

Innovative Technology

Individual Solutions

Intensive Support

**Our Ideas,
Your Success**

Hella Product Overview:

Caravans

and Motor Homes



**Ideas today for
the cars of tomorrow**



Freedom without adventure.

Those who travel with caravans or motor homes want to experience independence and do their own thing.

Those who develop, design and produce these homes on wheels have to set technology and design trends with every new model series.

Those who have Hella as their partner are open to everything – as developers, manufacturers and users, because Hella means complete freedom – free of risk.

Innovative depth: Modular concepts. Technological leadership.

Hella has earned itself a leading global position through diligence, creativity and top-quality precision. For over one hundred years. Hella and modern caravanning – a long-term successful partnership.

- More safety through innovations in lighting technology: e.g. Xenon and LED.
- More economy thanks to integrated electrics and electronics components.
- More equipment versions, more brand-typical features and more trendsetting: e.g. through an extraordinary depth of product range and modular systems.
- More safety in production and in use: e.g. through OEM quality, through synergies from our developments for the international automotive industry and zero-fault quality management.



Local Hella support.

We do not only see ourselves as top-quality suppliers, but rather as development partners. If required, our developers and engineers can work with your teams on site to prepare optimum solutions. This speeds up processes and prepares the way for new standards. More technological freedom, more styling freedom, more room for rationalisation: That is Hella.

We wish you a successful future.





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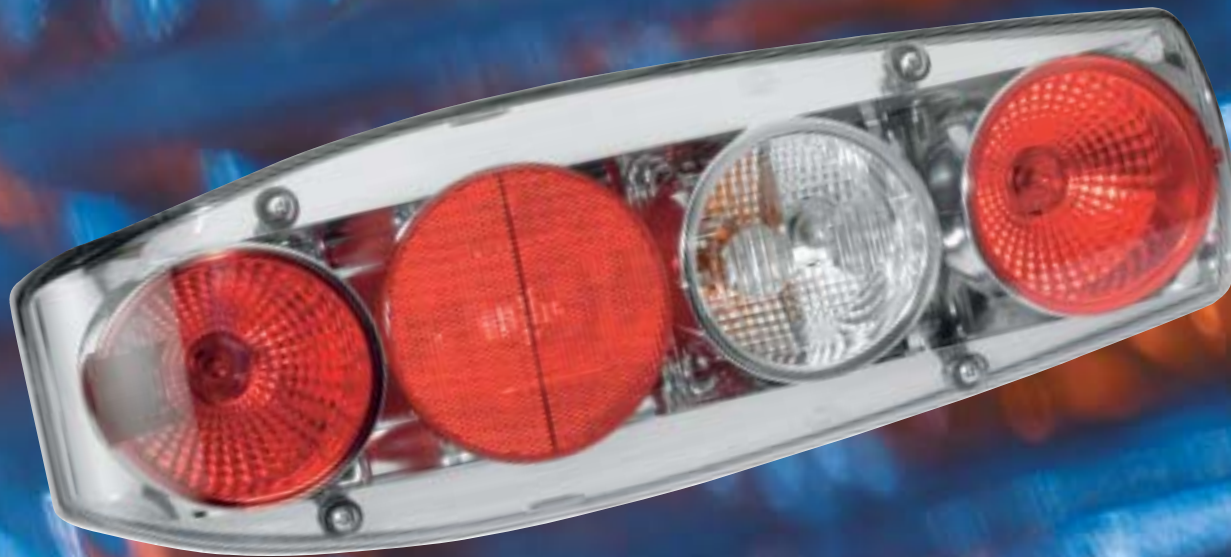
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We are the 100% service provider for innovative, individual customising. And for 100% reliability.

New dimensions in the lighting sector:

After decades of standard solutions, Hella has been continually breaking new ground – becoming the Number 1 in customer-specific solutions. Our lead is growing because there are future-oriented solutions available that only Hella has to offer. Thanks to our own light laboratory we can cover applications for all global markets.



New dimensions in the field of modular concepts:

Engineers, designers and controllers are all equally delighted about our modular system. It offers you the whole range of design possibilities – from futuristic through dynamic, sporty, matter-of-fact, elegant, classic to retro. Here you will find solutions that no-one else has. At Hella you have the whole range of modern headlight and light technology to fall back on: Halogen, Bi-halogen, Xenon, Bi-xenon, LED, light guide, ellipsoid, free-form FF. You specify the installation opening and determine the design, we build you the module. Even in small series, of course.





New dimensions of module speed:

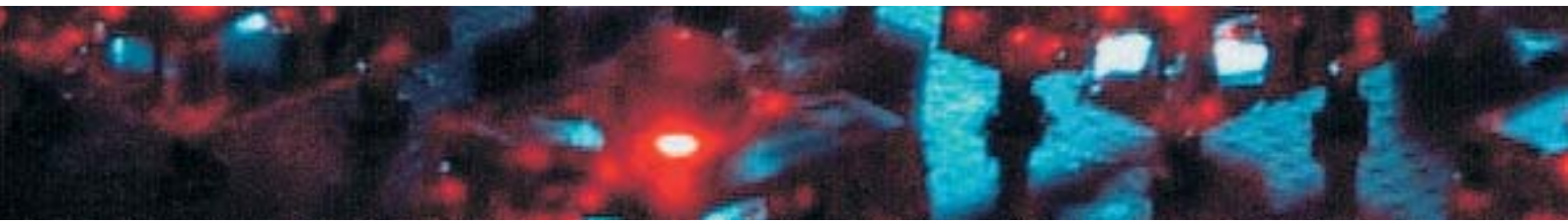
We want to be faster than anyone else. An optimised Time to Market process from the first notes taken down to delivery of the series product makes fast realisation of your individual design possible.

