INSTRUCTION SHEET

for: **Part No. 2ZR 980 889-xxx / 1468V**

APPLICATION AND MOUNTING INSTRUCTIONS

LED REVERSING LAMP - VERTICAL MOUNT

2ZR 980 889-1xx / 1468V: ***12V DC Only***

2ZR 980 889-3xx / 1468V-24V: ***24V DC Only***

Lens Marking and Installation Requirements

This Reversing Lamp identified by lens marking (E24) 0028 and the HELLA® logo was manufactured to comply with:

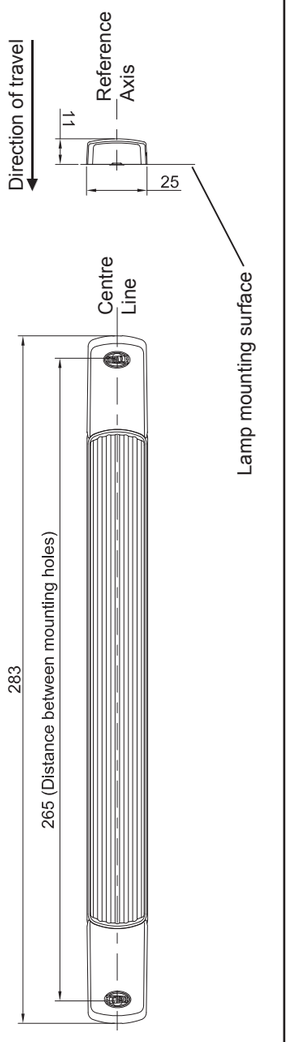
ECE Regulation 23 Category AR for Reversing Lamps.

- A tolerance of +/-3° applies on all mounting details.
- Lamp module mounting surface must be vertical to the ground and facing to the rear.
- Lamp module reference axis must be parallel to the vehicle longitudinal axis.
- Lamp must be visible from 45° inboard and 45° outboard, as well as from 15° above and to 5° below the horizontal axis.
- Lamp modules must not be mounted less than 250 mm and more than 1200 mm above the ground.
- Lamp is approved to be mounted vertically with an allowable rotation of +/-15° (see diagram over page).

Note: Please refer to ECE Regulation No. 48 for more details.

LENS IDENTIFICATION NUMBER: 0880 E

General Dimensions
(in millimetres)



Product Contents

Description	2ZR 980 889-1xx 1468V	2ZR 980 889-3xx 1468V-24V
LED Reversing Lamp with 2.5 m cable	x1	x1
Screw Cap	x2	x2
Mounting Screw	x2	x2
Application and Mounting Instructions	x1	x1

Hella-New Zealand Limited, Auckland.

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HELLA KGaA Hueck & Co.

Technical description
Technische Beschreibung

Type: *Typ:* **2ZR 980 889-AA**

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Function(s): *Beantragte Funktion(en):* **Reversing Lamp for Automobile** *Rückfahrscheinwerfer für Kraftfahrzeuge*

Shape of device: *Form des Gerätes:* **Rectangular, rounded** *Rechteckig, abgerundet*

Remark: *Bemerkung:* **For left- or right hand vertical flush- or surface mounting** *Für links- oder rechtsseitigen vertikalen Ein- oder Anbau*

Description of the lens(es): *Beschreibung der Abschluss-Scheibe(n):*

Function *Funktion*	Material *Material*	Colour *Farbe*	Optical system *Optisches System*	Light source *Lichtquelle*
* Reversing Lamp *Rückfahrscheinwerfer*	Plastic *Kunststoff*	Colourless *Glasklar*	Outside: Riffle optic *Aussen: Riffeloptik* Inside: Fresnel optic *Innen: Fresneloptik*	10 LEDs

*** If one LED fails, the remaining LEDs fulfil the requirements.**
Beim Ausfall einer LED, erfüllen die verbleibenden LEDs die Bedingungen

Technical features: *Technische Merkmale:*

Backplate, material: *Grundplatte, Material:*	**Plastic (PC, PMMA, ABS, ASA, PA ...)** *Kunststoff (PC, PMMA, ABS, ASA, PA ...)*
Backplate, surface: *Grundplatte, Oberfläche:*	**Untreated** *Unbehandelt*
Gasket between housing and outer lens: *Abdichtung zwischen Gehäuse und Lichtscheibe:*	**Fully sealed** *Vollständig abgedichtet*
Gasket between housing and car body: *Abdichtung zwischen Gehäuse und Karosserie:*	-- --
Fastening the device to the automobile: *Befestigungsart der Leuchte an die Karosserie:*	**With two screws** *Mit zwei Schrauben*

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Mounting instruction
Anbauanweisung

Type: *Typ:* **2ZR 980 889-AA**

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Belongs to approval no.: *Gehört zu Gen.-Nr.:* **E24 0028**

Reversing Lamp for Automobile *Rückfahrscheinwerfer für Kraftfahrzeuge*

Light source(s): *Lichtquelle(n):* **10 LEDs**

Test voltage: *Prüfspannung:* **13.5 V** or / *oder* **28 V**

Nominal voltage: *Nennspannung:* **12 V** or / *oder* **24 V**

Nominal wattage: *Nennleistung:* **3 W**

⌑ = **Centre of reference in accordance with the ECE-Regulation-No. 23.** *Bezugspunkt nach der ECE-Regelung-Nr. 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: *Bezugsachse:* **Parallel to the car centre line and parallel to the road.** *Parallel zur Fahrzeuglängsachse und parallel zur Fahrbahn.*

For left- or right hand vertical flush- or surface mounting. *Für links- oder rechtsseitigen vertikalen Ein- oder Anbau.*

Permissible rotation in direction a = 15° and in direction b = 15°. *Zulässige Drehung in Richtung a = 15° und in Richtung b = 15°.*

The Lamp can be rotated 180° around the reference axis.

