INSTRUCTION SHEET

for: **2ZR 959 930-001 / 1465**

ADR - APPLICATION AND MOUNTING INSTRUCTIONS

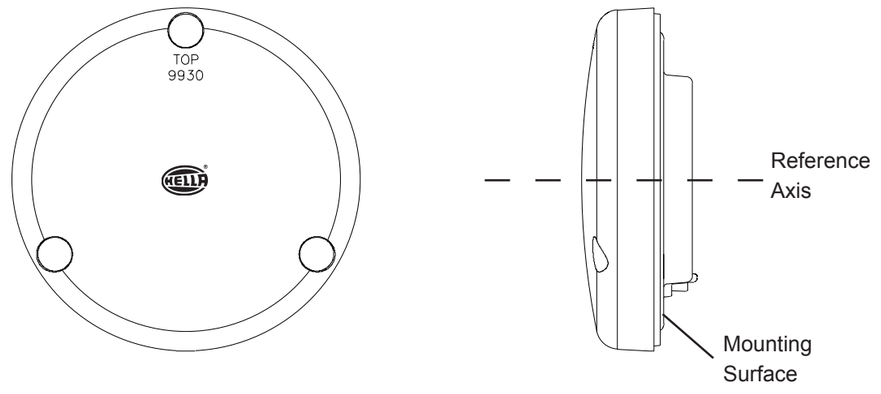
ADR 1/00 Reversing Lamp

110mm ROUND LED REVERSING LAMP

Multivolt 9-33V DC

Lens Marking and ADR 13/00 Installation Requirements

- This Reversing Lamp, identified by lens marking 9930, clear lens and the HELLA logo was manufactured to comply with ADR 1/00 Reversing 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 outboard, as well as from 10° above and 5° below the horizontal axis.
- Lamp is approved to be mounted only with lens engraving "TOP" located correctly.
  Please refer to ADR 13/00 for more details.



LENS IDENTIFICATION NUMBER: 9930

CATALOGUE NUMBER	ENGINEERING NUMBER	CRN NUMBER	COMPLIANCE NUMBER	ADR 51/00 GLOBE	ADR APPLICABLE
1465	2ZR 959 930-00	35981	8-1465-17	N/A LED	ADR 1/00

AMENDMENTS			ADR COMPLIANCE VERIFIED	ISSUE DATE:
3/2009				3/2006
				959 150-04

HELLA-New Zealand Limited, Auckland, NZ

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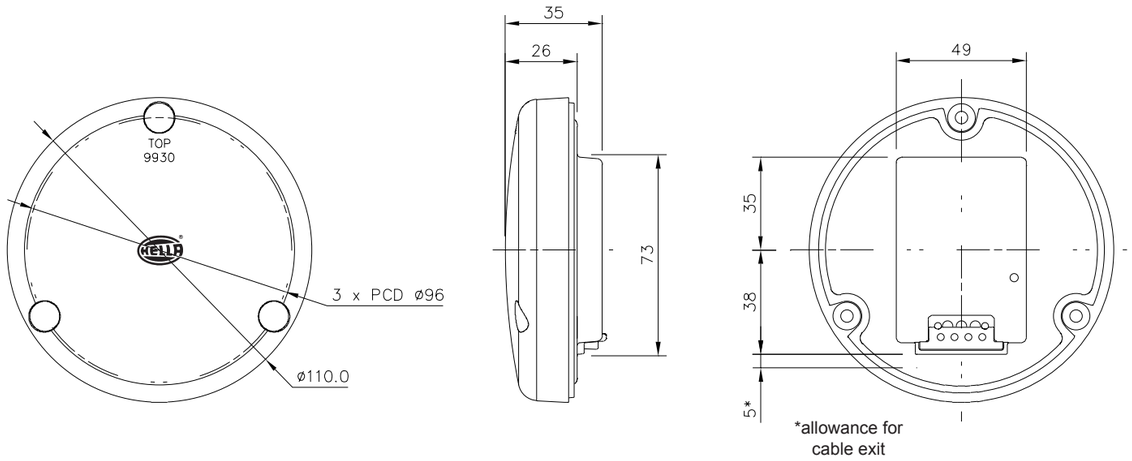
for: **2ZR 959 930-001 / 1465**

Lamp Mounting

New Installations

- Lamp should be mounted on a flat surface to avoid mounting stress and as shown in the application and mounting instructions.
- Ensure that the engraving "TOP" is located in the correct position.
- After ascertaining the desired position on the vehicle, cut a hole to fit the lamp as shown in the diagram below. The lamp can then be used as a template to drill the screw/bolt mounting points.
- If passing the cables through a hole, ensure there are no sharp edges to cut or chafe the cable.
- Connect the lamp as per the wiring chart shown below, preferably join the cable inside a sealed cable junction box.
- Push the screws caps on securely until flush with the lamp surface.

General Dimensions (mm)



Wiring Colour Coding

This lamp is for multivolt capable allowing full light output between 9 and 33 volts DC.
LED lamps 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 (-)	-
Grey	Reverse (+)	5 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)

This LED lamp is an electronic device. The electrical circuits contain components that suppress possible interference, both emission as well as susceptibility, to the technical requirements for the application of the Regulatory Compliance Mark (RCM).
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 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*