HELLA KGaA Hueck & Co.

Mounting instruction
Anbauanweisung

Type: **2VA 980 710**
Typ:

L-DL-FSCT
29.04.2014

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Belongs to approval no.: **E24 5882**
Gehört zu Gen.-Nr.:

Rear Position-, Stop Lamp ,Rear Direction Indicator and Reflex Reflector for Automobile.
Schluss-, Bremsleuchte ,Hinterer Fahrtrichtungsanzeiger und Rückstrahler Kraftfahrzeuge.

Light source(s): *Lichtquelle(n):*		Test voltage: *Prüfspannung:*	Nominal voltage: *Nennspannung:*	Nominal power: *Nennleistung:*
1	**Rear Direction Indicator** *Hinterer Fahrtrichtungsanzeiger*	8 LEDs	13.5V **or** / *oder* 28V	12V **or** / *oder* 24V	4W
2	**Stop Lamp** *Bremsleuchte*	8 LEDs	13.5V **or** / *oder* 28V	12V **or** / *oder* 24V	4W
2	**Rear Position Lamp** *Schlussleuchte*	4 LEDs	13.5V **or** / *oder* 28V	12V **or** / *oder* 24V	1W

⌑ = **Centre of reference in accordance with the ECE-Regulations-No.: 3, 6 and 7.**
Bezugspunkt nach den ECE-Regelungen-Nr.: 3, 6 und 7.

✧ = **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: Parallel to the car centre line and parallel to the road.
Bezugsachse: Parallel zur Fahrzeuglängsachse und parallel zur Fahrbahn.

The lamp can be rotated 180° around the reference axis.
Die Leuchte kann auch 180° gedreht um die Bezugsachse angebaut warden.

For left- and right hand mounting.
Für links- und rechtsseitigen Einbau.

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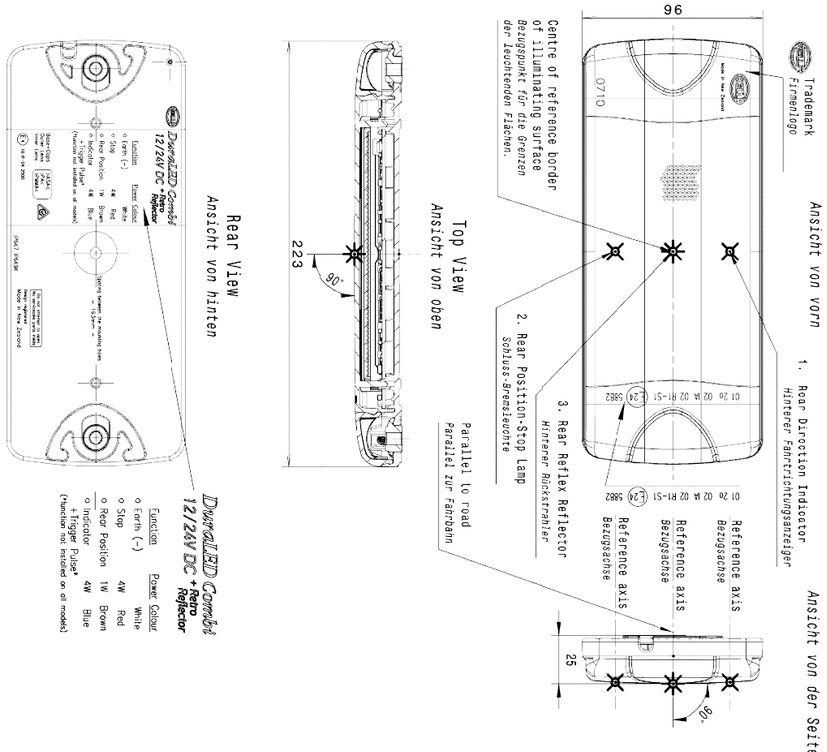
Belongs to approval no.: **E24 5882**
Gehört zu Gen.-Nr.:



INSTRUCTION SHEET
for: **2VA 980 710-3xx**

APPLICATION AND MOUNTING INSTRUCTIONS

DuraLED® Combi STOP / TAIL / INDICATOR LAMP with REFLECTOR

24V DC

Features Include:

- **DuraLED® Combi** = Fully sealed and submersible
- **DuraLED® Combi** = Stop, Rear Position, Direction Indicator and Reflector functions in a single lamp
- **DuraLED® Combi** = Vibration and shock resistant
- **DuraLED® Combi** = Ultra long service life
- **DuraLED® Combi** = Ultra fast response time
- **DuraLED® Combi** = Lens made from advanced Grilamid® material with enhanced impact and chemical resistance
- **DuraLED® Combi** = Reverse polarity protected
- **DuraLED® Combi** = Low power consumption
- **DuraLED® Combi** = Enhanced transient spike protection

Lens Marking and Installation Requirements

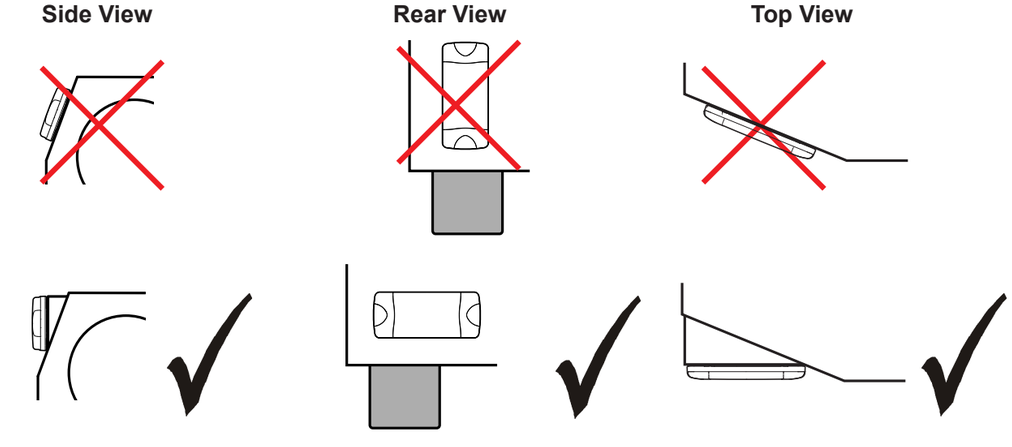
This Stop / Rear Position / Rear Indicator Lamp with Reflector, identified by lens marking (E24) 5882 and the HELLA logo was manufactured to comply with:

ECE Regulation 3 Class IA for Retro-Reflecting Devices
ECE Regulation 6 Category 2a for Rear Direction Indicator Lamps
ECE Regulation 7 for Rear Position (Side) / Stop Lamps

- 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.
- At least two lamps are required.
- Lamps must not be mounted less than 350 mm and more than 1200 mm above the ground.
- Lamps must be mounted within 400 mm of the widest point of the vehicle and no closer than 600 mm together.
- Lamp is approved to be mounted horizontally only.

Please refer to ECE Regulation 48 for more details.

Note: When mounting lamps on a trailer, additional triangular retro-reflectors (Class IIIA) are required for ECE compliance.



HELLA-New Zealand Limited, Auckland, New Zealand

INSTRUCTION SHEET

for: **2VA 980 710-3xx**

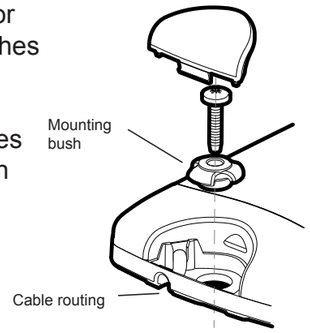
Lamp Mounting Instruction

Screw Cap Removal

Carefully insert a small flat blade screwdriver between the cap and the lens and pull towards the lens, the cap will clip off. To install the cap push in by hand until the top is flush with the lens.

