, light output, luminance and service life of Xenon HID bulbs significantly surpasses halogen bulbs.



D2R



D2S



D1R



D1S

### Fault Diagnosis

Check whether the ballast is attempting to ignite the bulb after the light has been switched on. Ignition attempts can be heard clearly near the headlight.

If ignition attempts are unsuccessful, the Xenon bulb should be checked by swapping it with one from the other headlight and the process tried again. If no ignition attempt is carried out, the fuse should be checked.

If the fuse is functional, check the voltage and ground supply directly at the ballast. Voltage must be at least 9V for 12V systems. If the voltage ground supplies and the Xenon bulbs are functional a faulty ballast is likely to be cause of the problem.

### Colour Match HID Bulbs

As HID bulbs age, the colour temperature increases resulting in a whiter light. When an HID bulb is replaced with a new bulb it can look yellow compared to the original bulb, and will whiten with use. If a white light from installation is desired, a colour match bulb may be used (D2R-5K, D2S-5K) which will be a closer match to the older bulb from the first use. These bulbs are ECE compliant.

### Xenon Gas Discharge (HID) Conversions

Available online and from some importers HID conversion kits, which enable the buyer to swap the halogen bulb and replace it with a non-compliant HID bulb. This illegal and dangerous combination can cause excessive glare and poses a considerable hazard for other road users. These conversion kits are illegal to use on public roads in New Zealand.

(Refer to <http://www.nzta.govt.nz> and 'Get your lights right')

	HALOGEN BULB (H7)	GAS DISCHARGE LAMP (HID)
<b>Light source:</b>	Filament	Light arc
<b>Luminance:</b>	1450 cd/m <sup>2</sup>	3000 cd/m <sup>2</sup>
<b>Capacity:</b>	55W	35W
<b>Energy balance:</b>	8% light radiation 92% heat radiation	28% light radiation 58% heat radiation 14% UV radiation
<b>Service life:</b>	Approx. 500 hours	Approx. 2500 hours
<b>Vibration-proof:</b>	To a certain extent	Yes
<b>Ignition voltage:</b>	No	Yes 23000V (3rd generation)
<b>Electronic control:</b>	No	Yes

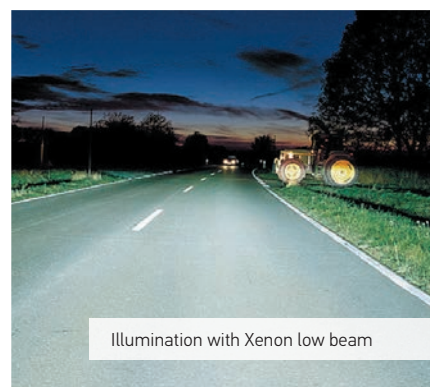
### Tips for Dealing with HID Electronic Ballasts

A faulty ballast leads to complete headlight failure. Possible causes for failure of the ballast are:

- Lack of voltage/sufficient current supply.
- Lack of ground connection.
- Faulty electronics of the device.
- Internal short-circuits.



Illumination with Halogen low beam



Illumination with Xenon low beam

# QUICK REFERENCE BULB GUIDE

## HALOGEN HEADLAMP BULBS

H1



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H2



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H3



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H4



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H7



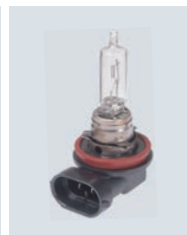
PAGE 319

H8



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H10



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H11



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HB3



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HB4



PAGE 323

800 SERIES



PAGE 324

## XENON GAS DISCHARGE BULBS

D1



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D2



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D4



PAGE 317

## CONVENTIONAL SIGNAL AND MARKER BULBS

BAYONET



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WEDGE



PAGE 328

FESTOON



PAGE 332

PLASTIC



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# QUICK REFERENCE UPGRADE BULB GUIDE



## COOL BLUE (CB) AND BLUE VISION (BV) – WHITER (UP TO 4200°K)

These bulbs come close to emulating the colour of a Xenon HID lamp. The high colour temperature of the Cool Blue bulbs creates the crisp white light which provides illumination that is conspicuous while being easy on the eye

UPGRADE BULBS							
Bulb	Category	Part Number		Voltage	Power Consumption	Base	Page
	H1	C1255CB		12V	55W	P14.5s	320
	H3	YC1255CB		12V	55W	PK22s	321
	H4	XD1260/55CB		12V	60/55W	P43t	318
	H7	CA1255CB		12V	55W	PX26d	319
	HB3	CB1265CB		12V	65W	P20d	323
	HB4	CC1255CB		12V	55W	P22d	323
	T4W	HL124BV		12V	4W	BA9s	331
	W5W	W125BV		12V	5W	W2.1 x 9.5d	329

## LONGLIFE (LL) - UP TO TWICE THE LIFE













LongLife (LL) bulbs are increasing in popularity for applications such as taxis and drivers using headlamps during the day. Many new vehicles now come equipped with LongLife bulbs as a standard fitment. The bulbs will provide safe and legal light performance and can be rated at twice or greater the service life of standard bulbs.

UPGRADE BULBS							
Bulb	Category	Part Number		Voltage	Power Consumption	Base	Page
	H1	C1255LL		12V	55W	P14.5s	320
	H3	YC1255LL		12V	55W	PK22s	321
	H4	XD1260/55LL		12V	60/55W	P43t	318
	H7	CA1255LL		12V	55W	PX26d	319
	R5W	G125LL		12V	5W	BA15s	330
	C5W	L125LL		12V	5W	SV8.5-8	332
	P21W	R1221LL		12V	21W	BA15s	326
	P21/5W	S1221/5VLL		12V	21/5W	BAY15d	327
	W5W	W125LL		12V	5W	W2.1 x 9.5d	329
	894	CF1237-894		12V	37.5W	PGJ13	324
	898	CF1237-898		12V	37.5W	PGJ13	324



### XENON (X) - UP TO + 30% BRIGHTER







This bulb outshines a standard headlamp bulb by achieving up to 30% greater illumination on the road in the 50-75m range allowing better orientation and earlier reaction to hazards.

UPGRADE BULBS							
Bulb	Category	Part Number		Voltage	Power Consumption	Base	Page
	H1	C1255X		12V	55W	P14.5s	<b>320</b>
	H3	YC1255X		12V	55W	PK22s	<b>321</b>
	H4	XD1260/55X		12V	60/55W	P43t	<b>318</b>
	H7	CA1255X		12V	55W	PX26d	<b>319</b>
	H11	CG1255X		12V	55W	PGJ19-2	<b>322</b>



### XENON ULTRA (XU) - UP TO + 60% BRIGHTER

Xenon Ultra bulbs take lighting even further by providing up to 60% more illumination on the road than a standard headlamp bulb while emitting a 10-20m longer beam.















UPGRADE BULBS							
Bulb	Category	Part Number		Voltage	Power Consumption	Base	Page
	H1	C1255XU		12V	55W	P14.5s	<b>320</b>
	H4	XD1260/55XU		12V	60/55W	P43t	<b>318</b>
	H7	CA1255XU		12V	55W	PX26d	<b>319</b>

Lifetime and performance gains are compared to standard versions of the bulb. Greater performance is measured between 50 and 75m in front of vehicle.



















**ULTRA PLUS (UP) - UP TO + 110% BRIGHTER**

Ultra Plus bulbs are the ideal bulbs for drivers looking to increase safety with more light on the road. This halogen bulb produces up to 110% more light on the road, has a beam that is up to 35 metres longer and provides light that is up to 10% whiter than a standard bulb.

UPGRADE BULBS							
Bulb	Category	Part Number		Voltage	Power Consumption	Base	Page
	H1	C1255UP		12V	55W	P14.5s	320
	H3	YC1255UP		12V	55W	PK22s	321
	H4	XD1260/55UP		12V	60/55W	P43t	318
	H7	CA1255UP		12V	55W	PX26d	319
	HB3	CB1265UP		12V	65W	P20d	323
	HB4	CC1255UP		12V	55W	P22d	323
	H11	CG1255UP		12V	55W	PGJ19-2	322

**TRUCKSTAR® PRO - UP TO 2.5 TIMES THE LIFETIME AND 100% GREATER ILLUMINATION.**

At night, truck drivers need the best possible light on the road ahead. Truckstar® Pro out-performs conventional 24V bulbs, allowing drivers to concentrate on the essentials. With their extremely long life and robust construction, these bulbs save on replacements and downtime, reducing fleet costs

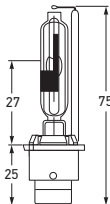
UPGRADE BULBS							
Bulb	Category	Part Number		Voltage	Power Consumption	Base	Page
	H1	C2470TS		24V	70W	P14.5s	320
	H3	YC2470TS		24V	70W	PK22s	321
	H4	XD2475/70TS		24V	75/70W	P43t	318
	H7	CA2470TS		24V	70W	PX26d	319
	R5W	G245-TS		24V	5W	BA15s	330
	R10W	G2410-TS		24V	10W	BA15s	330
	T4W	HL244-TS		24V	4W	BA9s	331
	P21W	R2421-TS		24V	21W	BA15s	326




P/N D2R



P32d-3



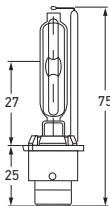
D2 - COLOUR MATCH BULBS				
Part Number	Voltage	Power Consumption	Base	ADR 51/00 Category
D2R	12/24V	35W	P32d-3	D2R
D2R-5K	 12/24V	35W	P32d-3	D2R




P/N D2S



P32d-2



D2S	12/24V	35W	P32d-2	D2S
D2S-5K	 12/24V	35W	P32d-2	D2S

See page 311 for further information on colour match bulbs (5K).  
See page 146 for information on power packs and ballast leads.

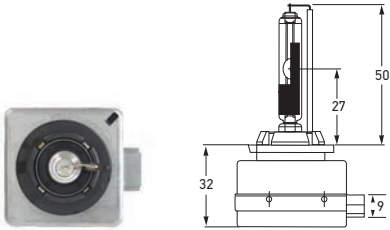


P/N HMXN4YEL



P32d-2/3

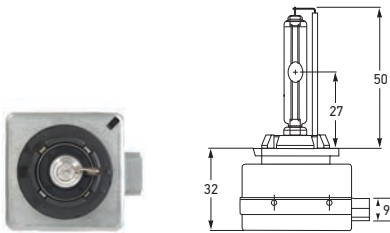
D2S - SUITABLE FOR WORK LAMPS (AMBER)				
Part Number	Voltage	Power Consumption	Base	ADR 51/00 Category
HMXN4YEL	12/24V	35W	P32d-2/3	



D1				
Part Number	Voltage	Power Consumption	Base	ADR 51/00 Category
D1R	12/24V	35W	PK32d-3	D1R



P/N D1R

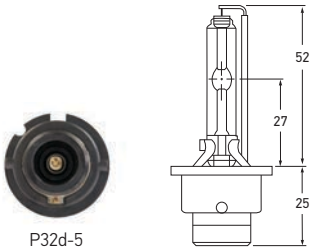


D1S	12/24V	35W	PK32d-2	D1S
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See page 146 for information on power packs and ballast leads.



P/N D1S



P32d-5

D4S				
Part Number	Voltage	Power Consumption	Base	ADR 51/00 Category
D4S	12/24V	35W	P32d-5	D4S



P/N D4S



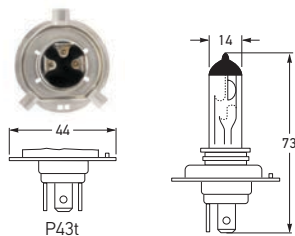
P/N XD1260/55UP











P/N XD1260/55X

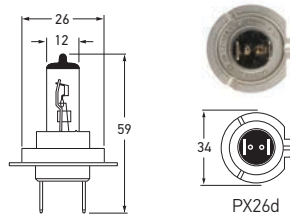









P/N XD2475/70



HALOGEN BULBS - H4				
Part Number	Voltage	Power Consumption	Base	ADR 51/00 Category
XD1260/55	12V	60/55W	P43t	H4
XD1260/55-BULK	12V	60/55W	P43t	H4
XD1260/55LL	 12V	60/55W	P43t	H4
XD1260/55X	 12V	60/55W	P43t	H4
XD1260/55X-BULK	 12V	60/55W	P43t	H4
XD1260/55XU	 12V	60/55W	P43t	H4
XD1260/55UP	 12V	60/55W	P43t	H4
XD1260/55CB	 12V	60/55W	P43t	H4
XD12100/90	12V	100/90W	P43t	
XD12100/90-BULK	12V	100/90W	P43t	
XD2475/70	24V	75/70W	P43t	H4
XD2475/70-BULK	24V	75/70W	P43t	H4
XD2475/70TS	 24V	75/70W	P43t	H4
XD2475/70TSBULK	 24V	75/70W	P43t	H4
XD24100/90	24V	100/90W	P43t	
XD24100/90-BULK	24V	100/90W	P43t	

Bulk packs supplied in single cartons.



HALOGEN BULBS - H7				
Part Number	Voltage	Power Consumption	Base	ADR 51/00 Category
CA1255	12V	55W	PX26d	H7
CA1255-BULK	12V	55W	PX26d	H7
CA1255LL	 12V	55W	PX26d	H7
CA1255X	 12V	55W	PX26d	H7
CA1255XU	 12V	55W	PX26d	H7
CA1255UP	 12V	55W	PX26d	H7
CA1255CB	 12V	55W	PX26d	H7
CA2470	24V	70W	PX26d	H7
CA2470-BULK	24V	70W	PX26d	H7
CA2470TS	 24V	70W	PX26d	H7
CA2470TS-BULK	 24V	70W	PX26d	H7

Bulk packs supplied in single cartons.



P/N CA1255UP



P/N CA2470TS





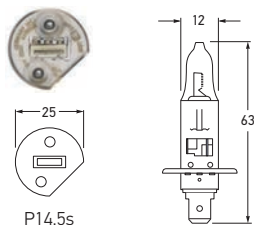
P/N C1255



P/N C1255UP



P/N C1255CB

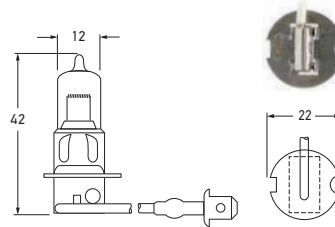


HALOGEN BULBS - H1







Part Number		Voltage	Power Consumption	Base	ADR 51/00 Category
C1255		12V	55W	P14.5s	H1
C1255-BULK		12V	55W	P14.5s	H1
C1255LL		12V	55W	P14.5s	H1
C1255X		12V	55W	P14.5s	H1
C1255XU		12V	55W	P14.5s	H1
C1255UP		12V	55W	P14.5s	H1
C1255CB		12V	55W	P14.5s	H1
C12100		12V	100W	P14.5s	
C2470		24V	70W	P14.5s	H1
C2470-BULK		24V	70W	P14.5s	H1
C2455		24V	55W	P14.5s	
C2455-BULK		24V	55W	P14.5s	
C2470TS		24V	70W	P14.5s	H1
C2470TS-BULK		24V	70W	P14.5s	H1
C24100		24V	100W	P14.5s	
C24100-BULK		24V	100W	P14.5s	

Bulk packs supplied in single cartons.

AUTOMOTIVE BULBS



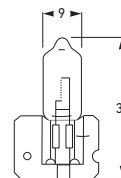
P/N YC1255UP

HALOGEN BULBS - H3				
Part Number	Voltage	Power Consumption	Base	ADR 51/00 Category
YC1255	12V	55W	PK22s	H3
YC1255-BULK	12V	55W	PK22s	H3
YC1235	12V	35W	PK22s	
YC1255LL	 12V	55W	PK22s	H3
YC1255X	 12V	55W	PK22s	H3
YC1255UP	 12V	55W	PK22s	H3
YC1255CB	 12V	55W	PK22s	H3
YC12100	12V	100W	PK22s	
YC12100-BULK	12V	100W	PK22s	
YC2470	24V	70W	PK22s	H3
YC2470-BULK	24V	70W	PK22s	H3
YC2455	24V	55W	PK22s	
YC2455-BULK	24V	55W	PK22s	
YC2470TS	 24V	70W	PK22s	H3
YC2470TS-BULK	 24V	70W	PK22s	H3
YC24100	24V	100W	PK22s	
YC24100-BULK	24V	100W	PK22s	

Bulk packs supplied in single cartons.