New dimensions in the field of electrics and electronics:

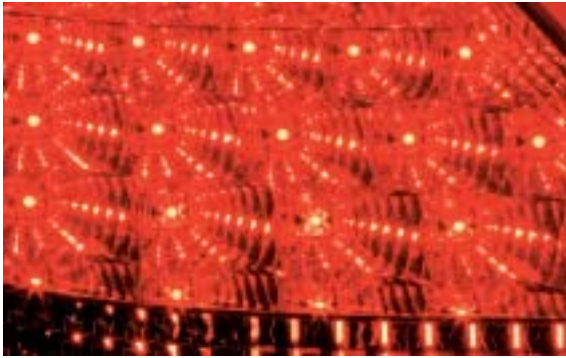
Hella covers the whole wide range of possibilities: from state-of-the-art standard solutions through to individual application developments. Additionally, we remain true to our motto "More safety and more convenience" in this area, too. Hella offers the combination of safety stoplight and rear view camera in one solution as well as applications for closing aids and locking fixtures for storage cabin flaps and caravan doors. Also new: The switch generation with 6,000 possible lasering and lighting possibilities.



So take us with you on your journey to the future because, like you, we love true freedom without adventure.



More design freedom through LEDs.



Thanks to the use of LEDs, design engineers have a great deal more design freedom. Ergonomic aspects can also be implemented easily and effectively.

Wide range of technical possibilities through LEDs.

Depending on the requirements of the product or customer wishes, Hella uses LEDs in different optical systems. Here are some examples for combination rearlights:

| | | |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|
| <p>Direct light</p> <ul style="list-style-type: none"> ■ Spot-shaped appearance ■ No optical system necessary ■ Max. distance between 2 LEDs = 15 mm | | |
| <p>Fresnel systems</p> <ul style="list-style-type: none"> ■ Suitable for all functions ■ Homogeneous appearance | | |
| <p>Reflector with pattern/ Lens without pattern</p> <ul style="list-style-type: none"> ■ High degree of effectiveness ■ Brilliant finish | | |
| <p>Light guide systems</p> <ul style="list-style-type: none"> ■ Elongated appearance ■ Homogeneous illumination ■ Adaptation to curved exterior shape | | |

LED indicators and the patented failure check.



Legal requirement in all ECE states

In the case of vehicles approved for use on public roads, the indicators must be monitored: The failure of an indicator must be shown optically or acoustically in the vehicle. This applies in all ECE states. In other words, the potential failure of the indicator **must** be monitored by the vehicle. Manufacturers use various failure-control systems. The failure check systems currently in use cannot detect simple LED lights and display a fault. All Hella LED indicators have integrated electronics for failure checking. The indicators are self-monitoring. They generate a pulse that is evaluated by the electronic ballast. This ballast simulates a 21 W bulb, which makes operation with conventional flasher units possible.

As soon as one single LED fails, the light can be considered faulty, the pulse is not generated. The ballast then switches the bulb simulation off and the flasher unit indicates the fault to the driver.

Safe conversion to LED indicators now possible thanks to patented Hella electronics

Hella supplies electronic ballasts for all Hella LED indicators which make it possible to convert the indicator failure display for various vehicles. This is necessary if the vehicle manufacturer does not guarantee indicator bulb failure checking via the vehicle electric system. The method has been patented by Hella. At the moment, there are three different ballasts and several different LED indicator types available.



LED lights failure check

On account of the low Watt power of LED lights, which distinguishes them significantly from filament bulb versions, there can be problems with the bulb failure check during operation on various traction vehicles. Since indicator failure checks are required by legislation, we recommend only operating the light in combination with an indicator control unit, Hella part no. 5DS 009 552-... .

In addition, further lighting functions are detected by some traction vehicles. This is a vehicle comfort function which is not required by legislation and does not release drivers from their obligation to see for

themselves that the lighting equipment is working. Here, too, faulty diagnoses can be a result of the lower power levels involved (instrument panel in the driver cab indicates a bulb failure although the function is working).

If faulty diagnoses such as the one described above occur during operation of your traction vehicle type, please contact the traction vehicle manufacturer.

LED indicator failure check: Background information.

Why does the failure detection required by law work with various LED lights with some flasher units and not with others?

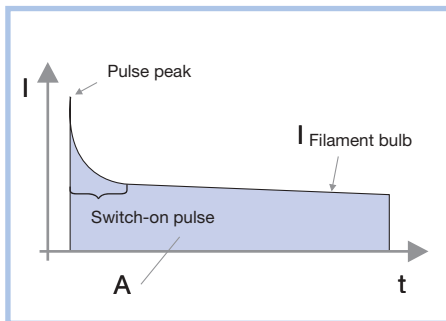


Fig. 1

Fig. 1 illustrates the typical current pattern when a bulb is switched on. Different flasher units detect this in different ways, for example by

- a) measuring the pulse peak or
- b) measuring the current at some point during the switch-on pulse or
- c) measuring the current after the pulse, when the current is constant and has a certain intensity, or
- d) determining the total energy flowing through the light (size of area A)

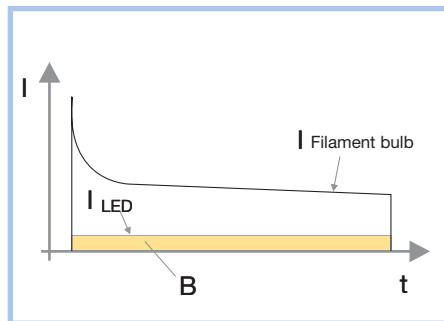


Fig. 2

Fig. 2 shows the LED current (I_{LED}) in relation to this. None of the methods mentioned can work here, because there is neither a switch-on pulse available nor is the current intensity high enough, and another possibility is that the total energy through both lights is identical (area B is as large as A).