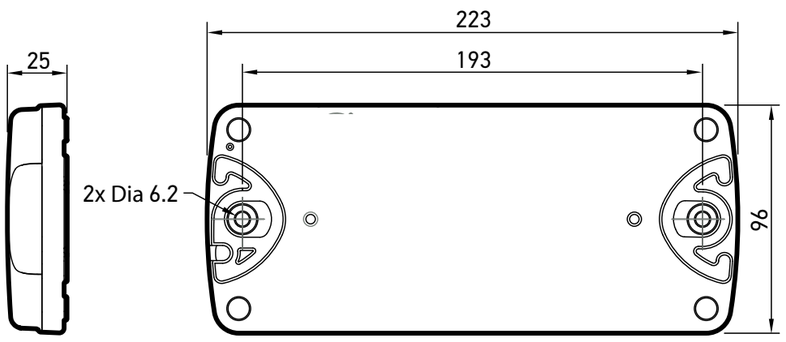
Surface Mounting

- Drill two holes up to 6.5mm Ø at 193mm centres. 6mm Ø screws or bolts are recommended to mount the lamp using the mounting bushes provided.
- Lamp should be mounted on a flat surface.
- If passing the cable through a hole, ensure there are no sharp edges to cut or chafe the cable. Alternatively, cable can be routed through the end of the base.
- Connect lamp as per chart below.
- Try to keep the cable as long as possible, preferably join the cable inside a sealed cable junction box.
- Clip the screw caps on securely until flush with the lamp surface.

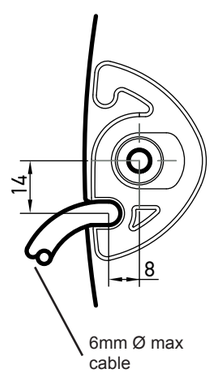


Note: Bolts not included

General Dimensions (in millimetres)



Cable Exit Location



Wiring Colour Coding

This lamp is for 24 volt applications only.

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.

Colour	Connect to	Power Consumption
White	Earth (-)	-
Red	Stop (+)	4 watts
Brown	Rear Position (+)	1 watt
Blue	Indicator & HCS Trigger Pulse (+)	4 watts

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

Direction Indicator Lamps with HCS trigger pulse work in conjunction with HCS / ISO 13207-1 compliant failure detection systems. If additional lamps are fitted beyond the amount supported by the HCS / ISO 13207-1 compliant failure detection system then they must be wired separately so as not to be detected.

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 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.

Bulb failure monitoring for indicator lamps

The indicator bulb failure warning (if fitted to the vehicle) relies on the full load of a 21-watt bulb in most cases. LED lamps with trigger pulse have integrated electronics for failure checking, if operating correctly the lamp will pulse a resistive load during the flasher “on” cycle to simulate this load.

If the vehicle manufacturer does not guarantee indicator bulb failure control via the vehicle wiring system than Hella can supply electronic control and flasher units which make it possible to convert the indicator failure system to suit LED lamps with trigger pulse.

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.

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 specified in ISO 7637 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

NSAI Certification

ECE TYPE-APPROVAL CERTIFICATE

Communication concerning approval granted of a type of
Retro-reflecting device pursuant to
Regulation No. 3.

E24

Approval No: ***E24 3R-025882*** Extension No: ***N/A***

1.	Trade name or mark of the device:	***HELLA***
2.	Manufacturer's name for the type of device:	***2VA 980 710***
	Version(s):	***-2VA 980 710***
3.	Manufacturer's name and address:	***Hella New Zealand Limited, 81-83 Ben Lomond Crescent, Pakuranga, NZ Auckland.***
4.	If applicable, name and address of manufacturer's representative:	***Hella KGaA, Rixbecker Straße, 75 DE-59552 Lippstadt, Germany***
5.	Submitted for approval on:	***09.05.2014 – 12.05.2014***
6.	Technical service responsible for conducting approval tests:	***FAKT S.r.l., Via Lithos 53, IT-25086 Rezzato (BS), Italy.***
7.	Date of test report:	***19.05.2014***
8.	Number of test report:	***IT14/0687-00***