P/N YC2470TS



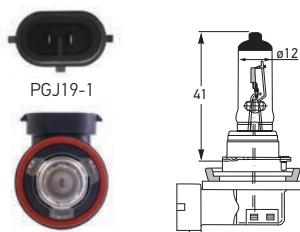
HALOGEN BULBS - H2				
Part Number	Voltage	Power Consumption	Base	ADR 51/00 Category
CD1255	12V	55W	X511	H2
CD2470	24V	70W	X511	H2



P/N CD2470



P/N CE1235

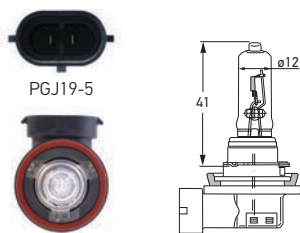


HALOGEN BULBS - H8

Part Number	Voltage	Power Consumption	Base	ADR 51/00 Category
CE1235	12V	35W	PGJ19-1	H8



P/N CF1265

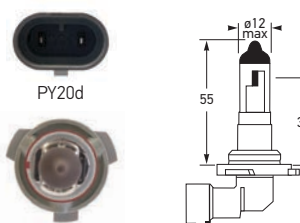


HALOGEN BULBS - H9

Part Number	Voltage	Power Consumption	Base	ADR 51/00 Category
CF1265	12V	65W	PGJ19-5	H9



P/N CH1242

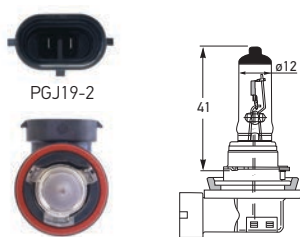


HALOGEN BULBS - H10

Part Number	Voltage	Power Consumption	Base	ADR 51/00 Category
CH1242	12V	42W	PY20d	H10



P/N CG1255

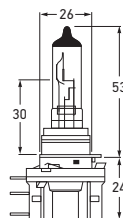


HALOGEN BULBS - H11

Part Number		Voltage	Power Consumption	Base	ADR 51/00 Category
CG1255		12V	55W	PGJ19-2	H11
CG1255X	Plus 30%	12V	55W	PGJ19-2	H11
CG1255UP	Plus 110%	12V	55W	PGJ19-2	H11
CG1255CB	Whiter	12V	55W	PGJ19-2	H11
CG2470		24V	70W	PGJ19-2	H11



P/N CG1255UP

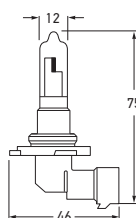


## DAYTIME RUNNING LAMP AND FOG LAMP BULB

Part Number	Voltage	Power Consumption	Base	ADR 51/00 Category
XH1215/55	12V	15/55W	PGJ23t-1	H15





P/N XH1215/55



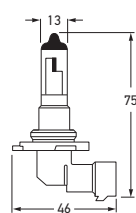
P20d

## HALOGEN BULBS - HB3 (9005)

Part Number	Voltage	Power Consumption	Base	ADR 51/00 Category
CB1265	12V	65W	P20d	HB3
CB1265UP	 12V	65W	P20d	HB3
CB1265CB	 12V	65W	P20d	HB3





P/N CB1265UP



P22d

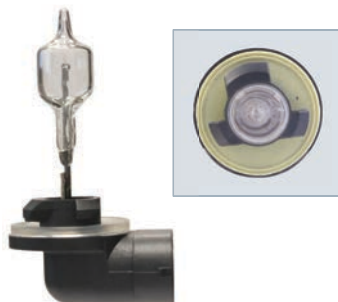
## HALOGEN BULBS - HB4 (9006)

Part Number	Voltage	Power Consumption	Base	ADR 51/00 Category
CC1255	12V	55W	P22d	HB4
CC1255UP	 12V	55W	P22d	HB4
CC1255CB	 12V	55W	P22d	HB4

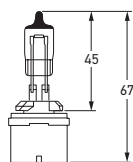


P/N CC1255UP

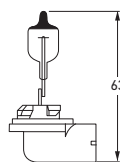
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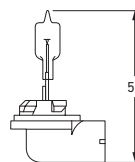
P/Ns CF1237-862,  
CF1237-894, CF1250-886,  
CF1227-889.



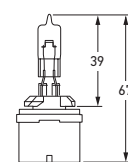
P/N CF1227-880



P/N CF1227-881



P/N CF1227-889

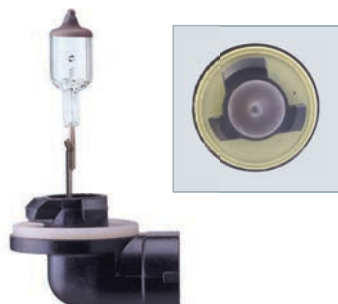


P/N CF1227-890

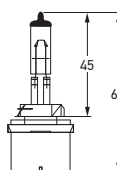
HALOGEN BULBS - 800 SERIES

Part Number	Picture	Voltage	Power Consumption	Base	ADR 51/00 Category
CF1227-880	4	12V	27W	PG13	880
CF1227-881	2	12V	27W	PGJ13	881
CF1227-889	1	12V	27W	PGJ13	889
CF1227-890	3	12V	27W	PG13	890

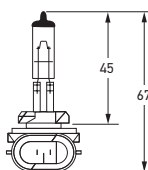
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P/Ns CF1227-881,  
CF1227-H27W/2 CF1237-896,  
CF1237-898.



P/N CF1227-H27W/1



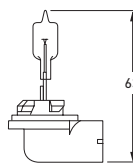
P/N CF1227-H27W/2

CF1227-H27W/1	4	12V	27W	PG13	H27W/1
CF1227-H27W/2	2	12V	27W	PGJ13	H27W/2

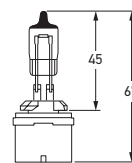
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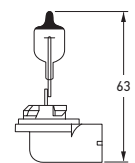
P/Ns CF1227-890,  
CF1250-885.



P/N CF1237-862/894



P/N CF1237-893



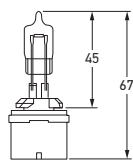
P/N CF1237-896/898

CF1237-862	1	12V	37.5W	PGJ13	862
CF1237-893	4	12V	37.5W	PG13	893
CF1237-894	1	12V	37.5W	PGJ13	894
CF1237-896	2	12V	37.5W	PGJ13	896
CF1237-898	2	12V	37.5W	PGJ13	898

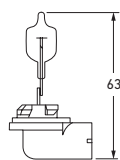
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P/Ns CF1227-880,  
CF1227-H27W/1,  
CF1237-893.



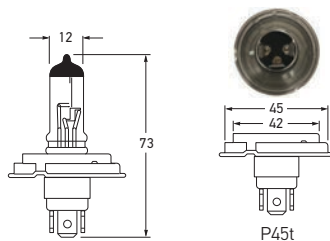
P/N CF1250-885



P/N CF1250-886

CF1250-885	3	12V	50W	PG13	885
CF1250-886	1	12V	50W	PGJ13	886



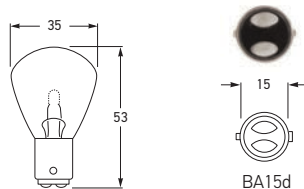


P45t

HALOGEN HEADLAMP BULBS				
Part Number	Voltage	Power Consumption	Base	ADR 51/00 Category
XE1260/55	12V	60/55W	P45t-41	
XE2475/70	24V	70/75W	P45t-41	



P/N XE1260/55

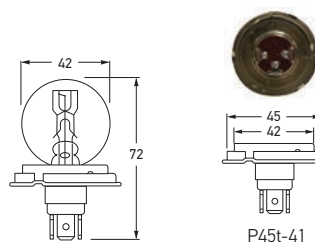


BA15d

HEADLAMP BULBS				
Part Number	Voltage	Power Consumption	Base	ADR 51/00 Category
1235/35	12V	35/35W	BA15d	



P/N 1235/35

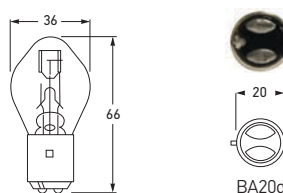


P45t-41

A1245/40	12V	45/40W	P45t-41	R2
A2455/50	24V	55/50W	P45t-41	R2



P/N A1245/40



BA20d

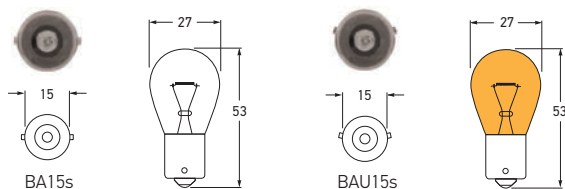
B1245/40	12V	45/40W	BA20d	
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P/N B1245/40



P/N R1221



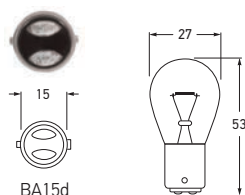
BAYONET INDICATOR AND STOP LAMP BULBS

Part Number	Voltage	Power Consumption	Base	ADR 51/00 Category
R1221	12V	21W	BA15s	P21W
R1221-BULK	12V	21W	BA15s	P21W
R1221LL	 12V	21W	BA15s	P21W
RY1221	12V	21W	BAU15s	PY21W
RY1221-BULK	12V	21W	BAU15s	PY21W
R2418	24V	18W	BA15s	
R2421	24V	21W	BA15s	P21W
R2421-BULK	24V	21W	BA15s	P21W
R2421-TS	 24V	21W	BA15s	P21W
RY2421	24V	21W	BAU15s	PY21W

Bulk bulbs (other than Halogen) are sold in packs of 10.

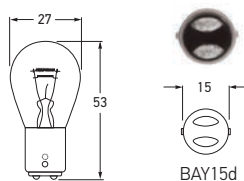


P/N FD1221



FD1221	12V	21W	BA15d	PY21W
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## AUTOMOTIVE BULBS




BAY15d

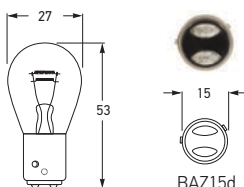


P/N S1221/5V

## BAYONET STOP AND TAIL LAMP BULBS

Part Number	Voltage	Power Consumption	Base	ADR 51/00 Category
S1221/5V	12V	21/5W	BAY15d	P21/5W
S1221/5V-BULK	12V	21/5W	BAY15d	P21/5W
S1221/5VLL 	12V	21/5W	BAY15d	P21/5W
S2421/5V	24V	21/5W	BAY15d	P21/5W
S2421/5V-BULK	24V	21/5W	BAY15d	P21/5W

Bulk bulbs (other than Halogen) are sold in packs of 10.



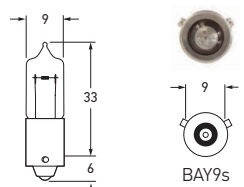
BAZ15d



P/N SZ1221/4

## BAYONET EUROPEAN STOP AND TAIL LAMP BULBS

Part Number	Voltage	Power Consumption	Base	ADR 51/00 Category
SZ1221/4	12V	21/4W	BAZ15d	P21/4W



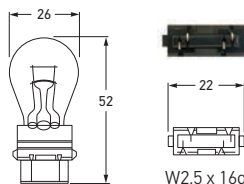
BAY9s



P/N RQ1221

## BAYONET HALOGEN INDICATOR AND STOP LAMP BULBS

Part Number	Voltage	Power Consumption	Base	ADR 51/00 Category
RQ1221	12V	21W	BAY9s	H21W
RQ2421	24V	21W	BAY9s	H21W



W2.5 x 16q



P/N WP1227/7



P/N WPA1227/7

## PLASTIC BASED BULBS

Part Number	Voltage	Power Consumption	Base	ADR 51/00 Category
WP1227	12V	27W	W2.5 x 16d	P27W
WP1227/7	12V	27/7W	W2.5 x 16q	P27/7W
WPA1227/7	12V	27/7W	W2.5 x 16q	P27/7W



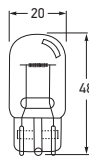
P/N CAP1221



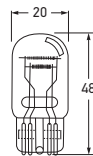
P/N CAPY1221



W3 x 16d



W3 x 16d



W3 x 16q

WEDGE BASE BULBS

Part Number	Voltage	Power Consumption	Base	ADR 51/00 Category
CAP1221	12V	21W	W3 x 16d	W21W
CAP1221-BULK	12V	21W	W3 x 16d	W21W
CAPY1221	12V	21W	W3 x 16d	WY21W
CAP1221/5	12V	21/5W	W3 x 16q	W21/5W
CAP1221/5-BULK	12V	21/5W	W3 x 16q	W21/5W

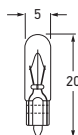
Bulk bulbs (other than Halogen) are sold in packs of 10.



P/N WBL122



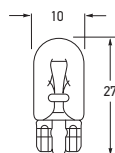
W2 x 4.6d



W121.2	12V	1.2W	W2 x 4.6d
W121.2-BULK	12V	1.2W	W2 x 4.6d
WBL122	12V	2W	W2 x 4.6d
WS122	12V	2W	W2 x 4.6d
W241.2	24V	1.2W	W2 x 4.6d
W241.2-BULK	24V	1.2W	W2 x 4.6d
WS242	24V	2W	W2 x 4.6d

Bulk bulbs (other than Halogen) are sold in packs of 10.

## AUTOMOTIVE BULBS



W2.1 x 9.5d



P/N W122



P/N W125BV



P/N WY125





P/N W1216

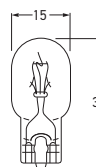


P/N WLED125

## WEDGE BASE BULBS

Part Number	Voltage	Power Consumption	Base	ADR 51/00 Category
W122	12V	2W	W2.1 x 9.5d	
W123	12V	3W	W2.1 x 9.5d	W3W
W125	12V	5W	W2.1 x 9.5d	W5W
W125-BULK	12V	5W	W2.1 x 9.5d	W5W
W125LL 	12V	5W	W2.1 x 9.5d	W5W
W125BV 	12V	5W	W2.1 x 9.5d	W5W
WY125	12V	5W	W2.1 x 9.5d	WY5W
W242-BULK	24V	2W	W2.1 x 9.5d	
W243	24V	3W	W2.1 x 9.5d	W3W
W245	24V	5W	W2.1 x 9.5d	W5W
W245-BULK	24V	5W	W2.1 x 9.5d	W5W

Bulk bulbs (other than Halogen) are sold in packs of 10.



W2.1 x 9.5d

WS1212	12V	12W	W2.1 x 9.5d	
W1216	12V	16W	W2.1 x 9.5d	W16W
W1221	12V	21W	W2.1 x 9.5d	

## LED RETROFITS

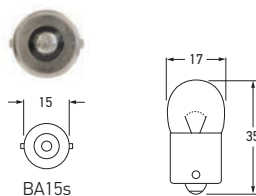
Part Number	Voltage	Power Consumption	Base	Temperature
WLED125	12V	1W	W2.1x9.5d	6000°K
WLED125-WW	12V	1W	W2.1x9.5d	4000°K

Not for use in marker and signal lamps. WW = warm white.








P/N G125



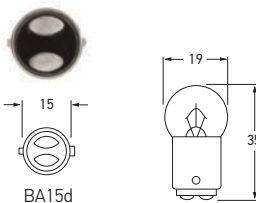
REAR POSITION, MARKER AND CLEARANCE BULBS

Part Number	Voltage	Power Consumption	Base	ADR 51/00 Category
G125	12V	5W	BA15s	R5W
G125-BULK	12V	5W	BA15s	R5W
G125LL 	12V	5W	BA15s	R5W
G1210	12V	10W	BA15s	R10W
G1210-BULK	12V	10W	BA15s	R10W
G245	24V	5W	BA15s	R5W
G245-BULK	24V	5W	BA15s	R5W
G245-TS 	24V	5W	BA15s	R5W
G2410	24V	10W	BA15s	R10W
G2410-BULK	24V	10W	BA15s	R10W
G2410-TS 	24V	10W	BA15s	R10W

Bulk bulbs (other than Halogen) are sold in packs of 10.