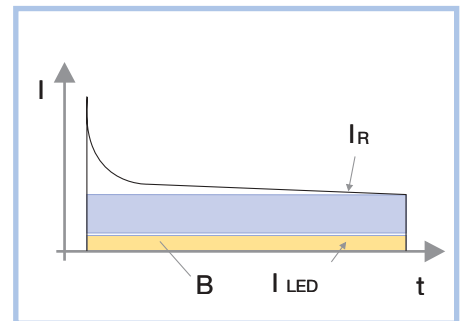


Fig. 3

If a simple Ohmic resistor is inserted, e.g. a resistor cable, the current is increased by a certain value (I_R) and the curve illustrated in Fig. 3 is the result. In this case, only a flasher unit according to principle c) would work. If the resistance is chosen somewhat higher, principle d) could also possibly work. If the light fails afterwards due to mechanical damage, the flasher unit could detect the inserted resistor as a functional bulb. In this case, a light working perfectly would be indicated although this is not the case!

This means: In this case the vehicle would lose its approval for use on public roads.

I = Current
t = Time

LED indicator failure check: The patented Hella solution.

The only solution conceivable for universal use is one that works with all the flasher units on the market. As the above considerations have shown, this can practically only be guaranteed if the current pattern of a bulb is simulated exactly by means of an electronic circuit.

Since such a circuit is extremely complex, it is not possible to integrate this in the LED light. In order to be able to benefit from the advantages of LED lights despite this fact, a ballast is required for the circuit. This combination provides the perfect – and above all legally conforming – solution to the problem.

Hella patent for the perfect problem solution

All Hella LED indicators with integrated electronics for failure checking are self-monitoring and generate an individual pulse. This pulse is evaluated by the electronic ballasts. The ballasts simulate a 21 W bulb. This makes operation with conventional flasher units possible. If the light is faulty, which can be the case if only a single LED fails, the above-mentioned pulse is not generated. The ballasts then switches the bulb simulation off and the flasher unit indicates the fault to the driver.

By measuring the light current during a time window of 10 ms (**Fig. 4**), direct exchange between the Hella LED light and a bulb version is possible.

Hella ballasts are straightforward to convert even at a later date.

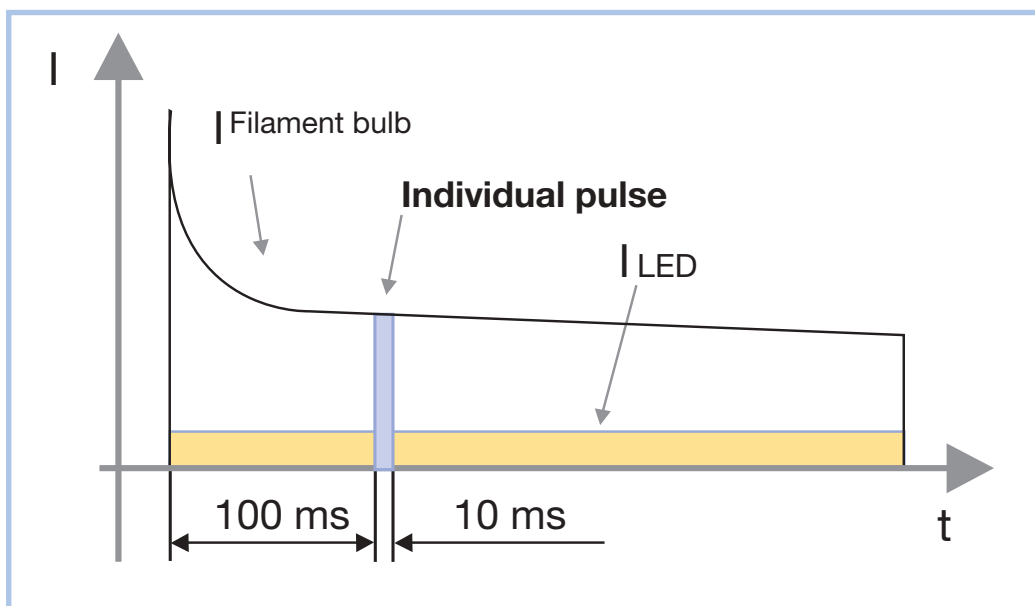


Fig. 4

Vehicle manufacturers can also ensure ECE-conforming failure checking by evaluating the pulse of the Hella LED indicators shown in the adjacent diagram directly in their control units. The exact specification can be obtained from Hella.

Which Hella ballast for which vehicle?

Vehicles that use the cold scan for the indicator failure check.

1.

Description of fault indication: Is a faulty light indicated when the ignition is switched on or directly when the fault occurs or when the bulb is screwed out without the indicator being triggered?

Solution: Simulation device for cold scan

Simulation device for cold scan 24 V

Part no. 5DS 009 602-001

12 V on request.



Vehicles without flasher unit that carry out current measurement for the failure check.

2.

Description of fault indication: Is a fault only determined during flashing (e.g. double flashing frequency)?

Solution: Indicator control unit

Indicator control units 24 V for traction vehicles

- An independent voltage supply must be guaranteed
- Protective rating IP 20

Part no. 5DS 008 828-001

12 V on request.



Protective rating IP 20
Protection against the penetration of solid particles with a diameter greater than 12 mm. Keep away from fingers or similar. No particular water protection.

