



INSTRUCTION SHEET  
for: **2BA 959 011-3xx**

**APPLICATION AND MOUNTING INSTRUCTIONS**

**83mm ROUND REAR DIRECTION INDICATOR LAMP  
24 Volt**

**Features**

- 12 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

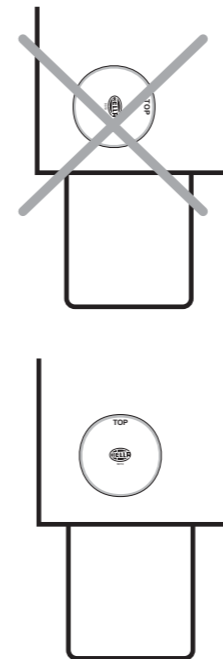
**Lens Marking and Installation Requirements**

This Rear Direction Indicator Lamp, identified by lens marking (E4)12373 and the HELLA logo was manufactured to comply with ECE Regulation 6 Category 2a Rear Direction Indicator Lamps

- A tolerance of +/-3 degrees applies on all mounting details.
- 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.
- Lamp is approved to be mounted only with lens engraving "TOP" located correctly.

**Note:** Lamp does not include a reflex reflector.

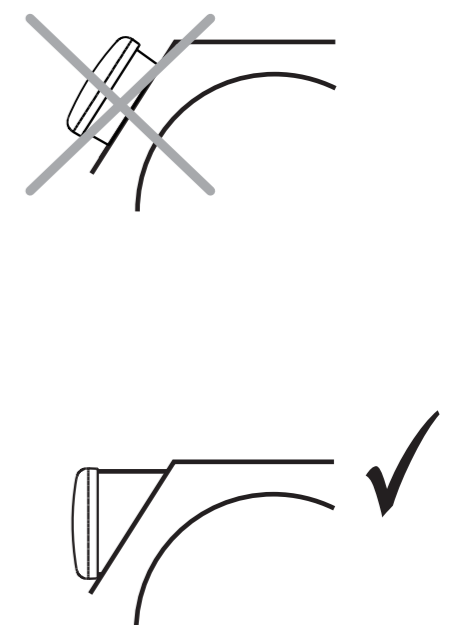
Rear View



Top View



Side View



HELLA-New Zealand Limited, Auckland, New Zealand



HELLA New Zealand

**Typbezeichnung: 2BA 959 011-AA**  
Type:

Gehtört zur Gen.-Nr.: E4 12373  
Belongs to approval no:

Einbauanleitung Nr.:  
Mounting instruction no:

Fahrerichtungsanzeiger  
Direction-indicator Lamp for vehicles

**Lichtquelle:** 12 nicht austauschbare LED's  
**Leistung:** 12 non replaceable light emitting diode  
Der Ausfall einer LED wird durch höhere Stromzufuhr kompensiert.  
The failure of one LED is compensated by upper current supply.

- = Bezugspunkt nach den ECE-Regelungen Nr. 6.  
Centre of reference in accordance with the ECE-regulation no. 6
- = Bezugspunkt zur Bestimmung der Grenzen der leuchtenden Fläche nach 76/756 EEC oder ECE Regelung-Nr.48.  
Markierung z. auf der Abschleife-Schleife, Maßstäbe A, Anlage A.  
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: Parallel zur Fahrzeuglängsachse und parallel zur Fahrbahn.  
Axis of reference: Parallel to the car center line and parallel to the road.

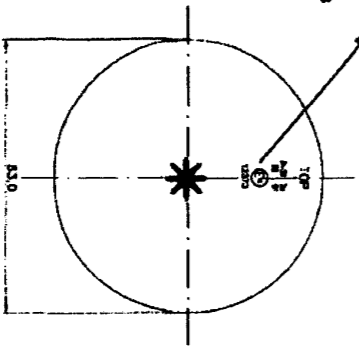
**Profilspannung:** 28 V  
**Deckel voltages:** 28 V