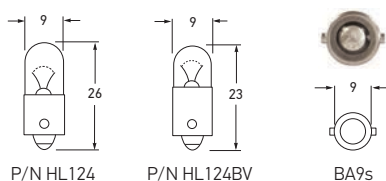


P/N GD125



GD125	12V	5W	BA15d	R5W
GD245	24V	5W	BA15d	R5W

## AUTOMOTIVE BULBS



P/N HL124

P/N HL124BV

BA9s





P/N HL124

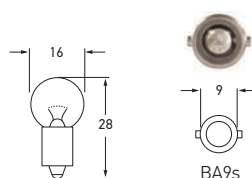


P/N HL124BV



P/N H126

PILOT/DASH BULBS				
Part Number	Voltage	Power Consumption	Base	ADR 51/00 Category
HL124	12V	4W	BA9s	T4W
HL124-BULK	12V	4W	BA9s	T4W
HL124BV 	12V	4W	BA9s	T4W
HL244	24V	4W	BA9s	T4W
HL244-BULK	24V	4W	BA9s	T4W
HL244-TS 	24V	4W	BA9s	T4W
HL247	24V	7W	BA9s	



H122	12V	2W	BA9s
H123	12V	3W	BA9s
H123-BULK	12V	3W	BA9s
H126	12V	6W	BA9s
H126-BULK	12V	6W	BA9s
H1210	12V	10W	BA9s
H242	24V	2W	BA9s
H242-BULK	24V	2W	BA9s

Bulk bulbs (other than Halogen) are sold in packs of 10.

LED RETROFITS				
Part Number	Voltage	Power Consumption	Base	Temperature
HLLED124	12V	1W	BA9s	6000°K
HLLED124-WW	12V	1W	BA9s	4000°K

Not for use in marker and signal lamps. WW = warm white.



P/N HLLED124



P/N K1221



P/N K2410



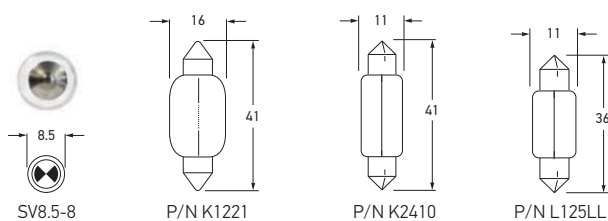
P/N L125LL



P/N M123

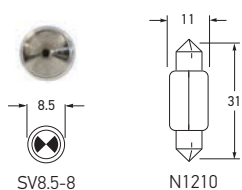
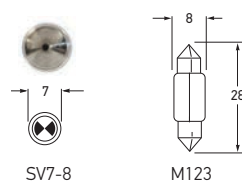


P/N N1210



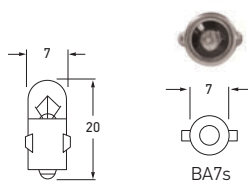
FESTOON BULBS

Part Number	Voltage	Power Consumption	Base	ADR 51/00 Category
K1210	12V	10W	SV8.5-8	
K1210-BULK	12V	10W	SV8.5-8	
K1221	12V	21W	SV8.5-8	C21W
K1221-BULK	12V	21W	SV8.5-8	C21W
K2410	24V	10W	SV8.5-8	
K2410-BULK	24V	10W	SV8.5-8	
K2421	24V	21W	SV8.5-8	
K2421-BULK	24V	21W	SV8.5-8	
L125	12V	5W	SV8.5-8	C5W
L125-BULK	12V	5W	SV8.5-8	C5W
L125LL	12V	5W	SV8.5-8	C5W
L1210	12V	10W	SV8.5-8	
L245	24V	5W	SV8.5-8	C5W
L245-BULK	24V	5W	SV8.5-8	C5W
L2410	24V	10W	SV8.5-8	
L2410-BULK	24V	10W	SV8.5-8	
M123	12V	3W	SV7-8	
M123-BULK	12V	3W	SV7-8	
M243	24V	3W	SV7-8	
M243-BULK	24V	3W	SV7-8	
N1210	12V	10W	SV8.5-8	
N1210-BULK	12V	10W	SV8.5-8	



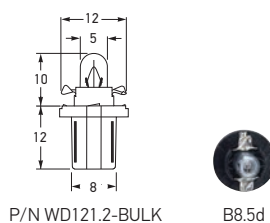
Bulk bulbs (other than Halogen) are sold in packs of 10.

## AUTOMOTIVE BULBS



P/N J122

MINIATURE BULBS				
Part Number	Voltage	Power Consumption	Base	ADR 51/00 Category
J122	12V	2W	BA7s	
J243	24V	3W	BA7s	



P/N WD121.2-BULK

B8.5d



P/N WD121.2-BULK

DASHBOARD BULBS				
Part Number	Voltage	Power Consumption	Base	ADR 51/00 Category
WD121.2-BULK	12V	1.2W	B8.5d	
WD241.2-BULK	24V	1.2W	B8.5d	

Bulk bulbs (other than Halogen) are sold in packs of 10.

LED RETROFITS				
Part Number	Voltage	Power Consumption	Base	Temperature
LLED125	12V	1W	SV8.5-8	6000°K
LLED125-WW	12V	1W	SV8.5-8	4000°K

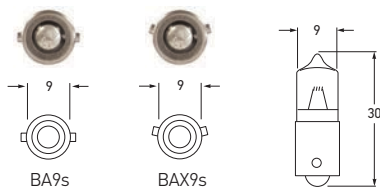
Not for use in marker and signal lamps. WW = warm white.



P/N LLED125



P/N YL125

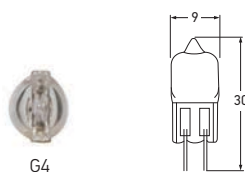


HALOGEN/INTERIOR BULBS

Part Number	Voltage	Power Consumption	Base	ADR 51/00 Category
YL125	12V	5W	BA9s	H6W
YL126	12V	6W	BAX9s	
YL1210	12V	10W	BA9s	
YL1220	12V	20W	BA9s	



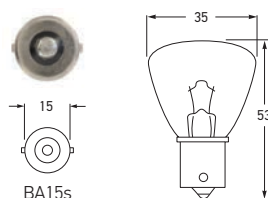
P/N YM1210



YM125	12V	5W	G4	
YM1210	12V	10W	G4	
YM1220	12V	20W	G4	
YM2410	24V	10W	G4	
YM2420	24V	20W	G4	



P/N U1245

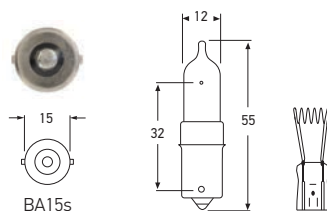


SPECIAL BULBS FOR EMERGENCY FLASHER AND REVOLVING LAMPS

Part Number	Voltage	Power Consumption	Base	ADR 51/00 Category
U1245	12V	45W	BA15s	
U2445	24V	45W	BA15s	



P/N YL1250TF



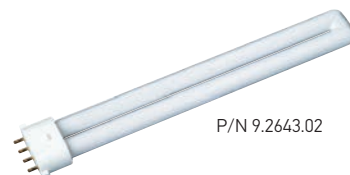
YL1250TF	12V	50W	BA15s	
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FLUORESCENT TUBES			
Part Number	Voltage	Power Consumption	To Suit
9.2642.02	12/24V	7W	P/Ns 2642 and 2642-24V
9.2643.02	12/24V	11W	P/Ns 2643 and 2643-24V
TL8W/336J	12/24V	8W	P/Ns 2644 and 2644-24V



P/N 9.2642.02



P/N 9.2643.02



P/N TL8W/336J

STROBE TUBES				
Part Number	Voltage	Power Consumption	Base	To Suit
XN000	12-72V	2 Joules	Circuit Board	Firebolt
XN451	12-48V	8 Joules	Circuit Board	Pulsator 451
XN602	12-48V	12 Joules	Circuit Board	602 Series
XN850	12-48V	12 Joules	Circuit Board	851 Series
XN6000	12/24V	10+2 Joules		KLX Junior
XN7000	12/24V	10+2 Joules	X1	KLX 7000



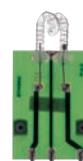
P/N XN000



P/N XN451



P/N XN602



P/N XN850



P/N XN6000



P/N XN7000

# 3RD EDITION ADR REFERENCE GUIDE

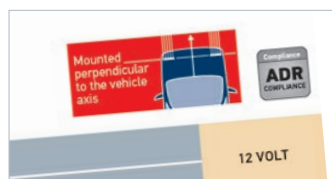
The following pages are a guide to mounting HELLA lamps in compliance with the Australian Design Rules (ADR). The diagrams in this section are intended as a general guide only, for exact mounting specifications please refer to ADR 13/00.



A quick reference



1. Find the product that fulfils your illumination requirement.



2. Check for the ADR symbol next to the part number to ensure it's compliance.

HELLA Part No.	Engineering Drawing No.	A.D.R. No.	Function
2550	001384-28	48/00	Number Plate Lamp
2551	001386-29	48/00	Number Plate Lamp
2553	951068-02	48/00	Number Plate Lamp
2554	950921-00	48/00	Number Plate Lamp
2555	001389-10	48/00	Number Plate Lamp

3. Look up the part number on the chart on page 340 for complete ADR information.

## Simpler ADR Compliance

The 3rd edition ADR covers all vehicles and trailers, even those not subject to registration requirements such as very light trailers or 'box' trailers.

To simplify the ADR approval process for smaller manufacturers and individual home-builders, HELLA has made a consolidated Summary

of Evidence (SE) submission to the Federal Office of Road Safety (FORS). This submission covers all HELLA products that comply with 3rd Edition ADRs.

This catalogue lists both the HELLA and FORS Component Registration Numbers (CRN) beside each item in a quick reference ADR application

chart in this section (page 340). HELLA provides specific ADR related lamp orientation and mounting requirements to enable customers requiring ADR compliance to simply quote the relevant CRN to the authorities (who maintain a central register), rather than undertake detailed SE submissions for each lamp function.

## REAR

- 1 ADR 49/00 Rear End Outline Lamps
- 2 ADR 48/00 Number Plate Lamps
- 3 ADR 6/00: Cat.2 Rear Direction Indicators
- 4 ADR 49/00 Rear Position Lamps
- 5 ADR 49/00 Stop Lamps
- 6 ADR 47/00 Rear Retro Reflectors
- 7 ADR 1/00 Reversing Lamps

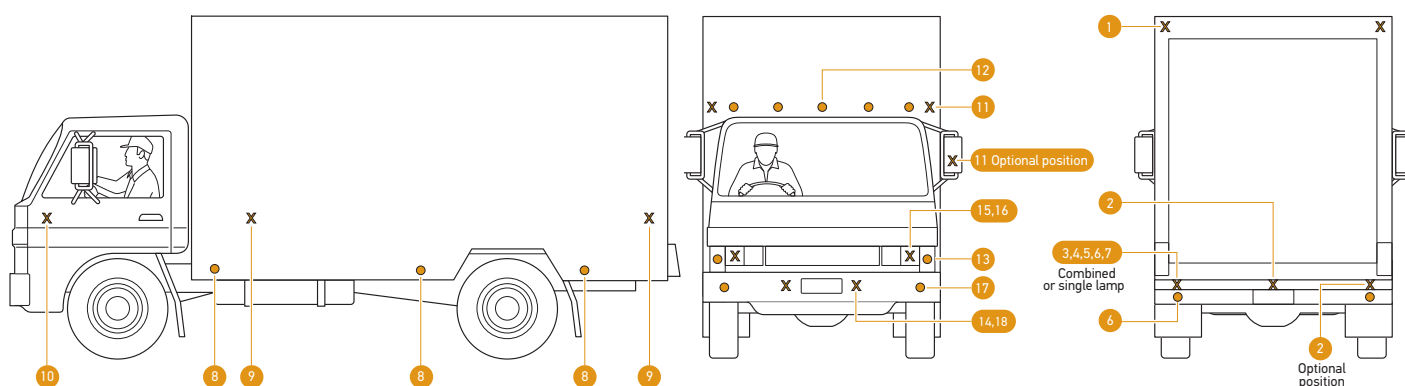
## SIDE

- 8 ADR 47/00 Side Retro Reflectors
- 9 ADR 45/01 or 74/00 Side Markers
- 10 ADR 6/00 Supplementary Side Direction Indicators

## FRONT

- 11 ADR 49/00 Front End Outline Lamps
- 12 ADR 45/01 Cab Markers (optional)
- 13 ADR 6/00: Cat.1 Front Direction Indicators
- 14 ADR 50/00 Front Fog Lamps (optional)
- 15 ADR 46/00 Headlamps
- 16 ADR 49/00 Front Position Lamps
- 17 ADR 47/00 Front Retro Reflectors
- 18 ADR 76/00 Daytime Running Lamps (optional)

## SMALL TRUCK



# 3RD EDITION ADR REFERENCE GUIDE

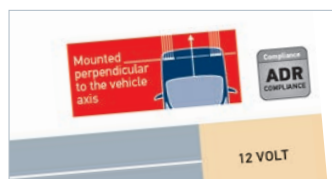
The following pages are a guide to mounting HELLA lamps in compliance with the Australian Design Rules (ADR). The diagrams in this section are intended as a general guide only, for exact mounting specifications please refer to ADR 13/00.



A quick reference



1. Find the product that fulfils your illumination requirement.



2. Check for the ADR symbol next to the part number to ensure it's compliance.

HELLA Part No.	Engineering Drawing No.	A.D.R. No.	Function
2550	001384-28	48/00	Number Plate Lamp
2551	001386-29	48/00	Number Plate Lamp
2553	951068-02	48/00	Number Plate Lamp
2554	950921-00	48/00	Number Plate Lamp
2555	001389-10	48/00	Number Plate Lamp

3. Look up the part number on the chart on page 340 for complete ADR information.

## Simpler ADR Compliance

The 3rd edition ADR covers all vehicles and trailers, even those not subject to registration requirements such as very light trailers or 'box' trailers.

To simplify the ADR approval process for smaller manufacturers and individual home-builders, HELLA has made a consolidated Summary

of Evidence (SE) submission to the Federal Office of Road Safety (FORS). This submission covers all HELLA products that comply with 3rd Edition ADRs.

This catalogue lists both the HELLA and FORS Component Registration Numbers (CRN) beside each item in a quick reference ADR application

chart in this section (page 340). HELLA provides specific ADR related lamp orientation and mounting requirements to enable customers requiring ADR compliance to simply quote the relevant CRN to the authorities (who maintain a central register), rather than undertake detailed SE submissions for each lamp function.