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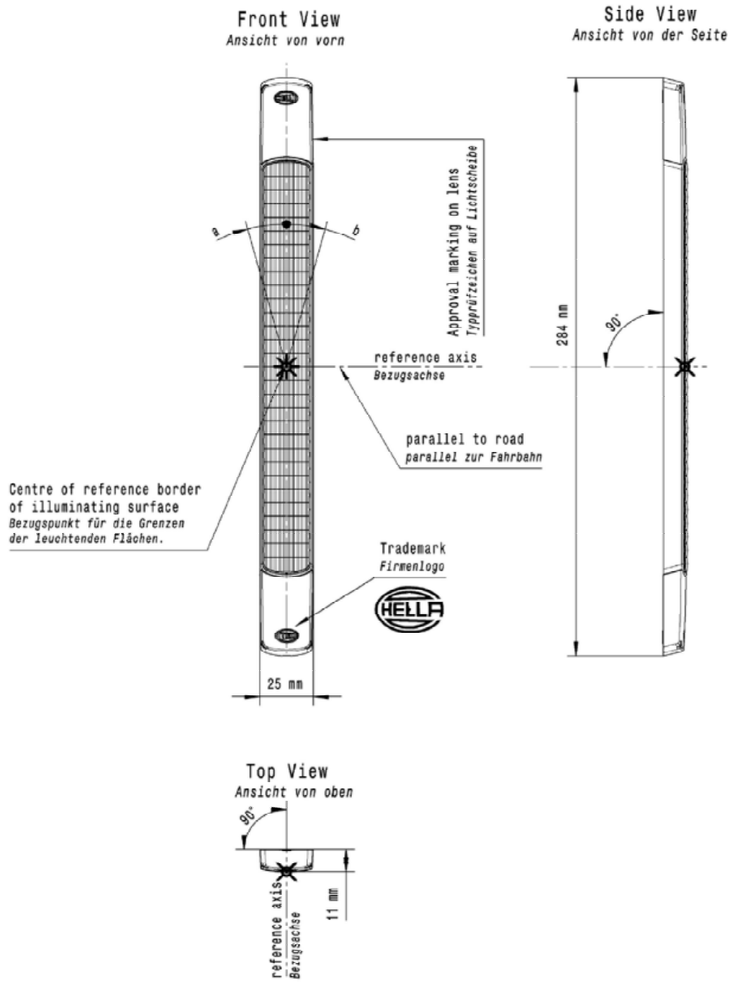
Mounting instruction
Anbauanweisung

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Type: *Typ:* **2ZR 980 889-AA**

Belongs to approval no.: **E24 0028**
Gehört zu Gen.-Nr.:

Reversing Lamp for Automobile
Rückfahrscheinwerfer für Kraftfahrzeuge

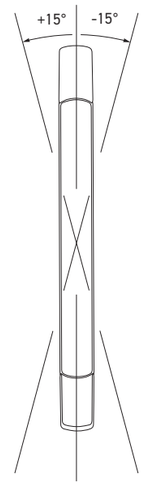


The device must be mounted according to the enclosed fitting documents (e. g. sketch + Annex A).
Der An- bzw. Einbau der Geräte hat nach anliegenden An- bzw. Einbauunterlagen (z. B. Skizze und Anlage A) zu erfolgen.

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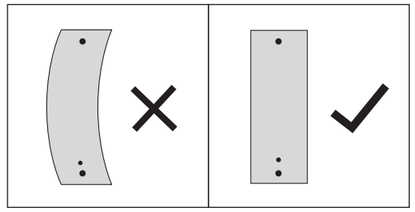
Mounting Tolerance

- Vertical mount: +/- 15° rotation around lamp (and vehicle) axis.



Mounting Instructions

- **Lamp must be mounted on a flat surface with no curvature.**



- Drill two 3 mm Ø mounting holes at 265 mm centres through the mounting surface to allow fitment of the lamp. See previous page for correct positioning.
- If passing the cable through a hole, ensure there are no sharp edges to cut or chafe the cable. Alternatively, the cable can be routed through the end of the screw cap.
- Connect the wires as per the table below and test that the lamp functions correctly.
- Using the mounting screws tighten the lamp to the mounting surface (Maximum torque 1.5Nm).
- Fit screw caps.

Note: Do not overtighten the mounting screws in the plastic lens.
If it is necessary to remove the screw caps, lever them out with a small flat head screw driver.

Wiring Instructions

- 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.

Wire Colour	Connect to	Power Consumption
Black	Earth (-)	-
Red	Reversing (+)	3 watts

Note: Lamp must be protected by a fuse rated at 3 amperes maximum.

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