Protective rating IP 6K9K
Dust must not penetrate. Water that is directed against the housing during high-pressure/steam jet cleaning may not have a harmful effect; water pressure approx. 80 - 100 bar.

for 24 V trailers

- No independent voltage supply is required
- Protective rating IP 6K9K

Part no. 5DS 009 552-001

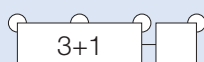
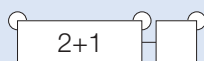
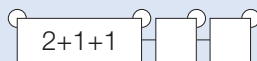
Available from 4th quarter 2007
12 V on request.



Vehicles with flasher unit.

3.

Solution: Replacement of the existing flasher unit by an LED flasher unit



LED flasher unit 12 V 2+1+1

Part no. 4DN 009 492-101

LED flasher unit 24 V 2+1

Part no. 4DM 009 492-001

LED flasher unit 24 V 3+1

Part no. 4DW 009 492-011

LED flasher unit 12 V 3+1

Part no. 4DW 009 492-111



More functional safety through LEDs.

Commercial vehicles are always under a lot of performance pressure. Fleet managers and drivers alike expect functional safety with no ifs and buts. In other words, high-quality vehicle components with a long service life. Hella LED lights meet these requirements. Their development and production takes place according to the most stringent quality standards. Hella tests their suitability for everyday use in a series of the toughest simulation tests. These include martyr stretches, arctic cold, tropical heat, thunderstorms and torrential rain. At the end of the day, LEDs come out winners against conventional filament bulbs.

Note: All LED lights have been designed for operation in DC voltage networks. Their operation with pulsed supply voltage or alternating current is not permissible.



Hella Original Parts quality sets standards.

All LED are subjected to extensive testing at Hella, both in the laboratory and in practice. In the year 2002, for example, 20 trailers belonging to an international freight carrier were fitted out with Dura-LED lights for a marathon test. Result: No failures to date. The test continues.

Products in comparison.

Hella's original parts quality is subject to comparison with standard products in regular laboratory tests. These reveal again and again how detailed solutions can cause or prevent problems for the user.

Product test LED lights: Two examples.

1. The temperature-sensitive current controllers in one **side marker light** common on the market are soldered by hand. During this process, minor unnoticed preliminary damage is caused to the components. This significantly reduces the service life of the whole LED light.

Hella relies exclusively on a precise automated process.

2. In the case of one **position light** tested, metal plates were inserted with the purpose of reflecting the light and thus adhering to the radiation angle required by legislation. This engineering principle is extremely dubious, however, both in terms of production tolerances and in normal operation. Influences such as corrosion or bending of the metal caused by vibration lead to the required lighting values no longer being achieved.

Hella uses a high-grade optical system for this functional requirement.

In this context, a note about ECE approval:

The products tested by Hella usually have ECE approval. The test results often convey the impression, however, that there must have been fluctuations in quality during production. In contrast, Hella products meet all legal requirements as well as vehicle manufacturers' requirements, which often go beyond the criteria required by law.

