Mounting instruction
Anbauanweisung

L-DL-FSCT
03.02.2015

HELLA KGaA Hueck & Co.

Type: **2SK 980 602**
Typ: *(2SK 980 613)*

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Belongs to approval no.: **E24 5894**
Gehört zu Gen.-Nr.:

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

	Light source(s): *Lichtquelle(n):*		Test voltage: *Prüfspannung:*	Voltage range: *Spannungsbereich:*	Nominal power: *Nennleistung:*
1	**Rear Direction Indicator** *Hinterer Fahrtrichtungsanzeiger*	6 LEDs	28V	18V – 32V	3W
2	**Stop Lamp** *Bremsleuchte*	6 LEDs	28V	18V – 32V	3W
2	**Rear Position Lamp** *Schlussleuchte*	6 LEDs	28V	18V – 32V	1W
3	**Reverse Lamp** *Rückfahrscheinwerfer*	6 LEDs	28V	18V – 32V	3W

⌑ = **Centre of reference in accordance with the ECE-Regulations-No.: 6, 7 and 23.**
Bezugspunkt nach den ECE-Regelungen-Nr.: 6, 7 und 23.

✧ = **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 180° around the reference axis.
Die Leuchte kann auch 180° gedreht um die Bezugsachse angebaut warden.

For left- and right hand mounting.
Für links- und rechtsseitigen Einbau.

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.

E24 23R-005894

INSTRUCTION SHEET
for: Part No. 2SK 980 602-5xx / 2383-DT24VCS

APPLICATION AND MOUNTING INSTRUCTIONS

DuraLED® Combi-S STOP / REAR POSITION / INDICATOR / REVERSE LAMP 24V DC

Features Include:

- *DuraLED®* ***Combi*** = Fully sealed against salt-water submersion
- *DuraLED®* ***Combi*** = Stop, Rear Position, Indicator and Reverse 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" materials with enhanced impact and chemical tolerance
- *DuraLED®* ***Combi*** = Enhanced transient spike protection

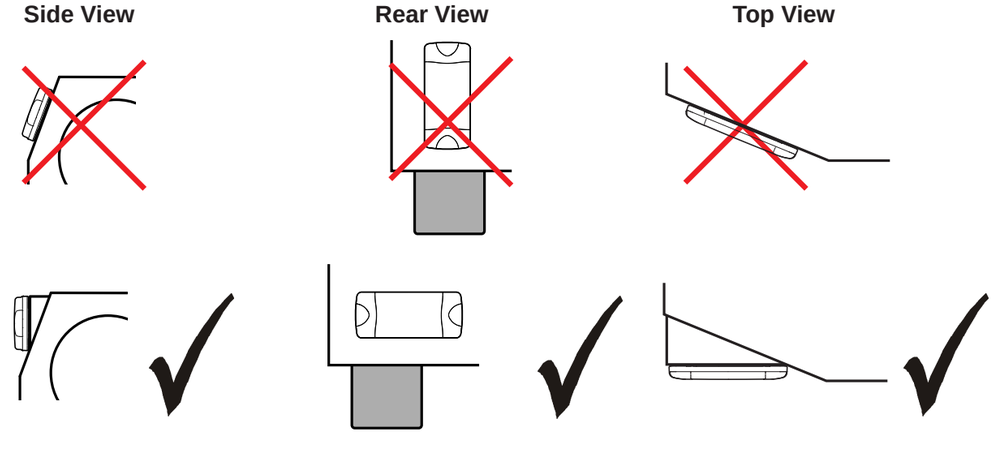
Lens Marking and Installation Requirements

This Stop / Rear Position / Direction Indicator / Reverse Lamp, identified by lens marking (E24) 5894 and the HELLA logo was manufactured to comply with:

ECE Regulation No. 6 Category 2a Rear Direction Indicator Lamps
ECE Regulation No. 7 Rear Position (side) / Stop Lamp
ECE Regulation No. 23 Reversing Lamps.

- Lamp module mounting plane must be vertical to the ground.
- Lamp module reference axis must be parallel to the vehicle longitudinal axis.
- 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 1200 mm above the ground.
- 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 only.

Note: Lamp does not include a reflex reflector.