## REAR

- 1 ADR 49/00 Rear End Outline Lamps
- 2 ADR 48/00 Number Plate Lamps
- 3 ADR 6/00: Cat.2 Rear Direction Indicators
- 4 ADR 49/00 Rear Position Lamps
- 5 ADR 49/00 Stop Lamps
- 6 ADR 47/00 Rear Retro Reflectors
- 7 ADR 1/00 Reversing Lamps

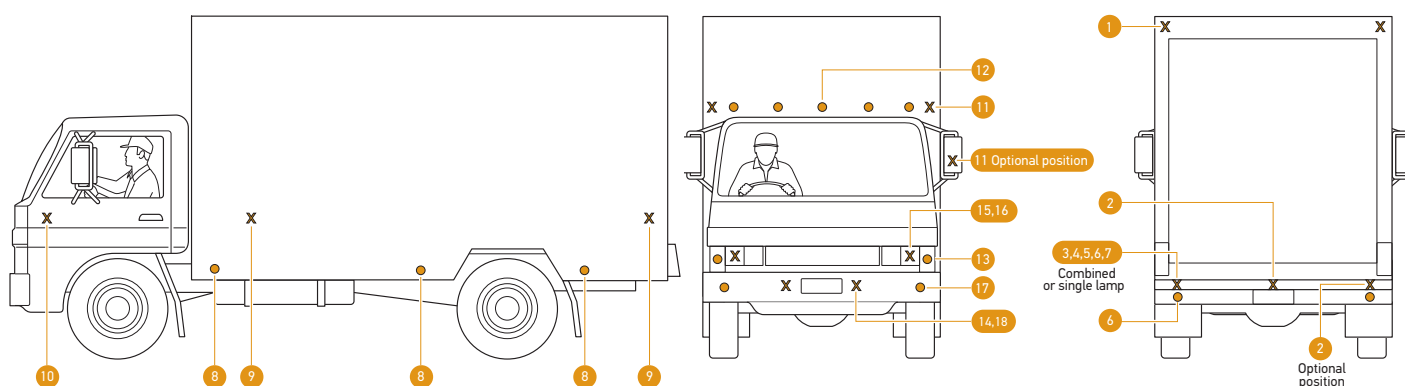
## SIDE

- 8 ADR 47/00 Side Retro Reflectors
- 9 ADR 45/01 or 74/00 Side Markers
- 10 ADR 6/00 Supplementary Side Direction Indicators

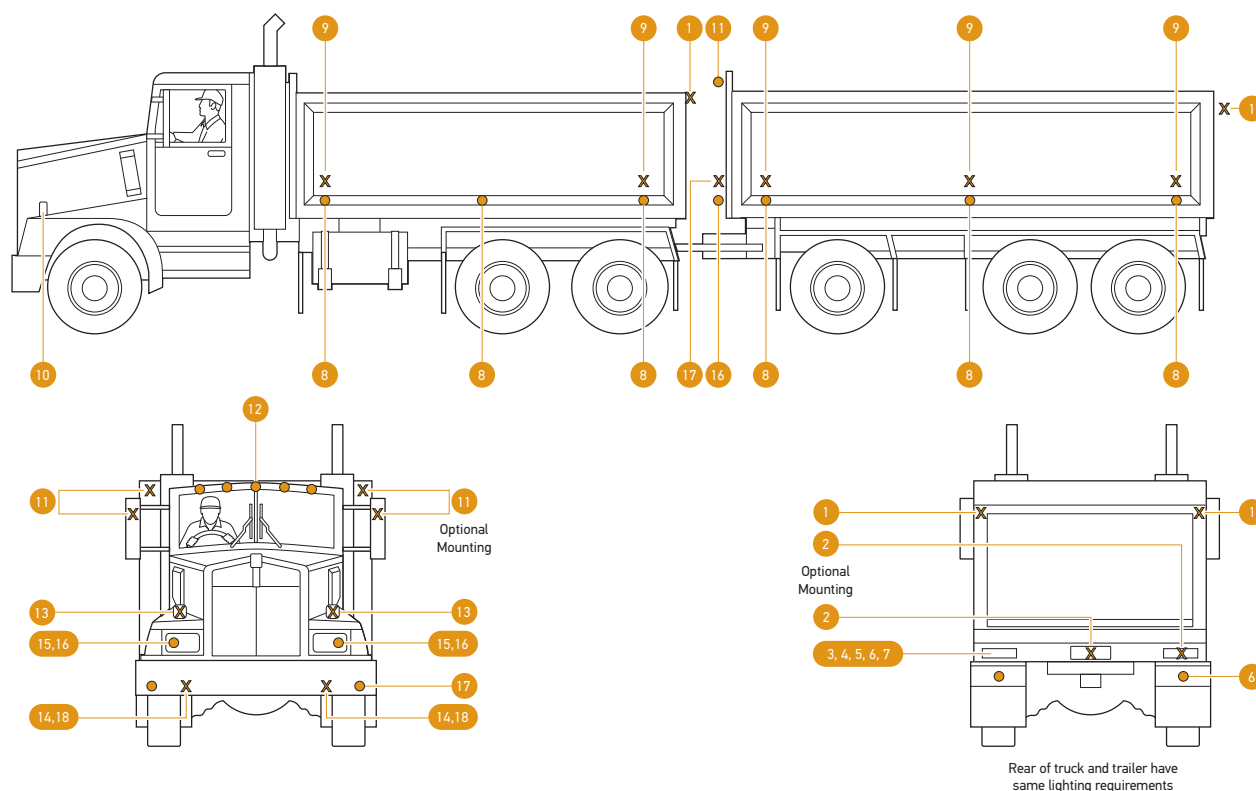
## FRONT

- 11 ADR 49/00 Front End Outline Lamps
- 12 ADR 45/01 Cab Markers (optional)
- 13 ADR 6/00: Cat.1 Front Direction Indicators
- 14 ADR 50/00 Front Fog Lamps (optional)
- 15 ADR 46/00 Headlamps
- 16 ADR 49/00 Front Position Lamps
- 17 ADR 47/00 Front Retro Reflectors
- 18 ADR 76/00 Daytime Running Lamps (optional)

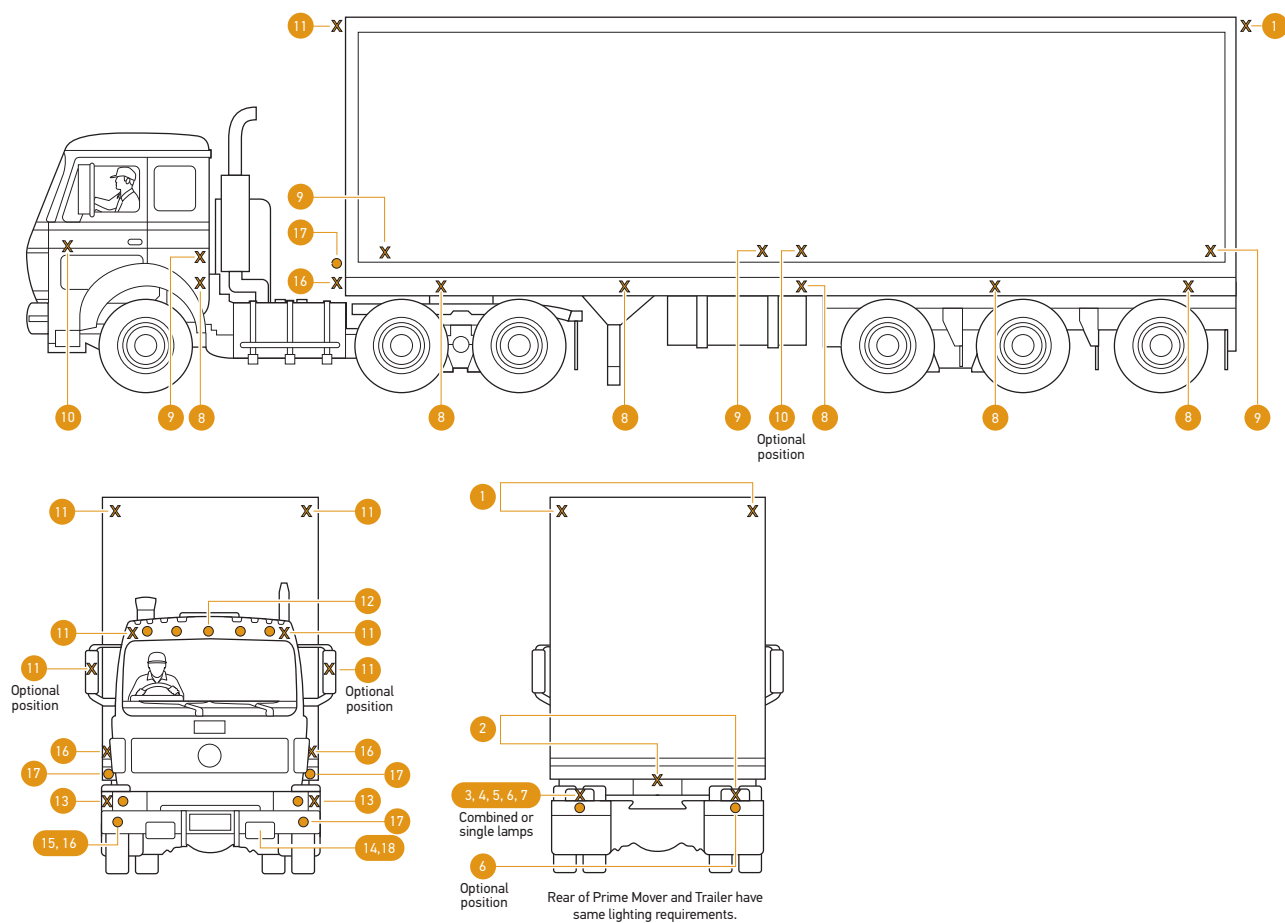
## SMALL TRUCK



## SINGLE TRAILER



## SEMI TRAILER



### REAR

- 1 ADR 49/00 Rear End Outline Lamps
- 2 ADR 48/00 Number Plate Lamps
- 3 ADR 6/00: Cat.2 Rear Direction Indicators
- 4 ADR 49/00 Rear Position Lamps
- 5 ADR 49/00 Stop Lamps
- 6 ADR 47/00 Rear Retro Reflectors
- 7 ADR 1/00 Reversing Lamps

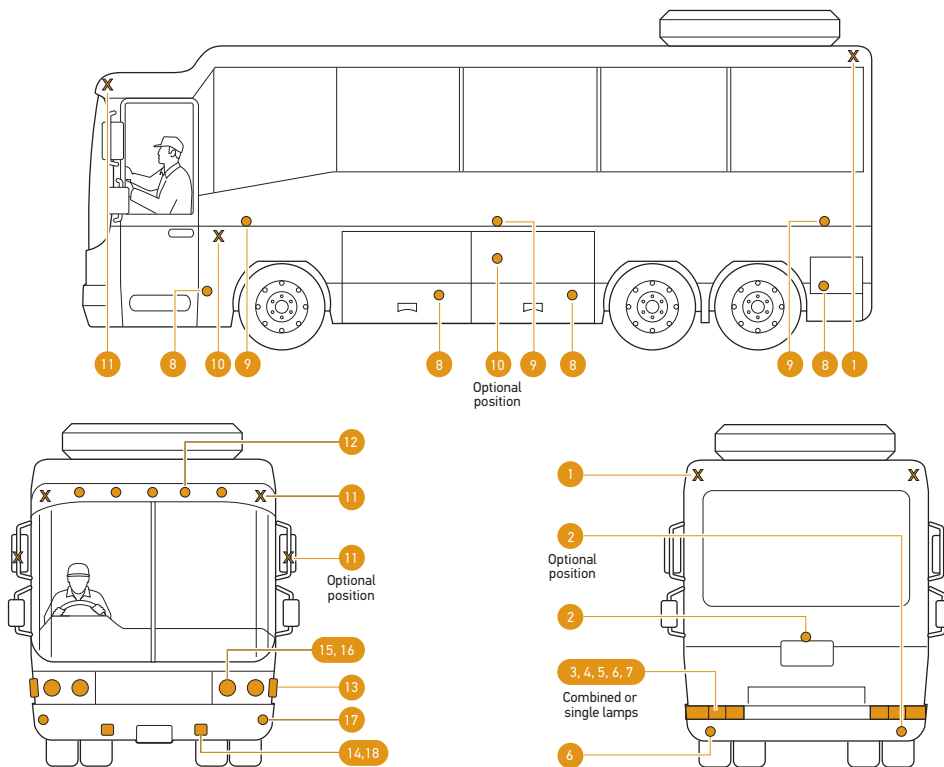
### SIDE

- 8 ADR 47/00 Side Retro Reflectors
- 9 ADR 45/01 or 74/00 Side Markers
- 10 ADR 6/00 Supplementary Side Direction Indicators

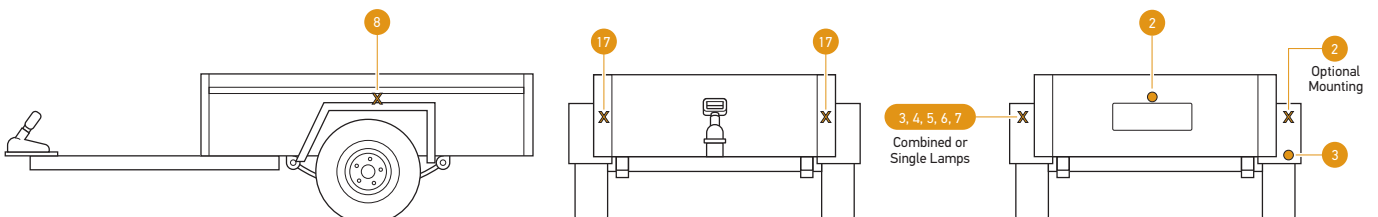
### FRONT

- 11 ADR 49/00 Front End Outline Lamps
- 12 ADR 45/01 Cab Markers (optional)
- 13 ADR 6/00: Cat.1 Front Direction Indicators
- 14 ADR 50/00 Front Fog Lamps (optional)
- 15 ADR 46/00 Headlamps
- 16 ADR 49/00 Front Position Lamps
- 17 ADR 47/00 Front Retro Reflectors
- 18 ADR 76/00 Daytime Running Lamps (optional)