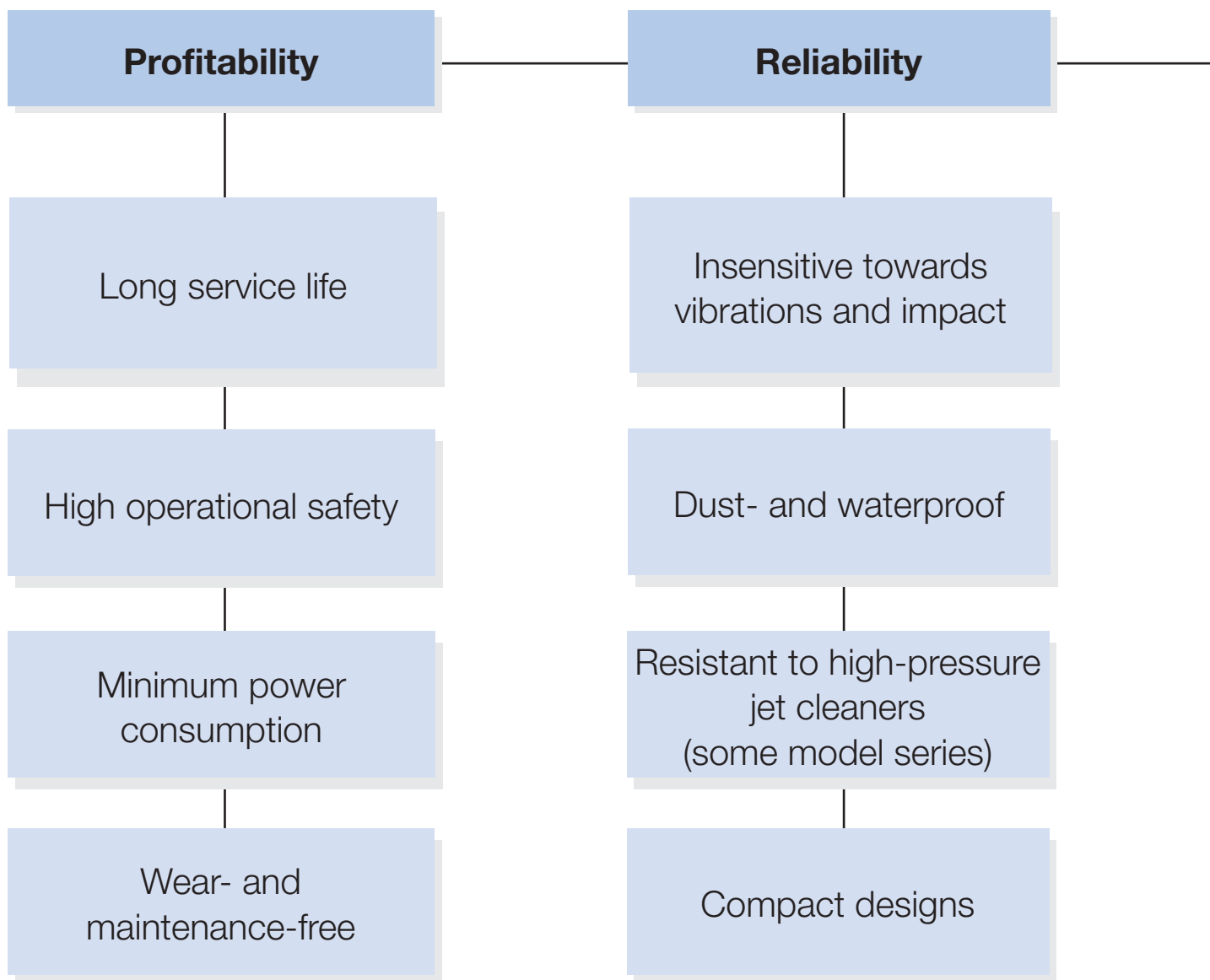


Negative example 1: Side marker light.



Negative example 2: Position light.

Summary of the advantages of the Hella LED products





Safety

Increased safety through quick switch-on behaviour

Design

Functional design



Frontlighting

Daytime running light

When do you drive with your lights on during the day?

Studies show: Driving with the lights on during the day brings decisive safety advantages. The vehicle can be seen much more easily and the number of accidents drops dramatically.

If less serious accidents are included, it can be said that more than 50 % of all collisions are due to other road users being overlooked.

Further information on the subject of Hella daytime running light can be found on the Internet:

www.tagfahrlicht.com



**Easily overlooked in the daylight:
no lighting**



**Optimal only for night-time drives:
conventional low-beam light**



**Excellent effect:
with special Hella daytime running light**

Its superior design makes it a perfect match for modern vehicle front-ends and allows it to be integrated harmoniously into the vehicle design. The new daytime running lights are suitable for universal installation on different vehicles and provide a performance lead:

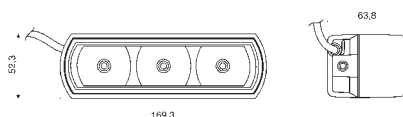
- The Hella daytime running lights generate a passive, brilliantly white signal light. This gives them a powerful signalling effect and creates a clear safety improvement
- Decisive gain in safety thanks to the special signal image for daytime driving

- Protect drivers from serious accidents
- Automatic switching on and off when the key is turned in the ignition
- Significantly lower fuel consumption than when driving with low-beam light

LED



(E1) 2344



LED daytime running lights, rectangular design

2 lights incl. harness and universal brackets.

3 high-power LEDs per light, multi-voltage 9-33 V

12 V / max. 5.5 W, current consumption = approx. 2.18 A

for surface-mounting

2PT 009 496-801

Individual light without bracket,

DRL function only

2PT 009 496-011

Individual light without bracket,

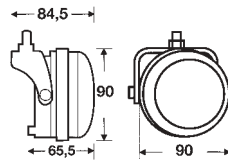
DRL with PO function

2PT 009 496-007

Frontlighting

Daytime running light

LED



LED daytime running lights set (round design)

2 lights incl. harness and universal brackets.

3 high-power LEDs per light, multi-voltage 9-33 V

12 V / max. 5.5 W, current consumption = approx. 2.18 A

for surface-mounting

2PT 009 599-801

Individual light without bracket

left **2PT 009 599-011**

right **2PT 009 599-021**

Individual light without bracket, with PO function

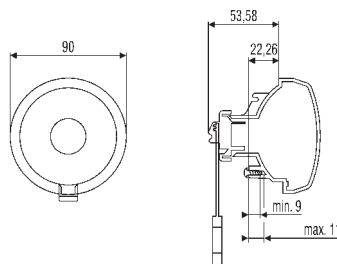
left **2PT 009 599-041**

right **2PT 009 599-031**

Universal carrier frame

9AH 165 968-001

(E1) 2372



Daytime running lights

with high-performance bulbs 12 V/16 W

Individual light

for flush-fitting, with bracket

2PT 008 935-011

Light insert with fixed-installation bulb

2PT 008 935-001

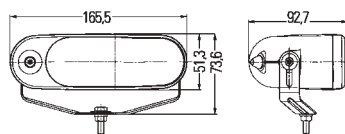
Set

two lights incl. pre-fitted professional cable harness, relay, incl. light sources, with universal bracket

for surface-mounting

2PT 008 935-801

(E1) 1722



Daytime running lights set

2 lights incl. harness, bulbs and universal carrier frame

2PT 008 362-801

(E1) 1032

Frontlighting

DynaView® Evo2

A new lighting era

DynaView® Evo2 combines the safety functions of a cornering light and fog light in compact round auxiliary headlights which can be retrofitted universally to a wide range of vehicles.

With the low beam switched on, the cornering light is activated on the left or right without delay when the indicator is set or automatically when driving round bends at speeds up to 40 km/h (25 mph).

When driving through bends, a yaw rate sensor measures the turning speed of the vehicle and triggers the switching pulse. After the bend, a dimmer gently switches the light cone off again. When the vehicle is put into reverse, both cornering lights switch on and illuminate the areas to the right and left of the vehicle broadly and brightly.



"In a normal driving situation on a straight road, the cornering light is switched off."

"When turning the corner or driving slowly round bends (at speeds of up to 40 km/h (25 mph) the cornering light is switched on automatically."

"When driving round bends at speeds of up to 40 km/h (25 mph) the respective headlight is switched on fully automatically."

"In foggy conditions, the cornering light (both sides) can be switched on manually in addition as fog light."