**Verzögerungsspannung:** 24 V  
**Shield voltages:** 24 V

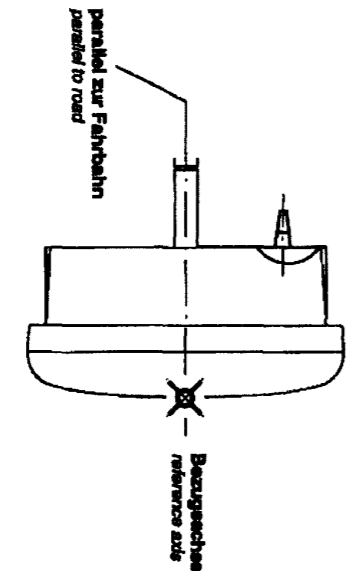
**Nennleistung:** 3 W  
**Normal power:** 3 W

R-41 2a  
01 2a  
02 01  
12373

Ansicht von vorn  
Front view

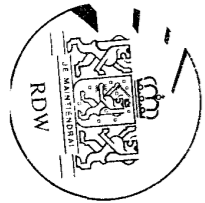
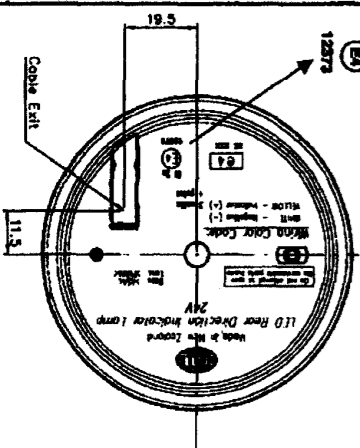


Ansicht von der Seite  
Side view



01 2a  
12373

Ansicht von hinten  
Back view



Der An- bzw. Einbau der Geräte hat nach anliegenden An- bzw. Einbauanleitungen (z. B. Skizzen und Anlage A) zu erfolgen.  
The device must be installed/connected or fitted/fitting according to the enclosed surface-mounting or fitting documents (e.g. sketch).  
2007-06-1



HELLA New Zealand

**Type: 2BA 959 011-AA**

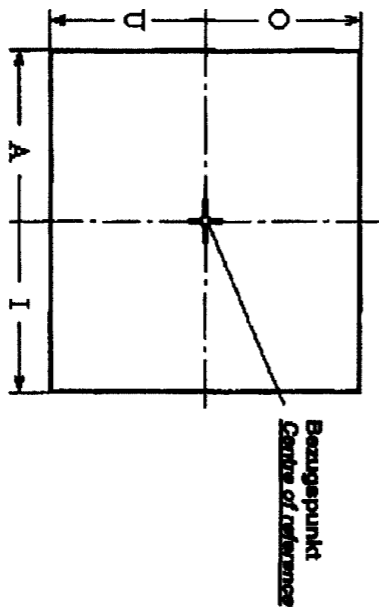
**Anlage A  
Annex A**

Gehtört zur G. Nr.: E4 12373  
Belongs to approval no.:

Einbauanleitung Nr.:  
Mounting instruction:

Bestimmung der Grenzen der leuchtenden Fläche einer Leuchte gemäß den Richtlinien des Rates der Europäischen Gemeinschaften "Anbau von Beleuchtungs- und Lichtsignalrichtungen" nach 76/756/EWG, bzw. ECE-Regelung Nr. 48, Absatz 2.9.2.

Definition of the illuminating surface of a device in accordance with the Council Directive 76/756/EEC or ECE-Regulation No. 48, clause 2.9.2.



Gerätebezeichnung Device / Function	Obere Grenze Upper Boundary (O) mm	Untere Grenze Lower Boundary (U) mm	Äußere Grenze Outer Boundary (A) mm	Innere Grenze Inner Boundary (I) mm
Hinterer Fahrtrichtungsanzeiger Rear Direction Indicator Lamp	29	29	29	29

1908/2007

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**Lamp Mounting**

1/4" UNC 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.

