



INSTRUCTION SHEET

for: **Part No. 2BA 959 011-0xx**

APPLICATION AND MOUNTING INSTRUCTIONS

**83mm ROUND REAR DIRECTION INDICATOR LAMP
Multivolt 9-33 Volts**

Features

- 24 LED design
- Low power consumption
- Ultra fast response time
- Reverse polarity protected
- Built-in transient spike protection
- Ultra long service life
- Fully sealed against dust and water
- Withstands most vibration and mechanical shock applications
- Manufactured from the latest "high tech" acrylic with enhanced impact and chemical tolerance
- Flush mount for low profile appearance

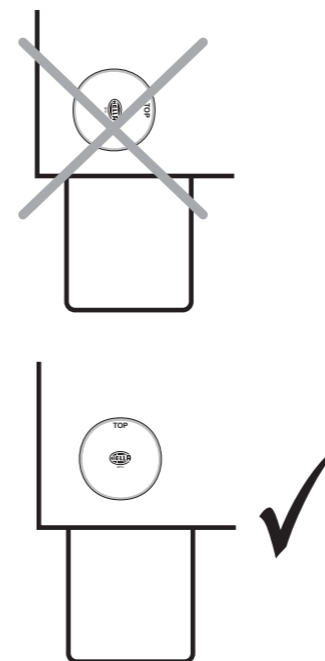
Lens Marking and Installation Requirements

This Rear Direction Indicator Lamp, identified by lens marking (E4) 11391 and the Hella logo was manufactured to comply with ECE Regulation 6 Category 2a Rear Direction Indicator Lamps

- Lamp module mounting surface must be vertical to the ground.
- Lamp module reference axis must be parallel to the vehicle longitudinal axis.
- Lamp module is approved to be mounted only with lens engraving "TOP" located correctly.
- Lamp module must be visible from 45° inboard and 80° outboard, as well as from 15° above and below the horizontal axis.
- At least two lamp modules are required.
- Lamps modules 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.
- Lamp modules must be mounted within 400 mm of the widest point of the vehicle and no closer than 600 mm together.

Please refer to ECE Regulation 48, for further details.

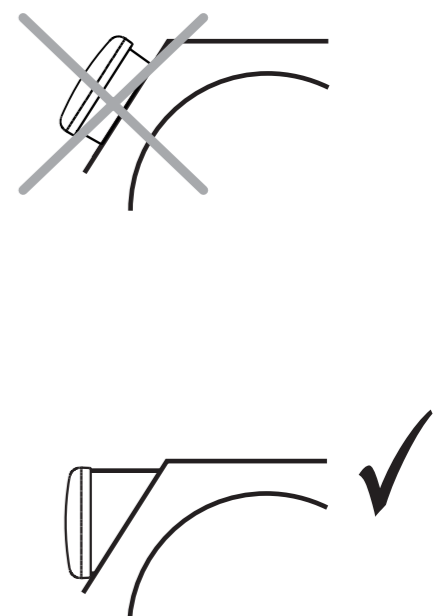
Rear View



Top View



Side View



958 780-14 V03

Hella-New Zealand Limited, Auckland, New Zealand

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Technische Beschreibung
Technical Description
Type: 2BA 959 011

HL-S-TLP Br/Ine
34 436
2006-11-09

Beantworte Funktion(en): Hinterer Fahrtrichtungsanzeiger
Rear Direction Indicator Lamp

Form des Gerätes: Rund

Bemerkung: Für links- und rechtseitigen Einbau
Left- and right hand mounting

Remark:

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

Funktion	Material	Farbe	optisches System	Lichtquelle
Funktion	Material	Farbe	optisches System	Lichtquelle

Fahrtrichtungsanzeiger	Kunststoff	ausser: gelb outer lens: amber	Zylinderoptik Cylinder optic	24 LEDs *
Direction indicator	Plastic	Innen: glasklar inner lens: colourless	Fresneloptik Fresnel optic	

* 24 nicht austauschbare LEDs
24 non-replaceable LEDs
Der Ausfall einer LED wird durch höhere Stromzufuhr kompensiert.
The failure of one LED is compensated by upper current supply.