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HELLA-New Zealand Limited, Auckland, New Zealand

INSTRUCTION SHEET

for: *Part No. 2SK 980 602-5xx / 2383-DT24VCS*

Lamp Mounting Instruction

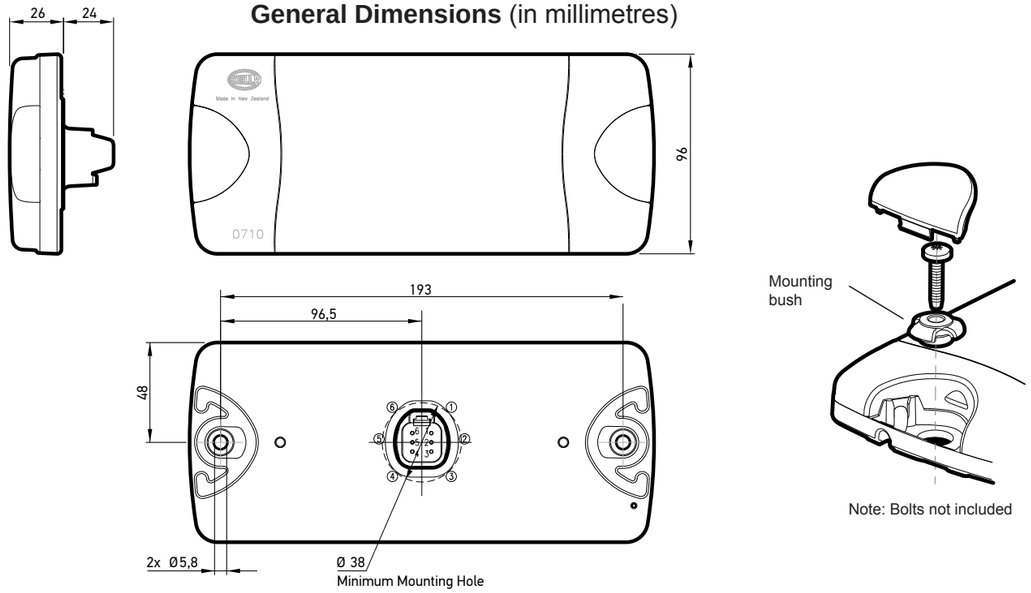
Screw Cap Removal

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

- Lamp should be mounted on a flat surface.
- Drill two holes up to 6.5mm Ø at 193mm centres. 6mm screws or bolts are recommended to mount the lamp using the mounting bushes provided.
- A minimum hole size of Ø38mm is required for the Deutsch 6-way socket in the backplate.
- Prepare the cable for the lamp (not supplied) using the correct plug connector (Deutsch P/N DT06-6S), wedge (Deutsch P/N W6S) and terminals (Deutsch P/N 0462-201-16141).
- Once the lamp is mounted, clip the screw caps on securely until flush with the lamp surface.

General Dimensions (in millimetres)



Note: Bolts not included

Wiring Colour Coding

Lamp is polarity conscious. The reversal of the polarity will not damage this product but will inhibit its function.

Pin Number	Connect to	Power Consumption
1	Rear Position (+)	1 watt
2	Stop (+)	3 watts
3	Indicator & HCS Trigger Pulse (+)	3 watts
4	Reverse (+)	3 watts
5	Earth (-)	-
6	Park (+)	1 watt

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

Direction Indicator Lamps with HCS trigger pulse work in conjunction with HCS / ISO 13207-1 compliant failure detection systems. If additional lamps are fitted beyond the amount supported by the HCS / ISO 13207-1 compliant failure detection system then they must be wired separately so as not to be detected.

Important Notes for Installer and Vehicle Owner

Introduction

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 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. 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 LED lamps with trigger pulse.

Electromagnetic Compatibility (EMC)

This 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 LED lamp is protected against damage from positive voltage spikes caused by events such as load dump conditions specified in ISO 7637 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 Hella's products please contact us on E-mail at techfeedback@hella.co.nz