### COACH

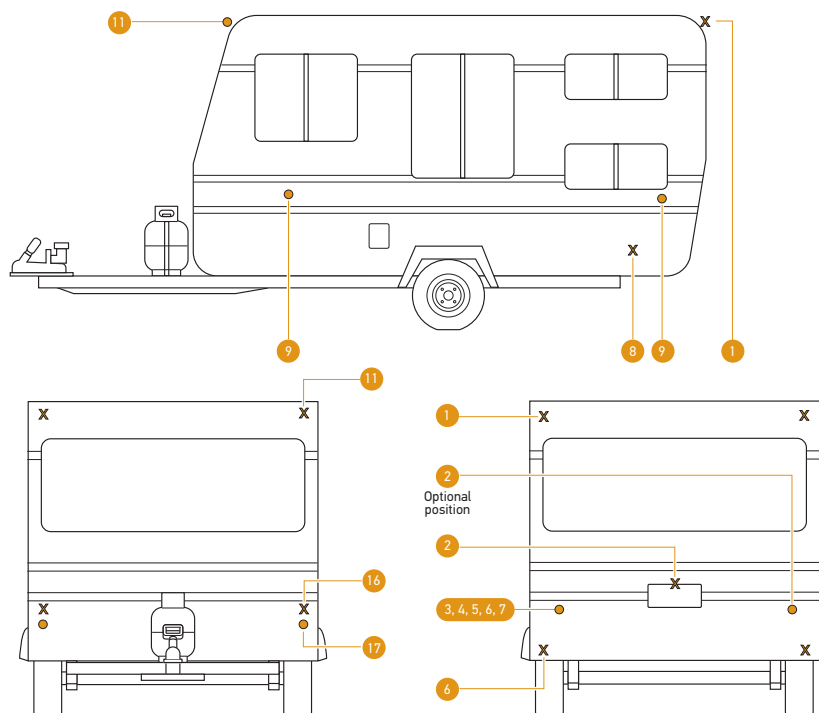


### SMALL TRAILER

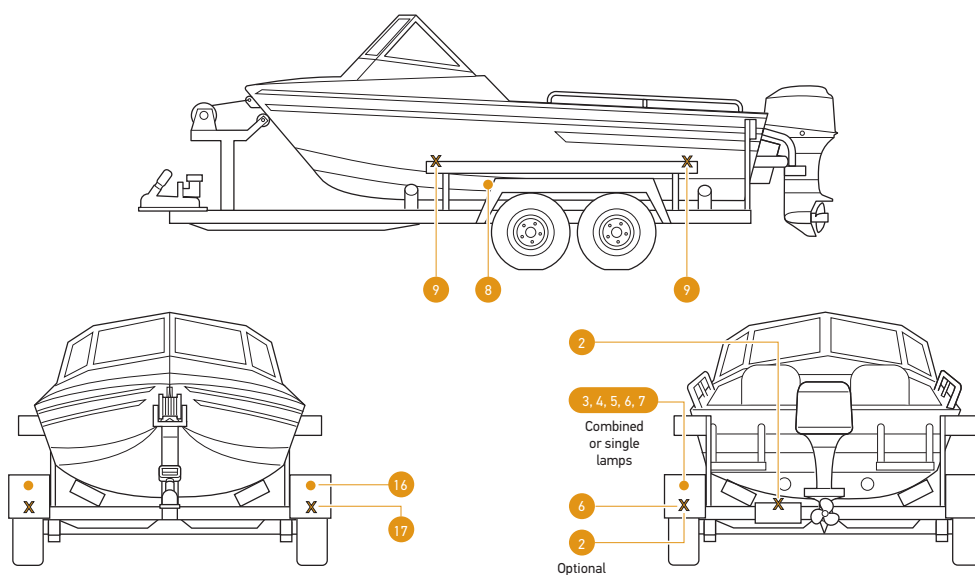




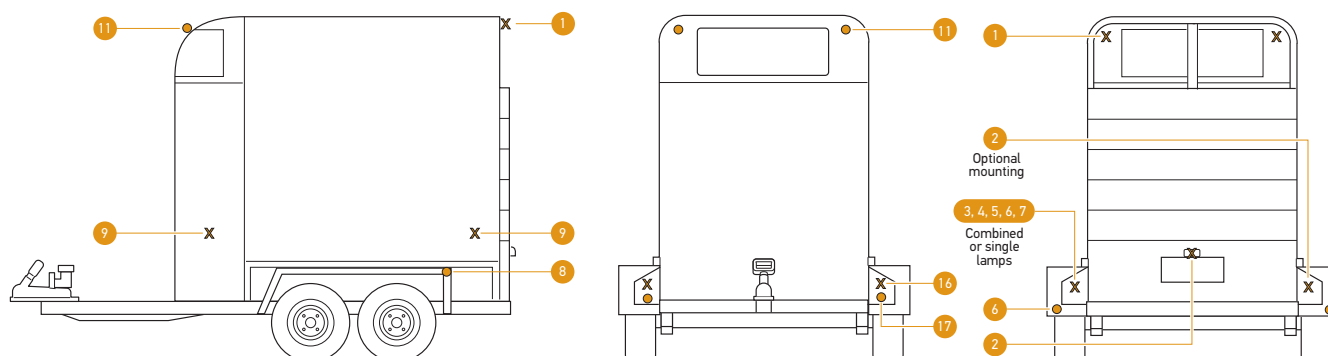
## CARAVAN



## BOAT TRAILER



## HORSE FLOAT



HELLA Part No.	Engineering Drawing No.	ADR No.	Function	Bulb(s)	Bulb Type	HELLA Ref. or ECE	FORS Ref: CRN or ECE	Instruction Sheet No.	Lamp Identification
<b>1000</b>	012614-00	76/00	Daytime Running Lamp	R1221	P21W	DRL*1000*B	27424	911-353-51	RL 008701
<b>1001</b>	950957-00	6/00: Cat 1	Front Direction Indicator Lamp	R1221	P21W	FL*1001*A	15230	911-351-00	016086 (Turn Signal) 17031R20 (Headlamp)
		46/00	Headlamp	XD1260/55	H4	HL*1001*A	15232		
		49/00	Front Position Lamp	HL124	T4W	FP*1001*A	15231		
<b>1003</b>	980608-50	76/00	Daytime Running Lamp	LED	N/A LED	DRL*1003*A	41607	980-703-11	9060
<b>1004</b>	980670-00	76/00	Daytime Running Lamp	LED	N/A LED	N/A ECE	E24 87R-000002	980-703-10	E24 0002 (0670)
<b>1005</b>	980680-00	76/00	Daytime Running Lamp	LED	N/A LED	N/A ECE	E24 87R-000001	980-703-12	E24 0001 (0680)
<b>1005-24V</b>	980680-50							980-703-24	
<b>1006</b>	980690-50	76/00	Daytime Running Lamp	LED	N/A LED	DRL*1006*A	42763	980-703-47	0690
<b>1007-24V</b>	980690-40	76/00	Daytime Running Lamp	LED	N/A LED	N/A ECE	E24 5854	980-703-53	0690
		49/00	Front Position Lamp						
<b>1008</b>	980680-11	76/00	Daytime Running Lamp	LED	N/A LED	N/A ECE	E24 87R-000001	980-703-68	E24 0001 (0680)
<b>1008-24V</b>	980680-61							980-703-69	
<b>1009</b>	980880-00	76/00	Daytime Running Lamp	LED	N/A LED	DRL*1009*A	44200	958-780-04	0880
<b>1009-24V</b>	980880-10					DRL*1009-24V*A	44202		
<b>1009V</b>	980880-40	76/00	Daytime Running Lamp	LED	N/A LED	1009V*DRL*C	45962	958-780-92	0880 B
<b>1009V-24V</b>	980880-50					1009-24VDRLC	45965		
<b>1013</b>	980970-00	76/00	Daytime Running Lamp	LED	N/A LED	DRL*1013*A	44776	958-780-44	0970
<b>1013-24V</b>	980970-50					DRL*1013-24V*A	44783		
<b>1027</b>	003434-18	46/00	Headlamp	XD1260/55	H4	HL*1027*A	15311	911-352-79	17016
		49/00	Front Position Lamp	HL124	T4W	FP*1027*A	15317		
<b>1028</b>	007834-00	46/00	Headlamp (Low/Dipped Beam)	C1255	H1	HL*1028*A	32013	911-353-80	550
<b>1029</b>	008193-00	46/00	Headlamp (Low/Dipped Beam)	CA1255	H7	HL*1029*A	32008	911-353-81	917
<b>1030</b>	008191-00/02	46/00	Headlamp (High/Main Beam)	CA1255	H7	HL*1030*A	32009	911-353-79	917
		49/00	Front Position Lamp (1030 only)	HL124	T4W	FP*1030*A	32014		
<b>1041</b>	003177-06	46/00	Headlamp	C1255	H1	HL*1041*A	15071	911-351-06	24504
<b>1042</b>	003177-30	46/00	Headlamp	XD1260/55	H4	HL*1042*A	15072	911-351-07	7197R20
<b>1043</b>	003427-04	46/00	Headlamp	XD1260/55	H4	HL*1043*A	15198	911-351-08	17009
		49/00	Front Position Lamp	HL124	T4W	FP*1043*A	15197		
<b>1044</b>	003177-51	46/00	Headlamp	XD1260/55	H4	HL*1044*A	15073	911-351-10	7197R20
		49/00	Front Position Lamp	HL124	T4W	FP*1044*A	15074		
<b>1053</b>	114155-00	46/00	Headlamp	C1255	H1	HL*1053*A	15075	911-351-14	14464R8
<b>1054</b>	114178-00	46/00	Headlamp	C1255	H1	HL*1054*A	15092	911-351-15	7076R8
		49/00	Front Position Lamp	HL124	T4W	FP*1054*A	15093		
<b>1055 &amp; 1055HD</b>	002850-06 & 002850-21	46/00	Headlamp	XD1260/55	H4	HL*1055*A	15088	911-351-16	17031R20
		49/00	Front Position Lamp	HL124	T4W	FP*1055*A	15089		
<b>1056</b>	002395-84	46/00	Headlamp	XD1260/55	H4	HL*1056*A	15094	911-351-17	53
		49/00	Front Position Lamp	HL124	T4W	FP*1056*A	15095		
<b>1058 &amp; 1058HD</b>	002395-13 (950519-00) & 002395-26	46/00	Headlamp	XD1260/55	H4	HL*1058*A	15096	911-351-18	53
		49/00	Front Position Lamp	HL124	T4W	FP*1058*A	15097		
<b>1107</b>	956329-00	50/00	Front Fog Lamp	YC1255	H3	FF*1107*A	15127	911-351-29	8361
<b>1108</b>	005750-04	50/00	Front Fog Lamp	YC1255	H3	FF*1108*A	15137	911-351-30	18213R19
<b>1109</b>	005700-02	50/00	Front Fog Lamp	YC1255	H3	FF*1109*A	15134	911-351-31	18216R19
<b>1110</b>	005860-00	50/00	Front Fog Lamp	YC1255	H3	FF1110*A	15218	911-351-32	18227
<b>1111</b>	006300-07	50/00	Front Fog Lamp	YC1255	H3	FF*1111*A	15255	911-351-33	18231
<b>1122</b>	008283-00	50/00	Front Fog Lamp	CA1255	H7	FF*1122*A	26829	911-353-45	021209
<b>1123</b>	008284-00	50/00	Front Fog Lamp	CA1255	H7	FF*1123*A	26830	911-353-47	021211
<b>1124</b>	001951-10	50/00	Front Fog Lamp	YC1255	H3	N/A ECE	03B E1 3221	HKG 460 845-16 & Refer ADR 13/00	E1 3221 R19
<b>1125</b>	001952-10	50/00	Front Fog Lamp	YC1255	H3	N/A ECE	03B E1 3222	HKG 460 845-16 & Refer ADR 13/00	E1 3222 R19

## 3RD EDITION ADR REFERENCE GUIDE

HELLA Part No.	Engineering Drawing No.	ADR No.	Function	Bulb(s)	Bulb Type	HELLA Ref. or ECE	FORS Ref: CRN or ECE	Instruction Sheet No.	Lamp Identification
1126	001953-10	50/00	Front Fog Lamp	YC1255	H3	N/A ECE	03B E1 3223	HKG 460 845-16 & Refer ADR 13/00	E1 3223 R19
1145CHROME	002608-02	50/00	Front Fog Lamp	YC1255	H3	FF*1145*A	31075	911-351-37	915
1162	004700-02	50/00	Front Fog Lamp	YC1255	H3	FF*1162*A	15136	911-351-38	8390R19
1178	009094-00	50/00	Front Fog Lamp	CA1255	H7	FF*1178*A	34092	911-353-96	02 1901
1178CHROME	009094-01								
1304	956327-01	46/00	High Beam Headlamp	CD1255	H2	HL*1304*A	15115	911-351-40	24462R8
1307	956329-01	46/00	High Beam Headlamp	YC1255	H3	HL*1307*A	15121	911-351-42	24556R8
1308	005750-30	46/00	High Beam Headlamp	YC1255	H3	HL*1308*A	15139	911-351-43	0444404R8
1309	005700-11	46/00	High Beam Headlamp	YC1255	H3	HL*1309*A	15132	911-351-44	0444410R8
1309CHROME	003590-41								
1310	005860-03	46/00	High Beam Headlamp	YC1255	H3	HL*1310*A	15220	911-351-45	044442
1311	006300-12	46/00	High Beam Headlamp	YC1255	H3	HL*1311*A	15254	911-351-46	0444444
1311BLUE	006300-26								
1316CHROME	002537-19	46/00	High Beam Headlamp	YC1255	H3	HL*1316*A	30100	911-353-64	14520R8
1318	008773-00	46/00	High Beam Headlamp	CA1255	H7	HL*1318*A	32057	911-353-82	1655
1318BLUE	008773-06								
1322	008283-01	46/00	High Beam Headlamp	CA1255	H7	HL*1322*A	26822	911-353-44	041210
1323	008284-01	46/00	High Beam Headlamp	CA1255	H7	HL*1323*A	26823	911-353-46	041212
1324	001951-00	46/00	High Beam Headlamp	YC1255	H3	N/A ECE	HR 01 12.5 E1 3221	HKG 460 845-16 & Refer ADR 13/00	E1 3221 R112
1325	001952-00	46/00	High Beam Headlamp	YC1255	H3	N/A ECE	HR 01 17.5 E1 3222	HKG 460 845-16 & Refer ADR 13/00	E1 3222 R112
1326	001953-00	46/00	High Beam Headlamp	YC1255	H3	N/A ECE	HR 01 12.5 E1 3223	HKG 460 845-16 & Refer ADR 13/00	E1 3223 R112
1363	004700-15	46/00	High Beam Headlamp	CD1255	H2	HL*1363*A	15141	911-351-51	34518R8
1364	004700-43	46/00	High Beam Headlamp	CD1255	H2	HL*1364*A	15353	911-353-05	0434518
1371	008273-00	46/00	High Beam Headlamp	C1255	H1	HL*1371*A	26741	911-353-40	04HR 999
1373	008273-04	77/00	High Beam Headlamp	XN4000	D2S	HL*1373*A	26742	911-353-41	00DR 999
1378	009094-02	46/00	High Beam Headlamp	C1255	H1	HL*1378*A	33671	911-353-94	00 1901
1378BLUE	009094-171								
1378CHROME	009094-03								
1382	009094-141	77/00	High Beam Headlamp	XN4001	D1S	HL*1382*B	36044	911-355-07	02 2087
1384	009094-311	77/00	High Beam Headlamp	XN4001	D1S	N/A ECE	E1 002087	HKG 460 818-21 & Refer ADR 13/00	E1 002087
1389LED	011002-001	46/00	High Beam Headlamp	LED	N/A LED	N/A ECE	HR PL 01 40 E1 3161	HKG 460 818-26 & Refer ADR 13/00	E1 3161
		49/00	Front Position Lamp	LED	N/A LED	N/A ECE	PL 02 A E1 3161		
1401	951215-02	1/00	Reversing Lamp	R1221	P21W	RL*1401*A	15202	911-351-52	91999
1403	003030-17	1/00	Reversing Lamp	R1221	P21W	RL*1403*A	30830	911-353-73	8726
1405	003014-09	1/00	Reversing Lamp	R1221	P21W	RL*1405*A	15131	911-351-53	8703R23
1406	003236-31	1/00	Reversing Lamp	R1221	P21W	RL*1406*A	15130	911-351-54	8728R23
		49/00	Front Position Lamp or Front End Outline Lamp	G125	R5W	FP*1406*B	15292		
1408	997506-40	1/00	Reversing Spotlamp	YC1255	H3	RL*1408*A	37918	911-355-11	23005
1409	005700-19	1/00	Reversing Spotlamp	YC1255	H3	RL*1409*B	38593	911-355-13	2185
1410	005860-15	1/00	Reversing Spotlamp	YC1255	H3	RL*1410*A	37919	911-355-12	2186
1413	002694-00	1/00	Reversing Lamp	R1221	P21W	RL*1413*A	15129	911-351-57	8708R23
1430-H	959070-50	1/00	Reversing Lamp	LED	N/A LED	RL*1430-H*A	36417	959-150-10	9060
1430-V	959070-55					RL*1430-V*A	36418		

HELLA Part No.	Engineering Drawing No.	ADR No.	Function	Bulb(s)	Bulb Type	HELLA Ref. or ECE	FORS Ref: CRN or ECE	Instruction Sheet No.	Lamp Identification
1433	959820-00	1/00	Reversing Lamp	LED	N/A LED	RL*1433*A	33190	959-149-69	9020
1446-H	959041-30	1/00	Reversing Lamp	LED	N/A LED	RL*1446-H*A	35980	959-149-95	9040
1446-V	959041-40					RL*1446-V*A	36243		
1459	959930-12	1/00	Reversing Lamp	LED	N/A LED	RL*1465*A	35981	959-150-19	9930
1461	980762-01	1/00	Reversing Lamp	LED	N/A LED	RL*1461*A	45442	958-780-72	0760
		47/00	Retro Reflector (Red/Rear)	N/A	N/A	RE*2161*A	45633		
1465	959930-00	1/00	Reversing Lamp	LED	N/A LED	RL*1465*A	35981	959-150-04	9930
1467	959930-11	1/00	Reversing Lamp	LED	N/A LED	RL*1465*A	35981	959-150-18	
1490	959010-50	1/00	Reversing Lamp	LED	N/A LED	RL*1490*A	36253	959-150-16	9010
2000	901227-24	49/00	Front Position Lamp or Front End Outline Lamp	L125	C5W	FP*2000*A	15243	911-351-58	45633
2006	910315-04	45/01	Side Marker Lamp	L125	C5W	SM*2006*A	15148	911-351-60	910320
2009	900711-26	45/01	Side Marker Lamp	L125	C5W	SM*2009*A	15245	911-351-63	900627
		49/00	Front Position Lamp			FP*2009*A	15307		
2019	950059-04	45/01	Cab Marker Lamp	GD125	R5W	CM*2019*A	15217	911-351-66	950065
		49/00	Front End Outline Lamp			FE0*2019*A	15356		
2020	900711-29	6/00: Cat 5	Supp. Side Direction Indicator Lamp	L125	C5W	DI*2020*A	15303	911-352-78	900626
		49/00	Front End Outline Lamp			FE0*2020*A	25815		
2026	959660-30	45/01	Cab Marker Lamp	LED	N/A LED	CM*2026*A	25025	959-149-17	9560
		6/00: Cat 5	Supp. Side Direction Indicator Lamp			SDI*2026*A	25725		
2027 & 2027P	980660-00	45/01	Cab Marker Lamp	LED	N/A LED	CM*2027*A	42856	980-703-13	6600
		6/00: Cat 5	Supp. Side Direction Indicator Lamp			SDI*2027*A	42857		
2029	900139-01	45/01	Side Marker Lamp	L125	C5W	SM*2029*A	15143	911-351-69	910049
2030	900139-02	6/00: Cat 5	Supp. Side Direction Indicator Lamp	L125	C5W	FL*2030*A	15146	911-351-70	910049
2031	959700-00	6/00: Cat 5	Supp. Side Direction Indicator Lamp	LED	N/A LED	SDI*2031*A	30768	959-149-55	9700
2033	959700-20	45/01	Side Marker Lamp	LED	N/A LED	SM*2033*A	31432	959-149-58	9700
2037	900139-04	45/01	Side Marker Lamp	L125	C5W	SM*2037*A	15144	911-351-72	910049
2038	900139-05	6/00: Cat 5	Supp. Side Direction Indicator Lamp	L125	C5W	FL*2038*A	15196	911-351-73	910049
2042	905055-01	45/01	Side Marker Lamp	M123	N/A Type M123	SM*2042*A	15192	911-351-74	910089
2043	910663-09	1/00	Reversing Lamp	R1221	P21W	RL*2043*A	15111	911-351-75	R.D.68158
2044	905055-02	6/00: Cat 5	Supp. Side Direction Indicator Lamp	M123	N/A Type M123	DI*2044*A	16360	911-351-83	910089
2046	958607-02	1/00	Reversing Lamp	R1221	P21W	RL*2046*A	15329	911-352-89	HNZ01
		49/00	Front Position Lamp or Front End Outline Lamp	G125	R5W	FP*2046*A	15352		
2047	963639-00	74/00 SM1	Side Marker Lamp: SM1	LED	N/A LED	SM*2047*A	27321	911-353-34	9605
		47/00	Retro Reflector (Amber Side)	N/A	N/A	RE*2047*A	27481		
2048	963639-01	74/00: SM1	Side Marker Lamp: SM1	LED	N/A LED	SM*2047*A	27321		
		47/00	Retro Reflector (Amber Side)	N/A	N/A	RE*2047*A	27481		
2051	959570-10	49/00	Front End Outline Lamp	LED	N/A LED	FE0*2051X*A	40676	959-150-79	9560
2053 & 2053GMD	959660-50	45/01	Side Marker Lamp	LED	N/A LED	SM*2053*A	24743	959-149-16	9560
2054	959570-50	49/00	Front Position Lamp or Front End Outline Lamp	LED	N/A LED	FP*2054X*A	40677	959-150-80	9560
2055	959590-40	49/00	Front Position Lamp or Front End Outline Lamp	LED	N/A LED	N/A ECE	A 02 E24 0054	959-149-26	E4 02 7597
2056	959590-30	49/00	Front End Outline Lamp	LED	N/A LED	FE0*2056*A	27380	959-149-38	9590
2057	959650-00	45/01	Cab Marker Lamp	LED	N/A LED	CM*2057*A	27432	959-149-42	9650
2058 & 2058P	980660-00	45/01	Side Marker Lamp	LED	N/A LED	SM*2058*A	41597	980-703-13	6600
2059	980855-01	49/00	Front Position Lamp or Front End Outline Lamp	LED	N/A LED	FP*2059*A	45233	958-780-67	0855
2059S	980855-02								
2060	980855-20	49/00	Front End Outline Lamp	LED	N/A LED	FE0*2060*A	45630	958-780-70	0855
2060S	980855-21								
2061 & 2061P	980660-20	49/00	Front Position Lamp or Front End Outline Lamp	LED	N/A LED	TBA	TBA	958-780-95	6600
2062 & 2062P	980660-30	49/00	Front Position Lamp	LED	N/A LED	TBA	TBA	958-780-96	6600
2063	900741-25	49/00	Front Position Lamp or Front End Outline Lamp	L125	C5W	FP*2063*A	15282	911-351-76	10833
2064	003014-07	49/00	Front Position Lamp or Front End Outline Lamp	L125	C5W	FP*2064*A	15177	911-351-77	11793R7