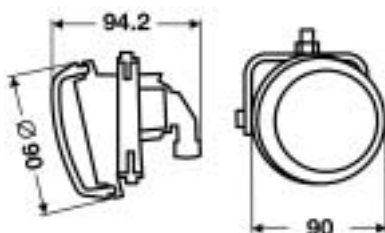
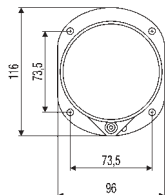


DynaView® Evo2 incl. H7 bulb
with hoop bracket, 12 V

Set incl. control electronics

| | |
|--------------------------------|-----------------|
| | 1N0 009 295-801 |
| individual light, left | 1N0 009 295-011 |
| individual light, right | 1N0 009 295-021 |

E1 1951



Connection plug set
for 20 headlights

8JD 156 151-807

Frontlighting

Low beam headlights and spotlights, 90 mm modules

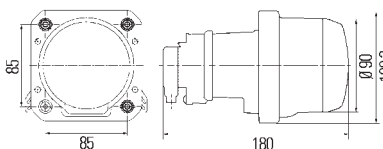
Premium

High-end illumination. Low beam and high beam from a single headlight module, using either xenon or halogen technology. Pattern-free glass cover lens. High-grade aluminium reflector. Waterproof electronic ballast with the xenon version. Connection through a 0.5 m shielded supply cable with detachable plug connection.

Bi-Xenon



E1



(illustration only shows low beam light distribution)

Bi-Xenon headlights

Low beam headlights and spotlights, 12 V

Xenon low beam and high beam in one headlight, xenon low beam only permissible with headlight range adjustment and lens cleaning system. See page 22/23.

Right-hand traffic, D2S, ECE

1AL 009 997-001

Left-hand traffic, D2S, ECE

1LL 009 997-011

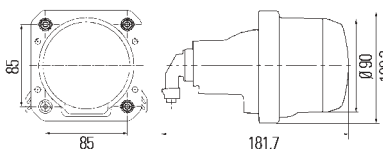
Right-hand traffic, D2S, SAE

1AL 009 997-021

Bi-halogen



E1



(illustration only shows low beam light distribution)

Bi-halogen headlight

Low beam headlights and spotlights, 12 V

Halogen low beam and high beam in one headlight.

Right-hand traffic, H7, ECE

1AL 009 998-001

Left-hand traffic, H7, ECE

1LL 009 998-011

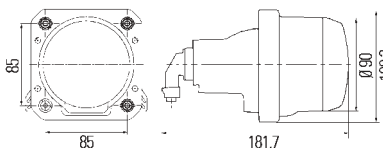
Right-hand traffic, H7, SAE

1AL 009 998-021

Halogen



E1



Halogen low beam headlight, 12 V

Metal reflectors with clear DE lens. Ideal in combination with the matching spotlights and fog lights.

Incl. light sources.

Right-hand traffic, H7, ECE

1BL 009 999-001

Right-hand traffic, H7, ECE

large pack **1BL 009 999-002**

Left-hand traffic, H7, ECE

1ML 009 999-011

Right-hand traffic, H7, SAE

1BL 009 999-021

Accessories for Premium headlights



Carrier frame
painted black

9AH 169 580-011



Actuator motors for headlight range adjustment

for 12 V halogen headlights

6NM 007 282-221

for 12 V Xenon headlights

6NM 007 282-231



Connection plug set

8JD 156 151-807

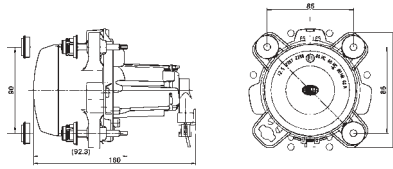
Frontlighting

Low beam headlights and spotlights, 90 mm modules

Performance

Optimised illumination. Even higher quality modules for use on long journeys.
With splashwater-proof plug-type connection.

Halogen



(E1) 2397

Low beam headlight, 12 V

Module headlight with aluminium reflector and clear DE lens behind pattern-free glass cover lens

Right-hand traffic, H1

1BL 247 042-007*

1BL 247 042-001*

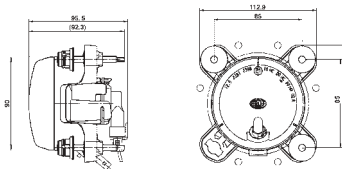
Left-hand traffic, H1

1BL 247 042-027*

1BL 247 042-021*

* Right-hand traffic version can be changed over from asymmetrical low beam to symmetrical light.
Left-hand traffic version can be changed over from symmetrical to asymmetrical.

Halogen



(E1) 2397

Spotlight, 12 V

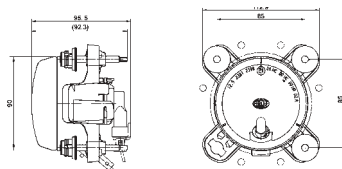
Module headlight with aluminium FF reflector and clear DE lens behind pattern-free glass cover lens

with position light, H1

1K0 247 043-007

1K0 247 043-001

Halogen



(E1) 2397

Spotlight, 12 V

without position light

1K0 247 043-017

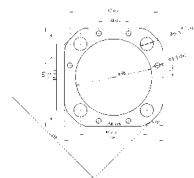
1K0 247 043-011

(illustration only shows low beam light distribution)



Carrier frame
painted black

9AH 254 228-017



Connection plug set
Performance + Classic + Premium
for 20 headlights

8JD 156 151-807



Actuator motor for headlight range adjustment
for 12 V halogen

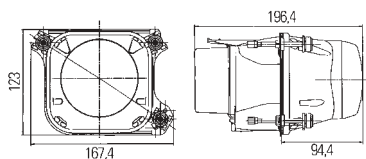
6MN 007 282-227



Connection plug set Performance + Classic
for position light, for 20 headlights

8JD 156 150-807

Bi-Xenon



E1 1677



(illustration only shows low beam light distribution)

Bi-xenon headlight, 12 V

Low beam and high beam from one headlight

Module headlight with integrated ignition unit and pattern-free glass cover lens. High-grade metal reflector.

