Approval number: E4-6R-01 10176 **Extension number: 01**

Hella New Zealand

Mounting Instruction
Anbauanweisung

HKG-LI-K Ke
31485
07.12.2010

Type: 2SD 959 050
Typ:

Belongs to approval no.: E4 10176
Gehört zu Gen.-Nr.:

Rear Position-/ Stop Lamp and Rear Direction Indicator for Automobile.
Schluss-/ Bremsleuchte und hinterer Fahrtrichtungsanzeiger für Kraftfahrzeuge.

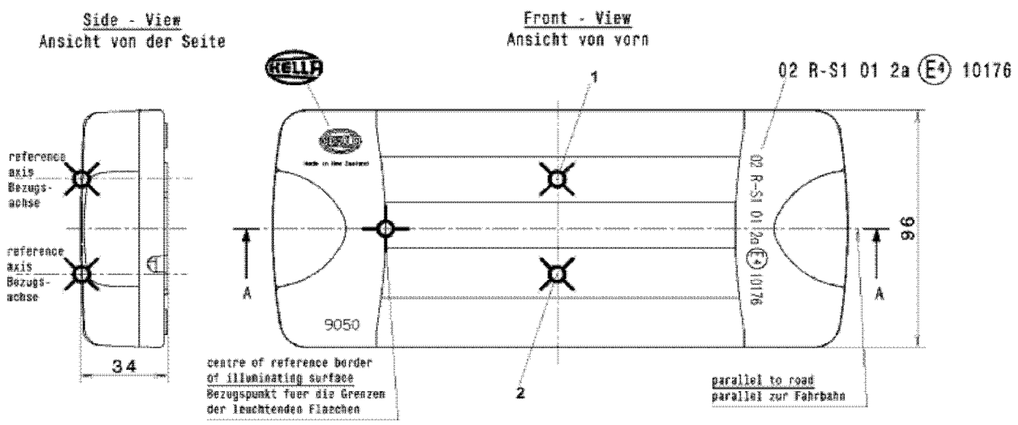
Light source(s): *Lichtquelle(n):*			**Design voltage:** *Prüfspannung:*	**Nominal voltage:** *Nennspannung:*	**Nominal power:** *Nennleistung:*
1	**Rear Position Lamp** *Schlussleuchte*	8 LEDs	13.5V / 28.0V	8.0V - 28.0V	1.5W
1	**Stop Lamp** *Bremsleuchte*	24 LEDs	13.5V / 28.0V	8.0V - 28.0V	5.0W
2	**Direction Indicator** *Fahrtrichtungsanzeiger*	16 LEDs	13.5V / 28.0V	8.0V - 28.0V	3.0W

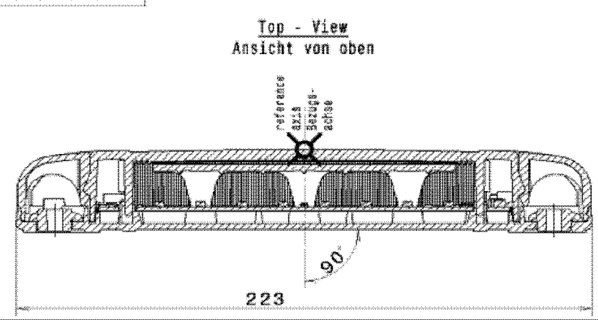
⌑ = **Centre of reference in accordance with the ECE-Regulations - No. 6 and 7.**
Bezugspunkt nach den ECE-Regelungen - Nr. 6 und 7.

✧ = **Centre of reference for the definition for illuminating surface in accordance with the Council Directive 76/756 EEC or ECE-Regulation No. 48 (see Annex A).**
Bezugspunkt zur Bestimmung der Grenzen der leuchtenden Fläche nach 76/756 EWG bzw. ECE-Regelung Nr. 48.
Markierung s. auf der Abschluss-Scheibe. Maße s. Anlage A.

Axis of reference: **Parallel to the car centre line and parallel to the road.**
Bezugsachse: *Parallel zur Fahrzeuglängsachse und parallel zur Fahrbahn.*

The Lamp can be rotated in 90° steps around the reference axis.
Das Gerät kann auch in 90°Schritten gedreht um die Bezugsachse angebaut werden.





RDW

The device must be mounted according to the enclosed fitting documents (e. g. sketch + Annex A).
Der An- bzw. Einbau der Geräte hat nach anliegenden An- bzw. Einbauunterlagen (z. B. Skizze und Anlage A) zu erfolgen.