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HELLA Part No.	Engineering Drawing No.	ADR No.	Function	Bulb(s)	Bulb Type	HELLA Ref. or ECE	FORS Ref: CRN or ECE	Instruction Sheet No.	Lamp Identification
2065	001227-24	49/00	Front Position Lamp or Front End Outline Lamp	L125	C5W	FP*2065*A	15244	911-351-78	2254
2066	006679-00	49/00	Front Position Lamp or Front End Outline Lamp	G1210	R10W	FP*2066*A	15253	911-351-79	0121691
2067	006679-01	45/01	Cab Marker Lamp	G125	R5W	CM*2067*A	15361	911-353-23	TV25
		49/00	Front End Outline Lamp			FEO*2067*A	15360		
2071	980990-40	49/00	Front End Outline Lamp	LED	N/A LED	2071*FEOM*C	45943	958-780-90	0990
2073	980990-00	45/01	Side Marker Lamp	LED	N/A LED	2073*SML*C	45809	958-780-87	0990
2074	980990-20	49/00	Front Position Lamp or Front End Outline Lamp	LED	N/A LED	2074*FEOM*C	45944	958-780-89	0990
2076	980990-10	45/01	Cab Marker Lamp	LED	N/A LED	2076*ECM*C	45810	958-780-89	0990
		6/00: Cat 5	Supp.Side Direction Indicator Lamp			2076*SDI*C	45811		
2077	901227-06	6/00: Cat 5	Supp.Side Direction Indicator Lamp	L125	C5W	DI*2077*A	15204	911-351-80	910001
		49/00	Front End Outline Lamp	L125	C5W	FEO*2077*A	25617		
2078	901227-23	49/00	Rear Position Lamp or Rear End Outline Lamp	L125	C5W	RR*2078*A	15250	911-351-81	910001
2084	950905-00	6/00: Cat 1	Front Direction Indicator Lamp	R1221	P21W	FL*2084*A	15226	911-351-86	2084
		6/00: Cat 5	Supp.Side Direction Indicator Lamp	G125	R5W				
		49/00	Front Position Lamp			FP*2084*A	15227		
2085	950905-01	6/00: Cat 1	Front Direction Indicator Lamp	R1221	P21W	FL*2085*A	15225	911-351-87	2085
		6/00: Cat 5	Supp. Side Direction Indicator Lamp	G125	R5W	FP*2085*A			
		49/00	Front Position Lamp				15224		
2100	901227-04	6/00: Cat 1	Front Direction Indicator Lamp	K1221	C21W	FL*2100*A	15212	911-351-88	910001
2101	002939-17	6/00: Cat 1	Front Direction Indicator Lamp	R1221	P21W	DI*2101*A	29439	911-353-58	32710
2103-12V	008260-01	6/00: Cat 2a	Rear Direction Indicator Lamp	LED	N/A LED	DI*2103*A	32646	911-353-90	01989
2103-24V	008260-00								
2105	959932-20	6/00: Cat 1	Front Direction Indicator Lamp	LED	N/A LED	DI*2105M*A	36805	959-150-24	9930
2105CLR	959932-21					DI*2105C*A	40148		
2105CLR-CS	959932-05					N/A ECE	1 01 E24 0023	959-150-93	1 01 E24 0023
2105-CS	959932-01					N/A ECE	1 01 E24 0023	959-150-93	1 01 E24 0023
2106-CS	959932-13	6/00: Cat 1	Front Direction Indicator Lamp	LED	N/A LED	N/A ECE	1 01 E24 5851	959-150-92	1 01 E24 5851
		49/00	Front Position Lamp			N/A ECE	A 02 E24 5851		A 02 E24 5851
2107	959011-10	6/00: Cat 1	Front Direction Indicator Lamp	LED	N/A LED	DI*2107*A	41601	980-703-19	9010
2107CLR	959011-11					DI*2107C*A	41609		
2108-GMD	980691-11	6/00: Cat 1	Front Direction Indicator Lamp	LED	N/A LED	N/A ECE	E24 5854	980-703-70	0690
2108-GMD24V	980690-00	49/00	Front Position Lamp					980-703-29	
		76/00	Daytime Running Lamp						
2117	001227-23	6/00: Cat 5	Supp.Side Direction Indicator Lamp	L125	C5W	FL*2117*A	15193	911-351-89	2254
		49/00	Front End Outline Lamp	L125	C5W	FEO*2117*A	25698		
2118	004965-80	6/00: Cat 5	Supp.Side Direction Indicator Lamp	W125	W5W	FL*2118*A	15169	911-351-90	42710R6
2123	900797-05	6/00: Cat 5	Supp.Side Direction Indicator Lamp	G125	R5W	FL*2123*A	15142	911-351-95	49935
		45/01	Cab Marker Lamp			CM*2123*A	15215		
		49/00	Front End Outline Lamp			FEO*2123*A	15354		
2124	900797-06	49/00	Front Position Lamp or Front End Outline Lamp	G125	R5W	FP*2124*A	15229	911-351-96	49935
2125	900797-07	6/00: Cat 5	Supp. Side Direction Indicator Lamp	GD125	R5W	FL*2125*A	15213	911-351-97	49935
		45/01	Cab Marker Lamp			CM*2125*A	15214		
		49/00	Front End Outline Lamp			FEO*2125*A	15355		
2126	905626-04	6/00: Cat 1 & 6/00: Cat 5	Front Direction Indicator Lamp and Supp.Side Direction Indicator Lamp	R1221	P21W	FL*2126*A	15271	911-351-98	905628
		6/00: Cat 5	Supp.Side Direction Indicator Lamp	G125	R5W	FL*2126*B	15300		
2127	900763-29	6/00: Cat 1 & 6/00: Cat 5	Front Direction Indicator Lamp and Supp.Side Direction Indicator Lamp	R1221	P21W	FL*2127*A	15272	911-351-99	R.D.10833
		6/00: Cat 5	Supp.Side Direction Indicator Lamp	G125	R5W	FL*2127*B	15301		
2128	900763-30	6/00: Cat 1	Front Direction Indicator Lamp	R1221	P21W	FL*2128*A	15273	911-352-00	R.D.10833
		6/00: Cat 5	Supp.Side Direction Indicator Lamp	G125	R5W	SDI*2128*A	15306		

HELLA Part No.	Engineering Drawing No.	ADR No.	Function	Bulb(s)	Bulb Type	HELLA Ref. or ECE	FORS Ref: CRN or ECE	Instruction Sheet No.	Lamp Identification
<b>2128LED</b>	959932-30	6/00: Cat 1	Front Direction Indicator Lamp	LED	N/A LED	DI*2105M*A	36805	959-150-25	9930
<b>2128LEDCLR</b>	959932-35					DI*2105C*A	40148		
<b>2129</b>	900763-31	6/00: Cat 1 & 6/00: Cat 5	Front Direction Indicator Lamp and Supp.Side Direction Indicator Lamp	FD1221	P21W (DC)	DI*2129*A	15304	911-352-76	R.D.10833
		6/00: Cat 5	Supp.Side Direction Indicator Lamp	GD125	R5W (DC)	DI*2129*B	15305		
<b>2130</b>	959011-00	6/00: Cat 2a	Rear Direction Indicator Lamp	LED	N/A LED	DI*2130*A	30649	959-149-50	9010
<b>2131-CS</b>	959932-15	6/00: Cat 1	Front Direction Indicator Lamp	LED	N/A LED	N/A ECE	1 01 E24 5851	980-703-03	1 01 E24 5851
		49/00	Front Position Lamp	LED	N/A LED	N/A ECE	A 02 E24 5851		A 02 E24 5851
<b>2132-CS</b>	959932-16	6/00: Cat 1	Front Direction Indicator Lamp	LED	N/A LED	N/A ECE	1 01 E24 5851	980-703-04	1 01 E24 5851
		49/00	Front Position Lamp				A 02 E24 5851		A 02 E24 5851
<b>2133</b>	959822-00	6/00: Cat 2a	Rear Direction Indicator Lamp	LED	N/A LED	DI*2133*A	33191	959-149-71	9020
<b>2133CS</b>	959822-60								
<b>2133-24V</b>	959021-00					DI*2133-24V*A	30442	959-149-53	9020
<b>2134</b>	951215-00	6/00: Cat 2a	Rear Direction Indicator Lamp	R1221	P21W	FL*2134*A	15199	911-352-01	91999
		49/00	Front End Outline Lamp	G125	R5W	FE0*2134*A	25596		
<b>2135</b>	900739-10	6/00: Cat 1	Front Direction Indicator Lamp	K1221	C21W	FL*2135*A	15270	911-352-02	10833
		49/00	Front End Outline Lamp	L125	C5W	FE0*2135*A	25578		
<b>2135LED</b>	959932-31	6/00: Cat 1	Front Direction Indicator Lamp	LED	N/A LED	DI*2105M*A	36805	959-150-26	9930
<b>2135LEDCLR</b>	959932-36					DI*2105C*A	40148		
<b>2135LEDCLR-CS</b>	959932-08					N/A ECE	1 01 E24 0023	980-703-01	1 01 E24 0023
<b>2135LED-CS</b>	959932-03					N/A ECE	1 01 E24 0023	980-703-01	1 01 E24 0023
<b>2136</b>	900741-21	6/00: Cat 1	Front Direction Indicator Lamp	K1221	C21W	FL*2136*A	15211	911-352-03	10833
		49/00	Front End Outline Lamp	L125	C5W	FE0*2136*A	25579		
<b>2136LED</b>	959932-32	6/00: Cat 1	Front Direction Indicator Lamp	LED	N/A LED	DI*2105M*A	36805	959-150-27	9930
<b>2136LEDCLR</b>	959932-37					DI*2105C*A	40148		
<b>2136LEDCLR-CS</b>	959932-07					N/A ECE	1 01 E24 0023	980-703-02	1 01 E24 0023
<b>2136LED-CS</b>	959932-04					N/A ECE	1 01 E24 0023	980-703-02	1 01 E24 0023
<b>2138</b>	959031-00	6/00: Cat 2a	Rear Direction Indicator Lamp	LED	N/A LED	12V Horiz	44203	958-780-39	9030
						24V Horiz	44204		
						12V Vert	44205		
						24V Vert	44209		
		47/00	Retro Reflector (Red/Rear)	N/A	N/A	RE*2317*A-1	22948		
<b>2139</b>	900940-00	6/00: Cat 5	Supp.Side Direction Indicator Lamp	M123	N/A TYPE M123	DI*2139*A	15287	911-352-68	900933
<b>2140</b>	900947-00	6/00: Cat 1	Front Direction Indicator Lamp	K1221	C21W	FL*2140*A	15190	911-352-04	52612
		49/00	Front End Outline Lamp	L125	C5W	FE0*2140*A	25580		
<b>2141</b>	900947-05	49/00	Front Position Lamp or Front End Outline Lamp	L125	C5W	FP*2141*A	15176	911-352-05	52612
<b>2142</b>	905141-02	6/00: Cat 1 & 6/00: Cat 5	Front Direction Indicator Lamp and Supp.Side Direction Indicator Lamp	R1221	P21W	FL*2142*C	15318	911-352-06	53174
		6/00: Cat 5	Supp.Side Direction Indicator Lamp	G125	R5W	FL*2142*B	15203		
		6/00: Cat 6	Supp.Side Direction Indicator Lamp	R1221	P21W	FL*2142*D	30062		
<b>2143</b>	910663-08	6/00: Cat 2a	Rear Direction Indicator Lamp	R1221	P21W	DI*2143*A	15110	911-352-07	R.D.68158
		49/00	Front End Outline Lamp	G125	R5W	FE0*2143*A	25523		
<b>2143LED</b>	2143LED	6/00: Cat 2a	Rear Direction Indicator Lamp	LED	N/A LED	12V Horiz	44203	958-780-39	9030
						24V Horiz	44204		
						12V Vert	44205		
						24V Vert	44209		
		47/00	Retro Reflector (Red/Rear)	N/A	N/A	RE*2317*A-1	22948		
<b>2144LED-H</b>	2144LED-H	6/00: Cat 2a	Rear Direction Indicator Lamp	LED	N/A LED	DI*2146-H*A	26179	959-149-30	9040
<b>2144LED-V</b>	2144LED-V					DI*2146-V*A	26180		
<b>2145</b>	958607-00	6/00: Cat 2a	Rear Direction Indicator Lamp	R1221	P21W	DI*2145*A	15330	911-352-90	HNZ01
		49/00	Front End Outline Lamp	G125	R5W	FE0*2145*A	25577		