Waterproof Xenon electronic ballast.

1 metre shielded supply cable with detachable plug connections

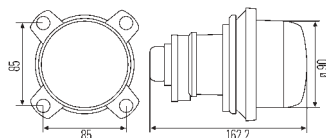
| | |
|------------------------------|-------------------------|
| Right-hand traffic | 1AL 008 934-001* |
| Left-hand traffic | 1LL 008 934-011* |
| SAE (USA) right-hand traffic | 1AL 008 934-041 |

Accessories for Bi-xenon

| | |
|---------------------------------|------------------------|
| Plug for ballast | 8JA 990 295-127 |
| Plug for switching to high beam | 8JD 162 211-801 |

* Right-hand traffic version can be changed over from asymmetrical low beam to symmetrical light.
Left-hand traffic version can be changed over from symmetrical to asymmetrical.

Xenon



E1 917



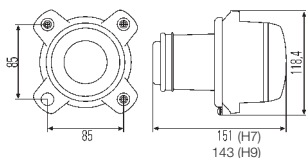
Low beam headlight, 12 V

Module headlights with pattern-free glass cover lens, magnesium reflectors with clear DE lens

Xenon low beam headlights

| | |
|------------------------|------------------------|
| D2 S | 1BL 008 194-007 |
| Left-hand traffic, D2S | 1LL 008 194-037 |
| D2S, USA version | 1BL 008 194-047 |

Halogen



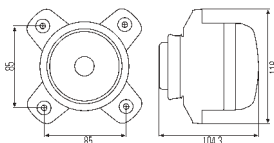
E1 917



Halogen low beam headlights

| | |
|------------------------|------------------------|
| H7, right-hand traffic | 1BL 008 193-001 |
| Left-hand traffic | 1LL 008 193-117 |
| H9, USA version | 1BL 008 193-021 |

Xenon



E1 917



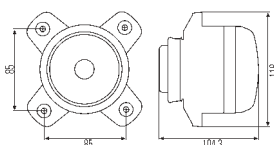
Spotlight, 12 V

Module headlight with magnesium FF reflectors and pattern-free glass cover lens.

Xenon spotlights

| | |
|------------------------|------------------------|
| with position light | 1K0 008 192-007 |
| without position light | 1K0 008 192-017 |

Halogen



E1 917



Halogen spotlights

| | |
|-------------------------------------|------------------------|
| with position light | 1K0 008 191-001 |
| without position light | 1K0 008 191-017 |
| without position light, USA version | 1K0 008 191-051 |
| with position light, USA version | 1K0 008 191-131 |

Xenon low beam only permissible with headlight range adjustment and lens cleaning system. See page 22/23.

Frontlighting

Accessories for Classic and fog lights, 90 mm module

Accessories for Classic



Rubber caps for 90 mm halogen H7, Classic

- **Low beam headlights 008 193-...**
non-ventilated

flat version for angled plugs

9GH 152 654-012

deep version for socket housing

9GH 145 943-012



- **Spotlights 008 191-...**
ventilated

flat version for angled plugs

9GH 152 654-007

deep version for socket housing

9GH 145 943-001

Halogen H9:

Sealed through connection system, no cap required



Connection plug set Classic + Performance

for position light
for 20 headlights

8JD 156 150-807



**Connection plug set
Classic + Performance + Premium**

for Xenon ballasts, halogen, bi-halogen and
DynaView® Evo2
for 20 headlights

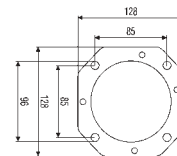
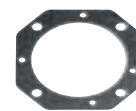
8JD 156 151-807



Connection plug set Classic

H9 008 191-... and 008 193-..., for USA version
for 20 headlights

8JD 158 175-807



Carrier frame Classic

for low beam headlights and spotlights

9AH 157 659-007



Actuator motors for headlight range adjustment Classic

for 12 V halogen headlights

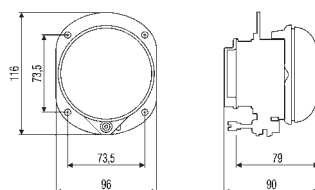
6NM 007 282-227

for 12 V Xenon headlights

6NM 007 282-231

E1

1342



Fog light 90 mm, 12 V

Minimum installation dimensions for a discreet but convincing
light design. Aluminium reflectors with clear lens. Ideal in
combination with the matching 90 mm spotlights and low
beam headlights.