INSTRUCTION SHEET
for: ***Part No. 2SD 959 050-40x***

APPLICATION AND MOUNTING INSTRUCTIONS

DuraLED® *Combi STOP / REAR POSITION / REAR DIRECTION INDICATOR LAMP*
Multivolt 8 - 28 volts

Features Include:

- *DuraLED®* ***Combi*** = Fully sealed against salt-water submersion
- *DuraLED®* ***Combi*** = Stop, Rear Position and Indicator functions in a single lamp
- *DuraLED®* ***Combi*** = Vibration and shock resistant
- *DuraLED®* ***Combi*** = Ultra long service life
- *DuraLED®* ***Combi*** = Ultra fast response time
- *DuraLED®* ***Combi*** = Reverse polarity protected
- *DuraLED®* ***Combi*** = Low power consumption
- *DuraLED®* ***Combi*** = Manufactured from the latest "high tech" acrylic with enhanced impact and chemical tolerance
- *DuraLED®* ***Combi*** = Enhanced transient spike protection

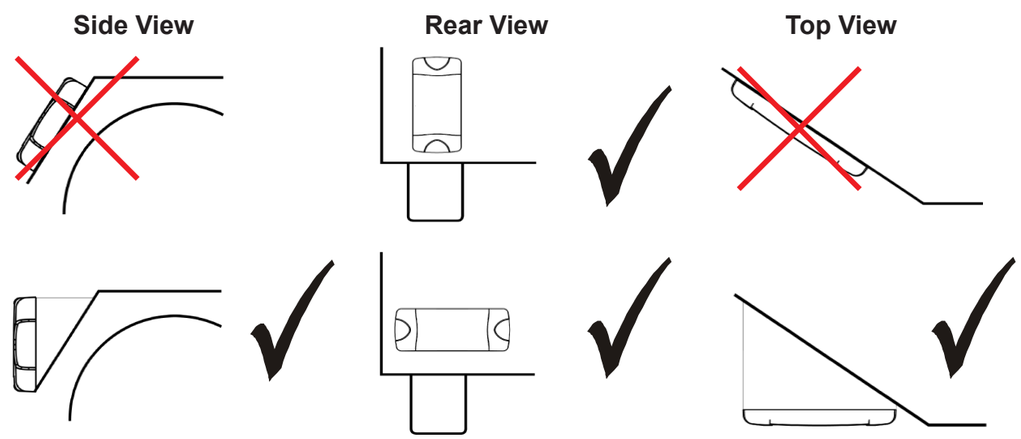
Lens Marking and Installation Requirements

This Stop / Rear Position / Direction Indicator Lamp, identified by lens marking E4 10176 and the HELLA logo was manufactured to comply with:
ECE Regulation No. 7 Rear Position (side) / Stop Lamp
ECE Regulation No. 6 Category 2a Rear Direction Indicator Lamps

- Lamp mounting surface must be vertical to the ground, and at right angles to the longitudinal axis of the vehicle.
- Lamp must be visible from 45° inboard and 80° outboard, as well as from 15° above and below the horizontal axis.
- At least two lamps are required.
- Lamps must not be mounted less than 350 mm and more than 1500 mm above the ground, two additional lamps can be mounted at a vertical distance no less than 600 mm from the mandatory lamps.
- Lamps must be mounted within 400 mm of the widest point of the vehicle and no closer than 600 mm together.
- Lamp is approved to be mounted horizontally and vertically

Note: Lamp does not include a reflex reflector.

Lamp Mounting



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HELLA-New Zealand Limited, Auckland, New Zealand

INSTRUCTION SHEET

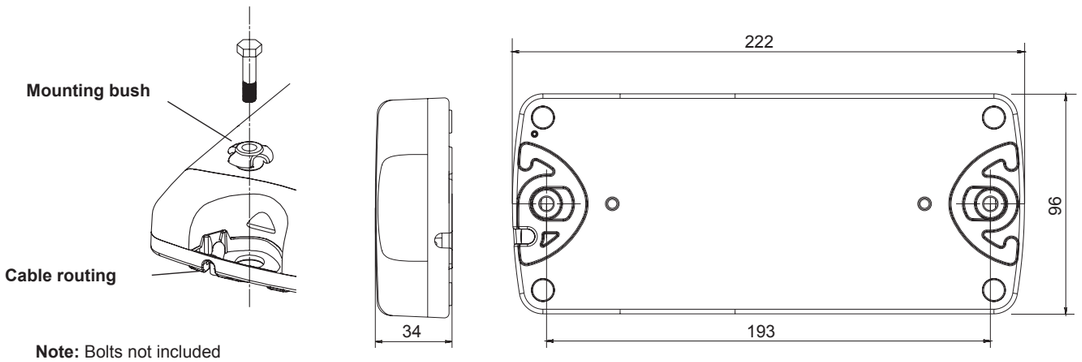
for: **Part No. 2SD 959 050-40x**

Lamp Mounting Instruction

Screw Cap Removal
Carefully insert a small flat blade screwdriver between the cap and the lens and pull towards the lens, the cap will clip off. To install the cap push in by hand until the top is flush with the lens.