NSAI, 1 Swift Square, Northwood, Santry, Dublin 9, Ireland. Telephone: (+353+1) 807 3800, Facsimile: 01-807 3844

NSAI Certification

Approval No: ***E24 3R-025882*** Extension No: ***N/A***

9.	Concise description:	***Rear retro reflecting device class IA***
	In isolation/part of an assembly of devices:	***Part of an assembly of devices***
	Colour of light emitted (white/red/amber):	***Red***
	Installation as an integral part of a lamp which is integrated into the body of a vehicle (yes/no):	***No***
	Geometric conditions of installation and relating variations (if any):	***Reference axis parallel to the vehicle longitudinal axis and parallel to the road (see drawings of information document).***
10.	Position of the approval mark:	***See drawings of information folder.***
11.	Reason(s) for extension (if applicable):	***N/A***
12.	Approval granted/~~extended/refused/withdrawn~~:	***Granted.***
13.	Place:	***Dublin.***
14.	Date:	***20th May, 2014.***
15.	Signature:	

NATIONAL STANDARDS AUTHORITY OF IRELAND
NSAI Certification
TRANSPORT DEPARTMENT

16. The following documents, bearing the approval number shown above, are available on request:

-Technical report with annexes and drawings.
-Annex I

NSAI, 1 Swift Square, Northwood, Santry, Dublin 9, Ireland. Telephone: (+353+1) 807 3800, Facsimile: 01-807 3844

NSAI Certification

ECE TYPE-APPROVAL CERTIFICATE

Communication concerning approval granted of a type of
direction indicator pursuant to
Regulation No. 6.

E24

Approval No: ***E24 6R-015882*** Extension No: ***N/A***

Reason(s) for extension:		***-N/A***
1.	Trade name or mark of the device:	***HELLA***
2.	Manufacturer's name for the type of device:	***2VA 980 710***
	Version:	***-2VA 980 710***
3.	Manufacturer's name and address:	***Hella New Zealand Limited, 81-83 Ben Lomond Crescent, Pakuranga, NZ Auckland.***
4.	If applicable, name and address of manufacturer's representative:	***Hella KGaA, Rixbecker Straße, 75 DE-59552 Lippstadt, Germany***
5.	Submitted for approval on:	***28.04.2014***
6.	Technical service responsible for conducting approval tests:	***FAKT S.r.l., Via Lithos, 53, IT-25086 Rezzato (BS), Italy.***
7.	Date of test report issued by that service:	***19.05.2014***
8.	Number of report issued by that service:	***IT14/0688-00***
9.	Concise description	
	Category:	***2a, Signal for activation of the tell-tale available: YES***
	Number, category and kind of light source(s):	***8, -, LEDs***
	Voltage and Wattage:	***12V/24V – 4W***

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NSAI Certification

Approval No: ***E24 6R-015882*** Extension No: ***N/A***

	Light source module specific identification code:	***N/A***
	Only for limited mounting height of equal to or less than 750 mm above the ground:	***No.***
	Geometrical conditions of installation and relating variations, if any:	***Reference axis parallel to the median longitudinal plane of the vehicle and parallel to the bearing plane of the vehicle on the road. (See drawings of the information folder)***
	Application of an electronic light source control gear/variable intensity control:	
	(a) being part of the lamp (~~yes~~/no):	***No.***
	(b) being not part of the lamp (~~yes~~/no):	***No.***
	Input voltage(s) supplied by an electronic light source control gear/variable intensity control:	***N/A***
	Electronic light source control gear/variable intensity control manufacturer and identification number (when the light source control gear is part of the lamp but is not included into the lamp body):	***N/A***
	Variable luminous intensity (~~yes~~/no):	***No.***
10.	Position of the approval mark:	***See drawings of information folder***
11.	Reason(s) for extension (if applicable):	***N/A***
12.	Approval granted/~~extended/refused/withdrawn~~:	***Granted.***
13.	Place:	***Dublin.***
14.	Date:	***20th May, 2014.***
15.	Signature:	

NATIONAL STANDARDS AUTHORITY OF IRELAND
NSAI Certification
TRANSPORT DEPARTMENT

16. The list of documents deposited with the Administrative Service which has granted approval, is annexed and may be obtained on request.