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HELLA Part No.	Engineering Drawing No.	ADR No.	Function	Bulb(s)	Bulb Type	HELLA Ref. or ECE	FORS Ref: CRN or ECE	Instruction Sheet No.	Lamp Identification
2146-H	959041-10	6/00: Cat 2a	Rear Direction Indicator Lamp	LED	N/A LED	DI*2146-H*A	26179	959-149-30	9040
2146-HCS	959041-51					DI*2146-H24*A	34498	959-150-57	
2146-H24	959041-50							959-149-88	
2146-V	959041-20					DI*2146-V*A	26180	959-149-30	
2146-VCS	959041-71					DI*2146-VCS*A	40650	959-150-57	
2146-V24	959041-70					DI*2146-V24*A	36718	959-149-88	
2147	003014-01	6/00: Cat 2a	Rear Direction Indicator Lamp	R1221	P21W	FL*2147*A	15168	911-352-11	32619R6
		49/00	Front End Outline Lamp	G125	R5W	FE0*2147*A	25759		
2148	003014-11	6/00: Cat 1	Front Direction Indicator Lamp	R1221	P21W	FL*2148*A	15170	911-352-12	32661R6
		49/00	Front End Outline Lamp	G125	R5W	FE0*2148*A	25761		
2149	003236-32	6/00: Cat 2a	Rear Direction Indicator Lamp	R1221	P21W	FL*2149*A	15171	911-352-13	6R0132764
		49/00	Front End Outline Lamp	G125	R5W	FE0*2149*A	25760		
2150	005603-00	6/00: Cat 1 & 6/00: Cat 5	Front Direction Indicator Lamp and Supp.Side Direction Indicator Lamp	R1221	P21W	FL*2150*A	15172	911-352-14	6R0142748
		49/00	Front End Outline Lamp	G125	R5W	FE0*2150*A	25763		
2151	959070-00	6/00: Cat 2a	Rear Direction Indicator Lamp	LED	N/A LED	FL*2151*A	16492	959-149-01	9060
2151-H	959070-35								
2151-HCS	980607-00					FL*2151-H*A	36420	959-150-11	2a 01 E24 5850
2151-V	959070-25					FL*2151-V*A	36421		9060
2151-VCS	980607-50					DI*2151-VCS*A	2a 01 E24 5850	959-150-56	2a 01 E24 5850
2152	959070-20	6/00: Cat 2a	Rear Direction Indicator Lamp	LED	N/A LED	FL*2151*A	16492	959-149-03	9060
2153	006692-01	6/00: Cat 6	Supp.Side Direction Indicator Lamp	R1221	P21W	SDI*2153*B	30495	911-353-69	52621
2154	006692-02	6/00: Cat 6	Supp.Side Direction Indicator Lamp	R1221	P21W	SDI*2154*B	30497	911-353-70	
2155 & 2155CLR	008355-00	6/00: Cat 6	Supp.Side Direction Indicator Lamp	R1221	P21W	SDI*2155*A	30498	911-353-71	1059
	008355-01			RY1221	PY21W	SDI*2155CLR*A	E1 011848		1848
2156 & 2156-24V	959075-50	6/00: Cat 2a	Rear Direction Indicator Lamp	LED	N/A LED	DI*2156*A	26483	959-149-28	9074
	959075-00					DI*2156-24V*A	26104	959-149-29	
2157	003236-17	6/00: Cat 1	Front Direction Indicator Lamp	R1221	P21W	DI*2157*A	30405	911-353-72	42730
2158	004119-02	6/00: Cat 1	Front Direction Indicator Lamp	R1221	P21W	DI*2158*A	31781	911-353-78	536
		6/00: Cat 5	Supp.Side Direction Indicator Lamp			SDI*2158*A	31802		
		49/00	Front Position Lamp	W125	W5W	FP*2158*A	31807		
2159	959932-72	6/00: Cat 2a	Rear Direction Indicator Lamp	LED	N/A LED	DI*2165*B	36056	959-150-23	9930
2159-CS	959932-54					N/A ECE	2a 01 E24 0023	980-703-06	2a 01 E24 0023
2160-24V	959021-10	6/00: Cat 1	Front Direction Indicator Lamp	LED	N/A LED	DI*2160*A	43274	980-703-52	9020
2161	980761-01	6/00: Cat 1	Front Direction Indicator Lamp	LED	N/A LED	DI*2161*A	45443	958-780-73	0760
2161-CS	980761-02	47/00	Retro Reflector (Red/Rear)	N/A	N/A	RE*2161*A	45633		
2165	959932-50	6/00: Cat 2a	Rear Direction Indicator Lamp	LED	N/A LED	DI*2165-B	36056	959-150-06	9930
2165-CS	959932-51					N/A ECE	2a 01 E24 0023	959-150-94	2a 01 E24 0023
2167	959932-71	6/00: Cat 2a	Rear Direction Indicator Lamp	LED	N/A LED	DI*2165-B	36056	959-150-22	9930
2167-CS	959932-53					N/A ECE	2a 01 E24 0023	980-703-05	2a 01 E24 0023
2303	901227-19	49/00	Stop Lamp	K1221	C21W	RR*2303*A	15249	911-352-15	910001
2305	963639-30	49/00	Rear Position Lamp or Rear End Outline Lamp	LED	N/A LED	RP*2305*A	24962	911-353-39	9808
		47/00	Retro Reflector (Red/Rear)	N/A	N/A	RE*2305*B	25036		
2306	963639-31	49/00	Rear Positon Lamp or Rear End Outline Lamp	LED	N/A LED	RP*2305*A	24962		
		47/00	Retro Reflector (Red/Rear)	N/A	N/A	RE*2305*B	25036		
2307	959560-10	49/00	Rear Positon Lamp or Rear End Outline Lamp	LED	N/A LED	RP*2307X*A	40680	959-150-81	9560
2308	959 610-40	49/00	Rear Position Lamp or Rear End Outline Lamp	LED	N/A LED	N/A ECE	E4 7R 02 7597	959-149-20	E4 7R 02 7597
2309	959700-30	49/00	Rear Position Lamp or Rear End Outline Lamp	LED	N/A LED	RR*2309*A	31431	959-149-59	9700

HELLA Part No.	Engineering Drawing No.	ADR No.	Function	Bulb(s)	Bulb Type	HELLA Ref. or ECE	FORS Ref: CRN or ECE	Instruction Sheet No.	Lamp Identification
2310	980855-30	49/00	Rear Position Lamp or Rear End Outline Lamp	LED	N/A LED	RR*2310*A	45631	958-780-71	0855
2310S	980855-31								
2311 & 2311P	980660-40	49/00	Rear Position Lamp or Rear End Outline Lamp	LED	N/A LED	TBA	TBA	958-780-97	6600
2312	980990-60	49/00	Rear Position Lamp or Rear End Outline Lamp	LED	N/A LED	2312*REOM*C	45945	958-780-91	0990
2314	900739-11	49/00	Rear Position / Stop Lamp	L125/K1221	C5W/C21W	RR*2314*A	15316	911-352-83	10833
2315	900741-22	49/00	Rear Position / Stop Lamp	L125/K1221	C5W/C21W	RR*2315*A	15310	911-352-84	10833
	959030-00	47/00	Retro Reflector (Red/Rear)	N/A	N/A	RE*2317*A-1	22948	959-149-05	9030
		49/00	Rear Position: Horiz	LED	N/A LED	RP*2317H*A	42577		
		49/00	Stop: Horiz			ST*2317H*A	42579		
		49/00	Rear Position: Vert			RP*2317V*A	42578		
		49/00	Stop: Vert			ST*2317V*A	42582		
2319	910664-02	47/00	Retro Reflector (Red/Rear)	N/A	N/A	RE*2319*A	15149	911-352-16	013051
		49/00	Rear Position / Stop Lamp	S1221/5V	P21W/5W	RR*2319*A	15151		
	2319LED	47/00	Retro Reflector (Red/Rear)	N/A	N/A	RE*2317*A-1	22948	959-149-05	9030
		49/00	Rear Position: Horiz	LED	N/A LED	RP*2317H*A	42577		
		49/00	Stop: Horiz			ST*2317H*A	42579		
		49/00	Rear Position: Vert			RP*2317V*A	42578		
		49/00	Stop: Vert			ST*2317V*A	42582		
2320LED-H	2320LED-H	49/00	Stop Lamp	LED	N/A	SL*2332-H24*A	34509	959-149-87	9040
2320LED-V	2320LED-V		Rear Position Lamp		N/A LED	RP*2332-H24*A	34502		
						SL*2332-V24*A	36722		
						RP*2332-V24*A	36721		
2321	958606-00	47/00	Retro Reflector (Red/Rear)	N/A	N/A	RE*2321*A	15327	911-352-91	HNZ01
		49/00	Rear Position / Stop Lamp	S1221/5V	P21W/5W	RR*2321*A	15328		
2322	003236-34	49/00	Rear Position Lamp or Rear End Outline Lamp	G125	R5W	RR*2322*A	15173	911-352-18	7R0111591
2323	003236-33	49/00	Stop Lamp	R1221	P21W	RR*2323*A	15174	911-352-19	11589
2324	006679-02	49/00	Rear Position Lamp or Rear End Outline Lamp	G1210	R10W	RR*2324*A	15251	911-352-20	0131470
2325	003014-05	49/00	Rear Position Lamp or Rear End Outline Lamp	L125	C5W	RR*2325*A	15252	911-352-21	0131418
2330	959060-00	49/00	Rear Position: Horiz	LED	N/A LED	RP*2330H1*A	42558	959-149-00	9060
2331	959060-20	49/00	Stop: Horiz	LED	N/A LED	ST*2330H1*A	42560	959-149-02	
		49/00	Rear Position: Vert			RP*2330V1*A	42559		
		49/00	Stop: Vert			ST*2330I*A	42561		
2330-H	959-060-35	49/00	Stop Lamp	LED	N/A LED	SL*2330-H*A	36428	959-150-12	9060
2330-V	959-060-25		Rear Position Lamp			RP*2330-H*A	36426		
				SL*2330-V*A	36429				
						RP*2330-V*A	36427		
2332-H24	959040-5x	49/00	Stop Lamp	LED	N/A LED	SL*2332-H24*A	34509	959-149-87	
			Rear Position Lamp			RP*2332-H24*A	34502		
2332-V24	959040-70						SL*2332-V24*A		36722
						RP*2332-V24*A	36721		
2334	959074-50	49/00	Stop Lamp	LED	N/A LED	SL*2334*A	26486	959-149-27	9074
			Rear Position Lamp			RP*2334*A	26484		
2334-24V	959074-00						SL*2334-24V*A		
						RP*2334-24V*A	26151		
2359	959931-12	49/00	Stop Lamp	LED	N/A LED	ST*2365*B	36250	959-150-21	9930
		49/00	Rear Position Lamp			RP*2365*B	36078		
2361	980760-01	49/00	Stop Lamp	LED	N/A LED	ST*2361*A	45634	958-780-75	0760
		49/00	Rear Position Lamp			RP*2361*A	45632		
		49/00	Retro Reflector (Red/Rear)			N/A	N/A		
2365	959931-00	49/00	Stop Lamp	LED	N/A LED	ST*2365*B	36250	959-150-05	9930
		49/00	Rear Position Lamp			RP*2365*B	36078		

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2366	959821-00	49/00	Stop Lamp	LED	N/A LED	SL*2366*A	33196	959-149-70	9020		
			Rear Position Lamp			RP*2366*A	33198				
2366-24V	959020-00	49/00				SL*2366-24V*A	30445	959-149-52	9020		
						RP*2366-24V*A	30443				
2367	959931-11	49/00	Stop Lamp	LED	N/A LED	ST*2365*B	36250	959-150-20	9930		
			Rear Position Lamp			RP*2365*B	36078				
2368	900807-01	6/00: Cat 2a	Rear Direction Indicator Lamp	K1221	C21W	FL*2368*A	15278	911-352-26	69079		
		47/00	Retro Reflector (Red/Rear)	N/A	N/A	RE*2368*B	15279				
		48/00	Number Plate Lamp	L1210	N/A	LP*2368*B	15289				
		49/00	Rear Position / Stop Lamp	L1210/K1221	N/A/C21W	RR*2368*B	16361				
2377	980710-01	6/00: Cat 2a	Rear Direction Indicator Lamp	LED	N/A LED	2377*RDI*C	45253	958-780-66	0710		
		49/00	Stop Lamp			2377*ST*C	45256				
		49/00	Rear Position Lamp			2377*RP*C	45254				
		47/00	Retro Reflector (Red/Rear)			N/A	N/A			2377*RR*C	45255
2378	980613-00	6/00: Cat 2a	Rear Direction Indicator Lamp	LED	N/A LED	2378*RDI*C	45258	958-780-63	0710		
2378-CS	980613-20	49/00	Stop Lamp			2378*ST*C	45260	958-780-64			
2378DT	980602-00	49/00	Rear Position Lamp			2378*RP*C	45259	958-780-65			
2378DTCS	980602-20					2378*DT*RP*C	45257	958-780-68			
2379	959050-00	6/00: Cat 2a	Rear Direction Indicator Lamp	LED	N/A LED	DI*2379*A	30916	959-149-47	9050		
2379-CS	959050-40	49/00	Stop Lamp			SL*2379*A	30919				
2379-GMD	959050-41	49/00	Rear Position Lamp			RP*2379*A	30917	959-150-55	9050		
2380	980603-50	6/00: Cat 2a	Rear Direction Indicator Lamp	LED	N/A LED	DI*2380*A	43630	958-780-05	9050		
2380-GMD	980603-55	49/00	Stop Lamp			SL*2380*A	43632				
2380-DT	980615-01	49/00	Rear Position Lamp			RP*2380*A	43631	958-780-35	9050		
2380-DTGMD	980615-05	1/00	Reversing Lamp			RL*2380*A	43628				
2382	951221-01	47/00	Retro Reflector (Red/Rear)	N/A	N/A	RE*2382*A	15284	911-352-29	92000		
		48/00	Number Plate Lamp	G125	R5W	LP*2382*A	15285				
		49/00	Rear Position / Stop Lamp	G125/R1221	R5W/P21W	RR*2382*A	15286				
2384	003014-14	48/00	Number Plate Lamp	L125	C5W	LP*2384*A	15175	911-352-30	231453		
		49/00	Rear Position / Stop Lamp	L125/R1221	C5W/P21W	RR*2384*A	15167				
2390	959010-00	49/00	Stop Lamp	LED	N/A LED	SL*2390*A	30651	959-149-51	9010		
		49/00	Rear Position Lamp			RP*2390*A	30650				
2391	980980-00	1/00	Reversing Lamp	LED	N/A LED	2391*RV*C	45251	958-780-58	0980		
		6/00: Cat 2a	Rear Direction Indicator Lamp			2391*RDI*C	45248				
		49/00	Stop Lamp			2391*ST*C	45262				
		49/00	Rear Position Lamp			2391*RP*C	45261				
		47/00	Retro Reflector (Red/Rear)			N/A	N/A			2391*RR*C	45250
2392L	980980-01	1/00	Reversing Lamp	LED	N/A LED	2392*RV*C	45267	958-780-59	0980		
		6/00: Cat 2a	Rear Direction Indicator Lamp			2392*RDI*C	45264				
		49/00	Stop Lamp			2392*ST*C	45268				
2392R	980980-02	49/00	Rear Position Lamp	LED	N/A LED	2392*RP*C	45265				
		47/00	Retro Reflector (Red/Rear)	N/A	N/A	2392*RR*C	45266				
		48/00	Number Plate Lamp	LED	N/A LED	2392*LP*C	45263				
2394	980720-00	6/00: Cat 2a	Rear Direction Indicator Lamp	LED	N/A LED	DI*2394*B	42034	980-703-20 958-780-56			
		49/00	Stop Lamp			SL*2394*A	42037				
		49/00	Rear Position Lamp			RP*2394*A	42036				
		47/00	Retro Reflector (Red/Rear)			N/A	N/A			N/A ECE	1A E24 5860
2395	980720-40	6/00: Cat 2a	Rear Direction Indicator Lamp	LED	N/A LED	DI*2395*B	42030	980 703-21 958-780-57	0720		
		49/00	Stop Lamp			SL*2395*C	42179				
		49/00	Rear Position Lamp			RP*2395*C	42178				
		47/00	Retro Reflector (Red/Rear)			N/A	N/A			N/A ECE	1A E24 5860
		48/00	Number Plate Lamp	LED	N/A LED	LP*2395*C	42175				
2396	905002-01	6/00: Cat 2a	Rear Direction Indicator Lamp	K1221	C21W	FL*2396*A	15239	911-352-31	54519		
		48/00	Number Plate Lamp	L125	C5W	LP*2396*A	15280				
		49/00	Rear Position / Stop Lamp	L125/K1221	C5W/C21W	RR*2396*A	15238				