Surface Mounting
- Drill two holes up to 6.5mm Ø at 193mm centres. 6mm Ø screws or bolts are recommended to mount the lamp using the mounting bushes provided.
- Lamp should be mounted on a flat surface.
- If passing the cable through a hole, ensure there are no sharp edges to cut or chafe the cable. Alternatively, cable can be routed through the end of the base.
- Connect lamp as per chart below.
- Try to keep the cable as long as possible, preferably join the cable inside a sealed cable junction box.
- Clip the screw caps on securely until flush with the lamp surface.

General Dimensions *(in millimeters)*



Note: Bolts not included

Wiring Colour Coding
This lamp is Multivolt capable allowing full light output between 8 and 28 volts.
Lamp is polarity conscious. The reversal of the polarity will not damage this product but will inhibit its function.
HELLA recommends wire connections be soldered, and heat shrink tubing applied to seal the joint.

Colour	Connect to	Power Consumption
White	Earth (-)	-
Red	Stop (+)	5 watts
Brown	Rear Position (+)	1.5 watts
Blue	Rear Direction Indicator & Trigger Pulse (+)	3 watts

NB: Lamp must be protected by a fuse rated at 5 amperes maximum.

Direction Indicator Lamps with trigger pulse work in conjunction with a failure detection system such as LED flasher units. If additional lamps are fitted beyond the amount supported by the failure detection system than they must be wired separately so as not to be detected.

Important Notes for Installer and Owner

Introduction
Multivolt LED signal and marker lamps offer many advantages over conventional bulb lamps. Significantly reduced power consumption, ultra long life and high tolerance to shock and vibration make the LED lamps the ideal choice for the commercial transport industry, where the cost of ownership versus the initial purchase price of the product is well understood.

Compatibility to existing electrical systems
It is important for the installer to ascertain the compatibility of the low power consumption LED lamps with the electrical and/or electronic systems of the complete vehicle, including trailers. In most cases the reduced power consumption is beneficial by imposing less demands on the entire electrical system.
For certain functions some electrical systems rely on a set power consumption for monitoring whether, for example, a trailer is connected.

Bulb failure monitoring for indicator lamps
The indicator bulb failure warning (if fitted to the vehicle) relies on the full load of a 21-watt bulb in most cases. Multivolt LED lamps with trigger pulse have integrated electronics for failure checking, if operating correctly the lamp will pulse a resistive load during the flasher “on” cycle to simulate this load.
If the vehicle manufacturer does not guarantee indicator bulb failure control via the vehicle wiring system than HELLA can supply electronic control and flasher units which make it possible to convert the indicator failure system to suit Multivolt LED lamps with trigger pulse.

Electromagnetic Compatibility (EMC)
This Multivolt LED lamp is an electronic device. The electrical circuits contain components that suppress possible interference, both emission as well as susceptibility, to the limits prescribed in UNECE Vehicle Regulation No. 10.
To avoid false signals or interference, it is standard practice that sensitive instrumentation such as ABS and Tachometers etc. are provided with direct earths.

Protection against damage due to voltage spikes
This Multivolt LED lamp is protected against damage from positive voltage spikes caused by events such as load dump conditions up to severity level 3 of ISO 7637-2 and contains a Transient Voltage Suppressor (TVS) designed to withstand a pulse of up to 5000 Watts.
The lamp is protected against reverse polarity connection and negative voltage spikes of up to 1000 volts.

Electric Welding
Electric Welding may damage the LED lamps. For LED lamps, HELLA recommends the negative connection to be wired isolated from the vehicle chassis. If the lamp uses the chassis as the earth return it is recommended that this earth return is disconnected during electric welding.

FIT AND FORGET - BY DESIGN

Congratulations, the product you have selected comes from ***HELLA*** - a world leader in LED lighting design.

Following the launch of the first LED automotive signal lamps in 1990, ***HELLA*** Design and Innovation continues to set new standards. ***HELLA*** innovative solutions have been incorporated into millions of lamps, engineered and tested to the most stringent standards, to suit the most demanding environmental conditions.

The cornerstone to the success of our products is our no compromise ***Fit and Forget - by Design*** philosophy which is incorporated into every step of the product life cycle.

In a world consuming finite resources at an ever faster rate, ***Fit and Forget - by Design*** is the right environmental choice that also makes perfect economic sense to customers that consider the total life cycle Cost of Ownership.

For general comments about Hellamarine products please contact us on E-mail at techfeedback@hella.co.nz