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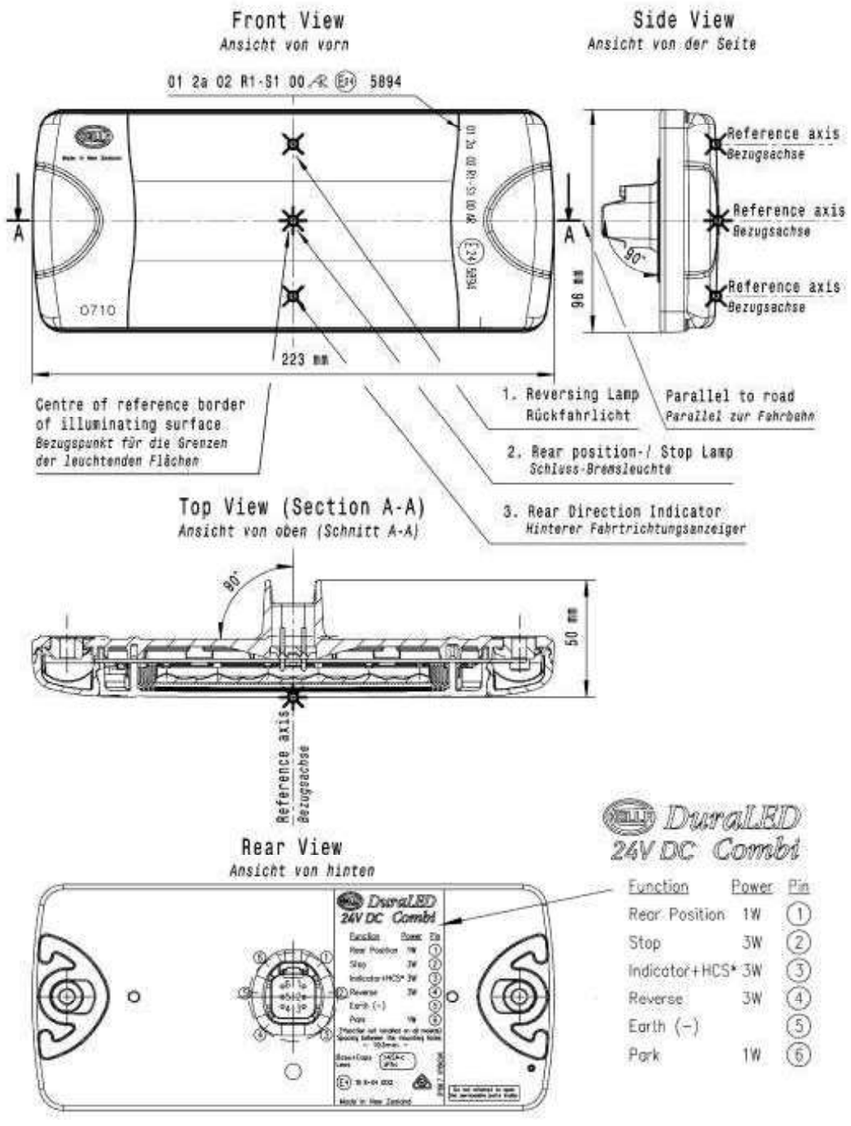
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Type: **2SK 980 602**
Typ: *(2SK 980 613)*

Page 2
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2SK 980 602



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.

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Annex A
Anlage A

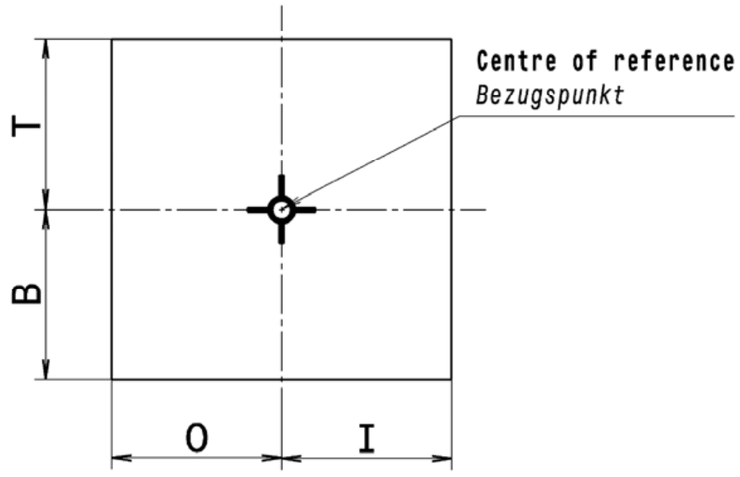
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Determining the borders of the illuminated area of lamp in accordance with the Directives of the Council of the European Community on "Mounting of lamps and light signalling equipment" 76/756 EEC and ECE-Regulation No. 48, sub-section 2.9..

Bestimmung der Grenzen der leuchtenden Fläche einer Leuchte gemäß den Richtlinien des Rates der Europäischen Gemeinschaften "Anbau von Beleuchtungs- und Lichtsignaleinrichtung" nach 76/756/EWG,bzw. ECE-Regelung Nr. 48, Absatz 2.9..



Category of Lamp *Gerätebezeichnung*	**Top edge** *Obere Grenze* **(T) mm**	**Bottom edge** *Untere Grenze* **(B) mm**	**Outer edge** *Äußere Grenze* **(O) mm**	**Inner edge** *Innere Grenze* **(I)**
Rear Position Lamp *Schlussleuchte*	**9**	**9**	**55**	**55**
Stop Lamp *Bremsleuchte*	**9**	**9**	**55**	**55**
Rear Direction Indicator *Hinterer Fahrtrichtungsanzeiger*	**-20**	**37**	**54**	**54**
Reverse Lamp *Rückscheinwerfer*	**37**	**-14**	**54**	**54**

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.