HELLA Part No.	Engineering Drawing No.	ADR No.	Function	Bulb(s)	Bulb Type	HELLA Ref. or ECE	FORS Ref: CRN or ECE	Instruction Sheet No.	Lamp Identification
<b>2397</b>	905168-00	6/00: Cat 2a	Rear Direction Indicator Lamp	K1221	C21W	FL*2397*A	15258	911-352-32	953811
		47/00	Retro Reflector (Red/Rear)	N/A	N/A	RE*2397*A	15261		
		49/00	Rear Position / Stop Lamp	L125/K1221	C5W/C21W	RR*2397*A	15265		
<b>2398</b>	905070-00	6/00: Cat 2a	Rear Direction Indicator Lamp	K1221	C21W	FL*2398*A	15259	911-352-33	R.D.54508
		49/00	Rear Position / Stop Lamp	L125	C5W/C21W	RR*2398*A	15266		
<b>2399</b>	959010-20	6/00: Cat 2a	Rear Direction Indicator Lamp	LED	N/A LED	DI*2399*A	37114	959-150-30	9010
		49/00	Stop Lamp			SL*2399*A	37116		
		49/00	Rear Position Lamp			RP*2399*A	37115		
<b>2400</b>	910036-01	6/00: Cat 2a	Rear Direction Indicator Lamp	R1221	P21W	FL*2400*A	15260	911-352-34	953811
		47/00	Retro Reflector (Red/Rear)	N/A	N/A	RE*2400*A	15262		
		48/00	Number Plate Lamp	G1210	R10W	LP*2400*A	15263		
		49/00	Rear Position / Stop Lamp	G1210/R1221	R10W/P21W	RR*2400*A	15267		
<b>2402</b>	950027-02	6/00: Cat 2a	Rear Direction Indicator Lamp	K1221	C21W	FL*2402*B	15334	911-352-35	013051
		47/00	Retro Reflector (Red/Rear)	N/A	N/A	RE*2402*B	15336		
		49/00	Rear Position / Stop Lamp	L125/K1221	C5W/C21W	RR*2402*B	15335		
<b>2403</b>	950027-03	6/00: Cat 2a	Rear Direction Indicator Lamp	K1221	C21W	DI*2403*A	15331	911-352-94	13051
		47/00	Retro Reflector (Red/Rear)	N/A	N/A	RE*2403*A	15333		
		49/00	Rear Position / Stop Lamp	L125/K1221	C5W/C21W	RR*2403*A	15332		
		1/00	Reversing Lamp	K1221	C21W	RL*2403*A	15337		
<b>2404</b>	951221-03	6/00: Cat 2a	Rear Direction Indicator Lamp	R1221	P21W	FL*2404*A	15241	911-352-36	92000
		47/00	Retro Reflector (Red/Rear)	N/A	N/A	RE*2404*A	15288		
		48/00	Number Plate Lamp	S1221/5V	P21W/5W	LP*2404*A	15240		
		49/00	Rear Position / Stop Lamp	S1221/5V	P21W/5W	RR*2404*A	15242		
<b>2414</b>	604011	1/00	Reversing Lamp	R1221	P21W	RL*2414*A	29428	911-353-56	9385/9531
		6/00: Cat 2a	Rear Direction Indicator Lamp			DI*2414*A	29426		
		49/00	Stop Lamp			SL*2414*A	29429		
<b>2415</b>	604012	49/00	Rear Position Lamp	G1210	R10W	RP*2414*A	29430	911-353-57	9385/9531
		1/00	Reversing Lamp	R1221	P21W	RL*2414*A	29428		
		6/00: Cat 2a	Rear Direction Indicator Lamp			DI*2414*A	29426		
<b>2416</b>	954002-01	49/00	Stop Lamp	G1210	R10W	SL*2414*A	29429	911-352-40	013051
		6/00: Cat 2a	Rear Direction Indicator Lamp	R1221	P21W	FL*2416*A	15269		
		47/00	Retro Reflector (Red/Rear)	N/A	N/A	RE*2416*A	15274		
<b>2416LED</b>	2416LED	49/00	Rear Position / Stop Lamp	S1221/5V	P21W/5W	RR*2416*A	15276	911-352-41	013051
		6/00: Cat 2a	Rear Direction Indicator Lamp	LED	N/A LED	12V Horiz	44203		
		47/00	Retro Reflector (Red/Rear)	N/A	N/A	24V Horiz	44204		
<b>2417</b>	954 002-00	49/00	Stop: Horiz	LED	N/A LED	12V Vert	44205	959-150-39	9030
		49/00	Rear Position: Vert			24V Vert	44209		
		49/00	Stop: Vert			ST*2317*A	42582		
<b>2419</b>	003184-03	49/00	Stop: Horiz	LED	N/A LED	RP*2317H*A	42577	911-352-42	7R0153253
		49/00	Rear Position: Vert			ST*2317H*A	42579		
		49/00	Stop: Vert			RP*2317V*A	42578		
<b>2420</b>	003184-10	49/00	Stop: Horiz	LED	N/A LED	ST*2317V*A	42578	911-352-43	7R0153253
		49/00	Rear Position: Vert			ST*2317V*A	42582		
		49/00	Stop: Vert			ST*2317V*A	42582		
<b>2421</b>	004623-00	49/00	Stop: Horiz	LED	N/A LED	RP*2317H*A	42577	911-352-44	7R01763
		49/00	Rear Position: Vert			ST*2317H*A	42579		
		49/00	Stop: Vert			RP*2317V*A	42578		

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2422LED	2422LED	6/00: Cat 2a	Rear Direction Indicator Lamp	LED	N/A LED	12V Horiz	44203	959-150-38	9030	
						24V Horiz	44204			
						12V Vert	44205			
						24V Vert	44209			
		47/00	Retro Reflector (Red/Rear)	N/A	N/A	RE*2317*A-1	22948			
		49/00	Rear Position: Horiz	LED	N/A LED	RP*2317H*A	42577			
		49/00	Stop: Horiz			ST*2317H*A	42579			
49/00	Rear Position: Vert	RP*2317V*A	42578							
2423	958616-00	49/00	Stop: Vert			ST*2317V*A	42582			
		6/00: Cat 2a	Rear Direction Indicator Lamp	R1221	P21W	DI*2423*A	15338	911-352-92	HNZ01	
		47/00	Retro Reflector (Red/Rear)	N/A	N/A	RE*2423*A	15339			
49/00	Rear Position / Stop Lamp	S1221/5V	P21W/5W	RR*2423*A	15340					
2424	958616-01	6/00: Cat 2a	Rear Direction Indicator Lamp	R1221	P21W	DI*2424*A	15342	911-352-93	HNZ01	
		47/00	Retro Reflector (Red/Rear)	N/A	N/A	RE*2424*A	15343			
		49/00	Rear Position / Stop Lamp	S1221/5V	P21W/5W	RR*2424*A	15344			
		1/00	Reversing Lamp	R1221	P21W	RL*2424*A	15341			
2424LED-H	2424LED-H	1/00	Reversing Lamp	R1221	P21W	RL*2424*A	15341	911-352-93	HNZ01	
						DI*2146-H24*A	34498	959-149-88		
						SL*2332-H24*A	34509	959-149-87	9040	
2424LED-V	2424LED-V	6/00: Cat 2a	Rear Direction Indicator Lamp			RP*2332-H24*A	34502			
		49/00	Stop Lamp	LED	N/A LED	RL*2424*A	15341	911-352-93	HNZ01	
		49/00	Rear Position Lamp			DI*2146-V24*A	36718	959-149-88		
2426-H	959-040-801	6/00: Cat 2a	Rear Direction Indicator Lamp	LED	N/A LED	SL*2332-V24*A	36722	959-149-87	9040	
						RP*2332-V24*A	36721			
						DI*2146-H24*A	34498			959-149-88
2426-V	959-040-901	49/00	Stop Lamp			SL*2332-H24*A	34509	959-149-87		
		49/00	Rear Position Lamp			DI*2146-V24*A	36718	959-149-88		
		49/00	Rear Position Lamp			SL*2332-V24*A	36722	959-149-87	9040	
2427-H	959-040-811	6/00: Cat 2a	Rear Direction Indicator Lamp	LED	N/A LED	RP*2332-V24*A	36721	959-149-87	9040	
						DI*2146-H24*A	34498			959-149-88
						SL*2332-H24*A	34509			959-149-87
2427-V	959-040-911	49/00	Stop Lamp			RP*2332-H24*A	34502	959-149-87		
		49/00	Rear Position Lamp			DI*2146-V24*A	36718	959-149-88		
		49/00	Rear Position Lamp			SL*2332-V24*A	36722	959-149-87	9040	
2428-H	959-041-811	1/00				RP*2332-V24*A	36721	959-149-87		
		6/00: Cat 2a				DI*2146-H24*A	34498	959-149-88	9040	
		49/00	Reversing Lamp			SL*2332-H24*A	34509	959-149-87		
		49/00	Rear Direction Indicator Lamp	LED	N/A LED	RP*2332-H24*A	34502	959-149-87		
2428-V	959-041-911	1/00	Stop Lamp			RL*1446-H*A	35980	959-149-95		
		6/00: Cat 2a	Rear Position Lamp			DI*2146-V24*A	36718	959-149-88	9040	
		49/00				SL*2332-V24*A	36722	959-149-87		
		49/00				RP*2332-V24*A	36721	959-149-87		
2429	980760-80	6/00: Cat 2a	Rear Direction Indicator Lamp			DI*2161*A	45443	958-780-73		
2429-CS	980761-80	49/00	Stop Lamp	LED	N/A LED	ST*2361*A	45634	958-780-75	0760	
		49/00	Rear Position Lamp			RP*2361*A	45632			
		47/00	Retro Reflector (Red/Rear)	N/A	N/A	RE*2161*A	45633			
2430	980760-81	6/00: Cat 2a	Rear Direction Indicator Lamp	LED	N/A LED	DI*2161*A	45443	958-780-73		
2430-CS	980761-81	49/00	Stop Lamp			ST*2361*A	45634	958-780-75	0760	
		49/00	Rear Position Lamp	LED	N/A LED	RP*2361*A	45632			
		47/00	Retro Reflector (Red/Rear)	N/A	N/A	RE*2161*A	45633			
2431	980760-82	6/00: Cat 2a	Rear Direction Indicator Lamp	LED	N/A LED	DI*2161*A	45443	958-780-73		
2431-CS	980761-82	49/00	Stop Lamp			ST*2361*A	45634	958-780-75		
		49/00	Rear Position Lamp	LED	N/A LED	RP*2361*A	45632	958-780-72	0760	
		1/00	Reversing Lamp			RL*1461*A	45442			
		47/00	Retro Reflector (Red/Rear)	N/A	N/A	RE*2161*A	45633			

HELLA Part No.	Engineering Drawing No.	ADR No.	Function	Bulb(s)	Bulb Type	HELLA Ref. or ECE	FORS Ref: CRN or ECE	Instruction Sheet No.	Lamp Identification
2550	001386-28	48/00	Number Plate Lamp	L125	C5W	LP*2550*A	15157	911-352-45	12820
2551	001386-29	48/00	Number Plate Lamp	L125	C5W	LP*2551*A	15158	911-352-46	12820
2553	951068-02	48/00	Number Plate Lamp	G1210	R10W	LP*2553*A	15150	911-352-47	E1 22819
2554	950921-00	48/00	Number Plate Lamp	G1210	R10W	LP*2554*A	15236	911-352-48	2554
2555	001389-10	48/00	Number Plate Lamp	L125	C5W	LP*2555*A	15156	911-352-49	12815R4
2557	900967-03	48/00	Number Plate Lamp	HL124	T4W (2 Pieces)	LP*2557*A	15207	911-352-50	4151
2558	004525-00	48/00	Number Plate Lamp	L125	C5W (2 Pieces)	LP*2558*A	15326	911-352-85	22861
2559	959640-30	48/00	Number Plate Lamp	LED	N/A LED	LP*2559H*A	41602	980-703-00	9640
2902	002016-11	47/00	Retro Reflector (Red/Rear)	N/A	N/A	RE*2902*A	15180	911-352-51	0231290
2910	900913-04	47/00	Retro Reflector (Red/Rear)	N/A	N/A	RE*2910*A	15182	911-352-53	0231290
2915	002014-03	47/00	Retro Reflector (Red/Rear)	N/A	N/A	RE*2915*A	15152	911-352/3-55/50	0221353
2916	002014-05	47/00	Retro Reflector (Amber/Side)	N/A	N/A	RE*2916*A	15153	911-352/3-56/48	0221353
2917	002014-04	47/00	Retro Reflector (White/Front)	N/A	N/A	RE*2917*A	15154	911-352/3-57/49	0221353
2919	004412-00	47/00	Retro Reflector (Amber/Side)	N/A	N/A	RE*2919*A	15233	911-352/3-58/48	02338
2920	004412-02	47/00	Retro Reflector (Red/Rear)	N/A	N/A	RE*2920*A	15294	911-352/3-70/50	02338
2921	004412-01	47/00	Retro Reflector (White/Front)	N/A	N/A	RE*2921*A	15293	911-352/3-71/49	02338
2922	003326-04	47/00	Retro Reflector (Amber/Side)	N/A	N/A	RE*2922*A	15237	911-352/3-59/48	0292031
2923	003326-03	47/00	Retro Reflector (Red/Rear)	N/A	N/A	RE*2923*A	15296	911-352/3-72/50	0292031
2924	003326-05	47/00	Retro Reflector (White/Front)	N/A	N/A	RE*2924*A	15295	911-352/3-73/49	0292031
2925	004713-00	47/00	Retro Reflector (Amber/Side)	N/A	N/A	RE*2925*A	15234	911-352/3-60/48	02353
2926	342007-10	47/00	Retro Reflector (Red/Rear)	N/A	N/A	RE*2926*A	15298	911-352/3-74/50	02353
2927	342007-20	47/00	Retro Reflector (White/Front)	N/A	N/A	RE*2927*A	15297	911-352/3-75/49	02353
2934-H	980565-10	47/00	Retro Reflector (Red /Rear)	N/A	N/A	RE*2934-H*A	38243	959-150-34	5651
2934-V	980565-50					RE*2934-V*A	38244	959-150-34	5655
5237	959190-12	49/00: Cat S3	Centre High Level Brake Lamp	LED	N/A LED	BL*5237*B	15350	911-352-64A	523
5238	959191-12	49/00: Cat S3	Centre High Level Brake Lamp	LED	N/A LED	BL*5238*B	15349	911-352-65A	523
5239	959192-12	49/00: Cat S3	Centre High Level Brake Lamp	LED	N/A LED	BL*5239*B	15351	911-352-66A	523
5240	959171-00	49/00: Cat S3	Centre High Level Brake Lamp	WBL122	N/A TYPE WBL122	BL*5240*A	15109	911-352-67	SAE U390
5242	006631-00	49/00: Cat S3	Centre High Level Brake Lamp	W1221	W16W	BL*5242*A	15290	911-352-08	5242
5243	959071-53	49/00: Cat S3	Centre High Level Brake Lamp	LED	N/A LED	8-5243-08	23071	959-089-01	27547
5245	980887-30	49/00: Cat S3	Centre High Level Brake Lamp	LED	N/A LED	5245*12*ST*C	45934	958-780-93	0880 A
5245-24V	980887-40					5245*24*ST*C	45935		
5617	980670-00	76/00	Daytime Running Lamp	LED	N/A LED	N/A ECE	E24 87R-000002	980-703-10	E24 0002 (0670)
5618	980680-80	76/00	Daytime Running Lamp	LED	N/A LED	N/A ECE	E24 87R-000001	980-703-12	E24 0001 (0680)
5618-24V	980680-85							980-703-24	
5619	980880-80	76/00	Daytime Running Lamp	LED	N/A LED	DRL*1009*A	44200	958-780-26	0880
5619-24V	980880-85					DRL*1009-24V*A	44202		
5619V	980880-90	76/00	Daytime Running Lamp	LED	N/A LED	1009V*DRL*C	45962	958-780-98	0880 B
5619V-24V	980880-95					1009-24VDRLC	45965		
5630	980860-84	76/00	Daytime Running Lamp	LED	N/A LED	N/A ECE	E24 87R-005863	958-780-18	E24 5863
5630-24V	980860-87								
5631	980850-84	76/00	Daytime Running Lamp	LED	N/A LED	N/A ECE	E24 87R-005862	958-780-19	E24 5862
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5636	980970-80	76/00	Daytime Running Lamp	LED	N/A LED	DRL*1013*A	44776	958-780-52	0970
5636-24V	980970-85					DRL*1013-24V*A	44783		
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