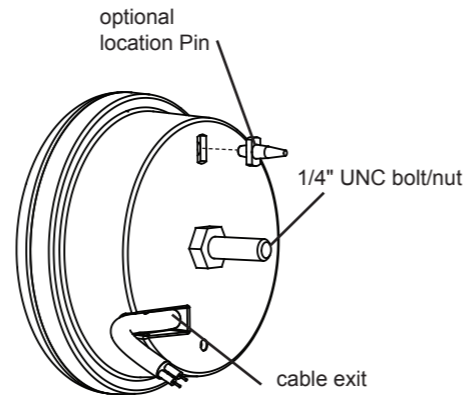
Drill a cable exit hole 6mm diameter in the position as shown on diagram below.

Ensure the lens engraving "TOP" is located correctly.

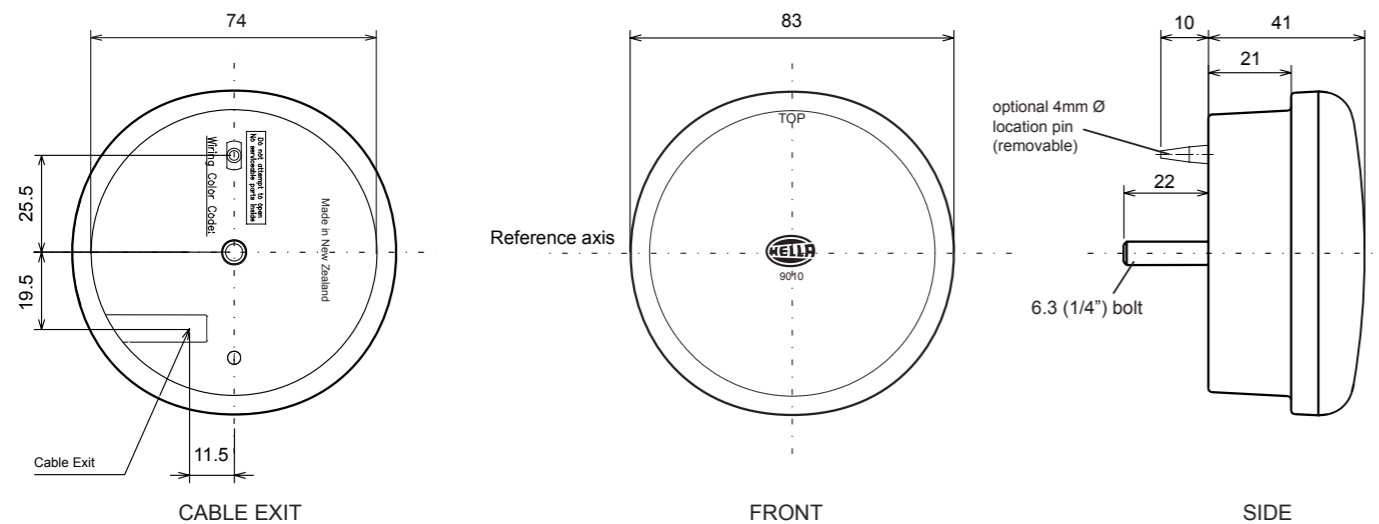
Connect lamp wiring as per chart below.

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

\*location pin not supplied with all lamp models



General Dimensions (mm)



**Wiring Colour Coding**

This lamp is 24 volt applications only. 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	Negative	(-)
Yellow	Indicator (+)	3 watts + failure detection pulse

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

**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 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.

Operation of this lamp using alternating current or modulated direct voltage will cause premature light failure. HELLA recommends connecting ADR or ECE certified LED signal and marker lamps to a continuous (unmodulated) 24V power supply to ensure safe light operation.

**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.

**Bulb failure monitoring for indicator lamps**

In most cases the vehicle's indicator bulb failure warning system (if fitted) relies on the full load of a 21 W bulb. When functioning correctly this LED lamp pulses a resistive load several times during the flasher "on" cycle to simulate this load and thus informing the warning system that the LED lamp has not failed. Please contact your Hella dealer for details regarding the correct ballast and flasher units to be used with this LED lamp.

**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 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](mailto:techfeedback@hella.co.nz)