Technische Merkmale
Technical Features

Gehäuse, Material:	Kunststoff
Housing, material:	Plastic
Gehäuse, Oberfläche:	Aussen: unbehandelt Outside: untreated
Housing, surface:	Innen: unbehandelt Inside: untreated

Abdichtung zwischen Abschluss-Scheibe und Gehäuse: Teile sind verschweisst
Sealed between outer lens and housing: Parts are welded

Befestigungsart der Abschluss-Scheibe an das Gehäuse: Teile sind verschweisst
Fastening the outer lens to the housing: Parts are welded

Befestigungsart des Gerätes an der Karosserie: Mit 1 Schraube
Fastening the device to the car body: With 1 screw



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Typbezeichnung: 2BA 959 011
Type: 2BA 959 011

Geht auf G. Nr.: E4 11391
Belongs to approval no: E4 11391

Einbauanweisung Nr.:
Mounting instructions no:

Hinterer Fahrtrichtungsanzeiger
Rear Direction Indicator Lamp for vehicles

Lichtquelle: 24 nicht austauschbare LEDs
Light sources: 24 non-replaceable light emitting diodes

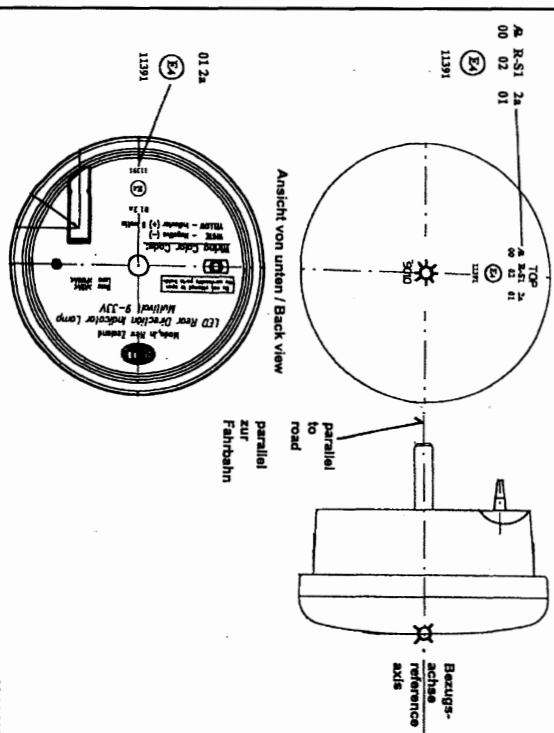
Der Ausfall einer LED wird durch höhere Stromzufuhr kompensiert.
The failure of one LED is compensated by upper current supply.

Bezugspunkt nach dem ECE-Regelung 6.
Reference point in accordance with the ECE-Regulations-No. 6.

Bezugspunkt zur Bestimmung der Grenzen der leuchtenden Fläche nach 76/756 EEC oder ECE
Regelung Nr. 48, Markierung 5, auf der Abschluss-Scheibe, Maße s. Anlage A.
Centre of reference for the determination of the limits for illuminating surface in accordance with the Council Directive 76/756 EEC
Regulation No. 48, Marking 5, on the outer lens, dimensions s. Annex A.

Bezugsachsen: Parallel zur Fahrzeuglängsachse und parallel zur Fahrbahn.
Axis of reference: Parallel to the car center line and parallel to the road.

Prüfspannung: 12 V oder 24 V **Versorgungsspannung:** 9 - 33 V **Nennleistung:** 5 W
Design voltage: 12 V or 24 V Supply voltage: 9 - 33 V Nominal power: 5 W



The device must be surface-mounted or flush-fitted according to the enclosed surface-mounting or flush-fitting documents (e.g. sketch + Annex A) 09.11.2006

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Lamp Mounting

1/4" Ø nut, bolt and washer have been supplied with this product. Do not mount the lamp where damage is likely to be sustained due to tie-downs and other securing devices.