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NSAI Certification

ECE TYPE-APPROVAL CERTIFICATE

Communication concerning approval granted of
a type of device pursuant to
Regulation No. 7.

E24

Approval No: ***E24 7R-025882*** Extension No: *N/A*

Reason for extension: ***- N/A***

1.	Trade name or mark of the device:	***HELLA***
2.	Manufacturer's name for the type of device:	***2VA 980 710***
	Variant(s):	***- 2VA 980 710***
3.	Manufacturer's name and address:	***Hella New Zealand Limited 81-83 Ben Lomond Crescent, Pakuranga NZ Auckland, New Zealand.***
4.	If applicable, name and address of manufacturer's representative:	***Hella KGaA, Rixbecker Straße 75, DE-59552 Lippstadt, Germany.***
5.	Submitted for approval on:	***28.04.2014***
6.	Technical service responsible for conducting approval tests:	***FAKT S.r.l., Via Lithos, 53, I-25086 Rezzato (BS), Italy.***
7.	Date of test report issued by that service:	***19.05.2014***
8.	Number of report issued by that service:	***IT14/0689-00 & IT14/0690-00***

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NSAI Certification

9.	Concise description:	
9.1	By Category of lamps:	***R1-S1***
	For mounting either outside or inside or both:	***Outside.***
	Colour of light emitted (red/selective yellow/white):	***Red***
	Number, category and kind of light source:	***Rear Position Lamp: 4, -, LEDs Stop Lamp: 8, -, LEDs***
	Voltage and wattage:	***Rear Position Lamp: 12V/24V – 1W Stop Lamp: 12V/24V – 4W***
	Light source module specific identification code:	***N/A***
	Only for installation on M1 and/or N1 category vehicles:	***No.***
	Geometric conditions of installation and relating variations (if any):	***Reference axis parallel to the median longitudinal plane of the vehicle and parallel to the bearing plane of the vehicle on the road (see drawings of the information folder).***
	Only for limited mounting height of equal to or less than 750 mm above the ground (~~yes~~/no):	***No.***
	Application of an electronic light source control gear/variable intensity control (a) being part of the lamp (~~yes~~/no):	***No.***
	(b) being not part of the lamp (~~yes~~/no):	***No.***
	Input voltage(s) supplied by an electronic light source control gear/variable intensity control:	***N/A***

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	Electronic light source control gear/variable intensity control manufacturer and identification number (when the light source control gear is part of the lamp but is not included into the lamp body):	***N/A***
	Variable luminous intensity (~~yes~~/no):	***No.***
9.2	Function(s) produced by an interdependent lamp forming part of an interdependent lamp system:	***No.***
10.	Position of the approval mark:	***See drawings of the information folder.***
11.	Reason(s) for extension (if applicable):	***N/A***
12.	Approval granted/~~extended/refused/withdrawn~~:	***Granted.***
13.	Place:	***Dublin.***
14.	Date:	***20th May, 2014.***
15.	Signature:	

NATIONAL STANDARDS AUTHORITY OF IRELAND
NSAI Certification
TRANSPORT DEPARTMENT

16. The list of documents deposited with the Administrative Service which has granted approval, is annexed and may be obtained on request.

17.	Remarks:	***Rear position lamp reciprocally incorporated with stop lamp; device is part of a multiple light source arrangement according to pt. 5.5.1.(a)***

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