INSTRUCTION SHEET

for: ***Part No. 2427-H / 2427-V***
2SD 959 040-81 / 2SD 959 040-91

ADR - APPLICATION AND MOUNTING INSTRUCTIONS

Designline LED Triple Multivolt (9-33 VOLT) Module
STOP / REAR POSITION / REAR DIRECTION INDICATOR LAMP

The LED modules are designed to operate on input voltages from 9 - 33 volts.

Lens Marking and ADR 13/00 Installation Requirements

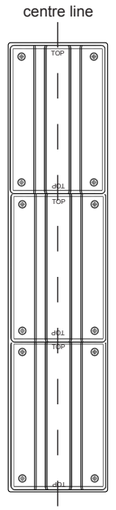
These lamp modules, identified by lens marking HNZ 9040, with amber, red or clear lenses were manufactured to comply with the following ADR's

ADR 6/00 Cat 2a	Rear Direction Indicator Lamp
ADR 49/00	Stop / Rear Position Lamp

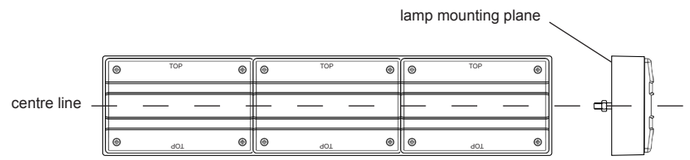
- A tolerance of +/-3° applies on all mounting details.
- Lamp modules mounting plane must be vertical to the ground
- Lamp modules reference axis must be parallel to the vehicle longitudinal axis
- Lamp modules centre line must be horizontal to the ground (Please note the "TOP" engraving on the inner surface of the lens)
- Lamp module must be visible from 45° inboard and 80° outboard, as well as from 15° above and below the horizontal axis

Notes: Please refer to ADR 13/00 for more details.
Lamp modules do not include a reflex reflector. An additional reflector would be required to be fitted to ensure vehicle compliance.

Vertical Mount



Horizontal Mount



LENS IDENTIFICATION NUMBERS:

HNZ 9040	Red Lens	2332-H24	2332-V24
HNZ 9040	Amber Lens	2146-H24	2146-V24

CATALOGUE NUMBER	ENGINEERING NUMBER	CRN NUMBER	COMPLIANCE NUMBER	ADR 51/00 GLOBE	ADRs APPLICABLE
2146-H24 2146-V24 2332-H24 2332-V24	2BA 959 041-50 2BA 959 041-70 2SB 959 040-50 2SB 959 040-70	34498 34498 34502 / 34509 34502 / 34509	8-2146-H24-17 8-2146-V24-17 8-2332-H24-17 8-2332-V24-17	N/A LED	ADR 6/00 Cat 2a ADR 6/00 Cat 2a ADR 49/00 ADR 49/00

AMENDMENTS			ADR COMPLIANCE VERIFIED	ISSUE DATE:
				05/2006
				959 150-14

HELLA-New Zealand Limited, Auckland

959 150-14 V03

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Lamp Module Mounting Instructions

Surface Mounting

- Lamp should be mounted on a flat surface and as close as possible to the outer extremities of the vehicle. Refer to the front page for mounting restrictions.
- Determine a suitable location for the lamp and drill two holes at 8.5mm diameter or larger at 498mm centres.
- Drill one hole for the cable if required up to 8mm diameter and use a grommet if there are sharp edges around the hole.
- Mount the lamp with the word "TOP" at the top of the lens (-H versions to be mounted horizontally, -V versions to be mounted vertically)
- Ensure, if water can collect at the back of the lamp, there are sufficient exits for the water to drain.

Wiring Procedure:

- Disconnect the earth cable from vehicle battery before attempting any electrical work or connections. Failure to do so could result in damage to vehicle and/or an electrical fire.
- Try to keep the cables as long as possible, preferably join the cable inside a sealed cable junction box.
- Connect lamp as per chart below and HELLA recommends wire connections be soldered, and heat shrink tubing applied to seal the joint. Power to the lamp functions should be protected by a fuse not rated higher than 5 amps
- Thoroughly check all connections and wiring, only then reconnect the earth cable to battery and test the new installation.

Please note: This lamp contains a patented hydrophobic breathing system to equalise air pressure inside the lamp. The module is sealed against moisture and dust but not designed for prolonged submersion.

Wiring Colour Coding

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

Colour	Connect to	Power Consumption
White	Earth (-)	-
Blue	Indicator (+)	6 watts
Red	Stop (+)	12 watts
Brown	Tail (+)	4 watts

Important Notes for the 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)
Multivolt LED lamps are electronic devices. 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 recommended practice that the installer always ascertians that a good earth is provided to potentially sensitive equipment such as the ECU's of the ABS, TCS, or Tachographs etc. If this cannot be assured, a direct earth path should be provided.

Protection against damage due to voltage spikes
The lamp is protected against reverse polarity connection and negative voltage spikes of up to 1000 volts.

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*