Lamp should be mounted on a flat surface. Drill one mounting hole between 6.5mm and 8mm in diameter. A small 5mm location hole is also recommended to assist in mounting the lamp accurately and to stop the lamp from rotating during or after installation. This can be done using the location pin supplied*.

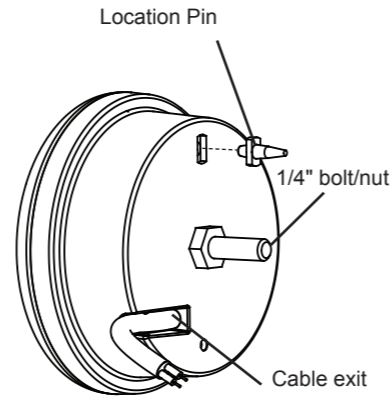
If passing the cable through a hole, ensure there are no sharp edges to cut or chafe the cable.

Drill a cable exit hole 6mm diameter in the position as shown on diagram below.

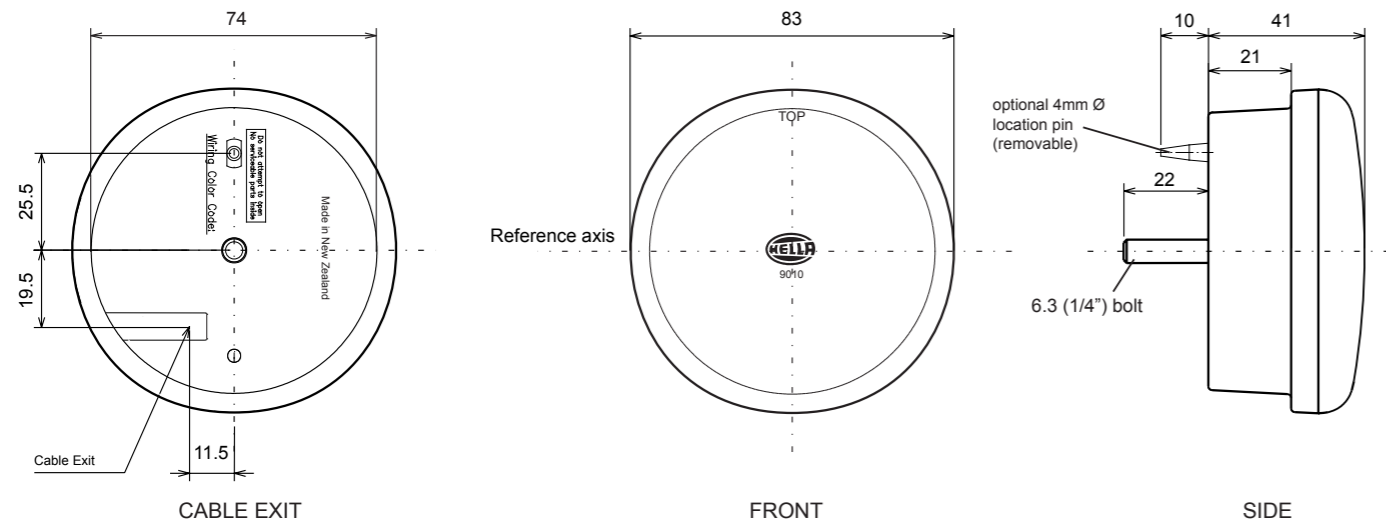
Ensure the lens engraving "TOP" is located correctly.

Connect lamp wiring as per chart below.

Try to keep the cable as long as possible, preferably join the cable inside a sealed cable junction box.



General Dimensions (mm)



Wiring Colour Coding

This lamp is Multivolt capable allowing full light output between 9 and 33 volts. LED modules are polarity conscious. Reverse 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/Black	Negative (-)	-
Yellow	Indicator (+)	2 watts

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

Important Notes for Installer and Vehicle 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.

Electromagnetic Compatibility (EMC)

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 Hella's products please contact us on E-mail at techfeedback@hella.co.nz