Halogen fog light

1N0 008 582-007

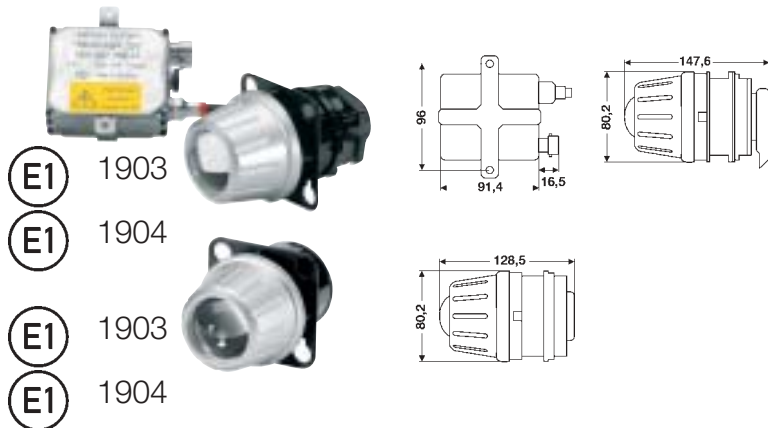
Accessories: Rubber cap

for fog lights

9GH 158 051-007

Frontlighting

50 mm Premium headlight modules



Low beam headlight, 12 V

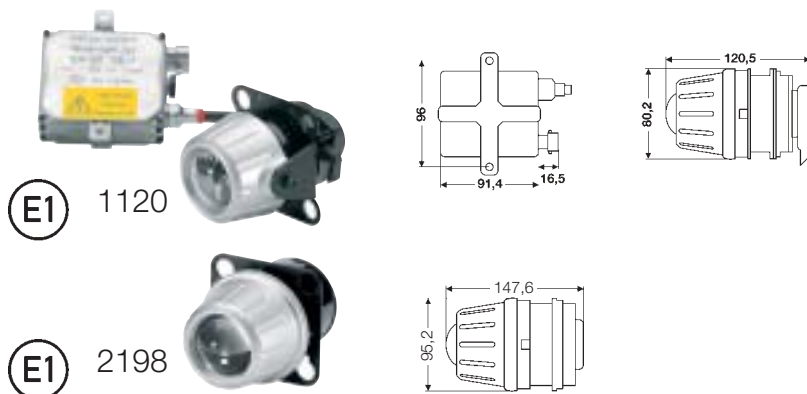
Installation frame for 3-point fastening, adjustable from the front and rear

Xenon

| | |
|-------------------------|------------------------|
| Right-hand traffic, D2S | 1BL 009 071-047 |
| Left-hand traffic, D2S | 1ML 009 071-057 |

Halogen

| | |
|------------------------|------------------------|
| Right-hand traffic, H7 | 1BL 009 071-007 |
| Left-hand traffic, H7 | 1ML 009 071-017 |



Spotlight, 12 V

3-point attachment, setting screw adjustment

Xenon

rear carrier frame is not part of the scope of supply (see accessories), D2S

1FO 008 390-317

Halogen

H9

1KL 009 486-001



Fog light, 12 V

3-point attachment, setting screw adjustment, rear carrier frame is not part of the scope of supply (see accessories), H7

1NL 008 090-317

Accessories for 50 mm headlight modules



Carrier frame (not for halogen spotlights)

| | |
|----------------------------------------------|------------------------|
| ① without headlight range adjustment fixture | 9AH 161 786-017 |
| ② with headlight range adjustment fixture | 9AH 161 784-017 |



Plastic cap

for fog lights **9HD 149 253-007**

Rubber cap

| | |
|-----------------------------------|------------------------|
| ① for halogen low beam headlights | 9GH 152 654-007 |
| ② for fog lights | 9GH 147 009-007 |



Actuator motors for headlight range adjustment

| | |
|------------------|------------------------|
| for 12 V halogen | 6NM 007 282-221 |
| for 12 V Xenon | 6NM 007 282-231 |

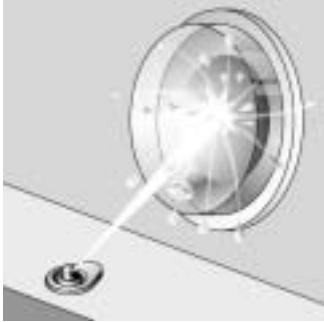


Connection plug set

for plastic cap **8JD 156 150-807**

Frontlighting

Lens cleaning systems



E1 0130

with stationary nozzles

12 V **8WS 008 549-001**

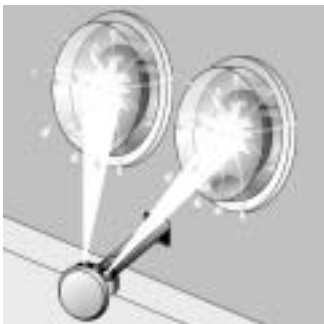
as **8WS 008 549-001**,
but with longer cables

12 V **8WS 008 549-011**



with single telescopic nozzles

12 V **8WT 008 549-101**



with double telescopic nozzles

12 V **8WT 008 549-201**

When xenon low beam headlights are used, legislation requires the use of a lens cleaning system (use of such a system is also possible for halogen headlights and spotlights).

Hella cleaning systems use the water jet principle which manages without wipers and brushes by using the kinetic energy of large water drops which are blasted off the lens and then rinsed away.

The water pressure required for the cleaning process is produced by a redary pump which is then used to form high-speed water drops inside special Hella vortex-chamber nozzles. Specially designed valves in front of the nozzles prevent water escaping from the higher placed storage tank and also help to save water.

Hella also has a solution for such cases where these stationary nozzles cannot be used due to unfavourable lens systems: telescopic nozzle systems which move into the required working position as long as they are needed for the cleaning process.

These headlight cleaning systems have ECE type approval for the following Hella headlight model series when installed according to the manufacturer's instructions.

| | | | | |
|----------|------------------------|----------|------------------------|------------------------|
| Ø 50 mm: | 1BL 009 071-... | Ø 90 mm: | 1KO 008 191-... | 1AL 009 997-... |
| | 1ML 009 071-... | | 1KO 008 192-... | 1AL 009 997-... |
| | 1FO 008 390-... | | 1BL 008 193-... | 1AL 009 998-... |
| | | | 1BL 008 194-... | 1LL 009 998-... |
| | | | 1AL 008 934-... | 1BL 009 999-... |
| | | | 1LL 008 934-... | 1ML 009 999-... |
| | | | | 1BL 247 042-... |
| | | | | 1BL 247 043-... |

Frontlighting

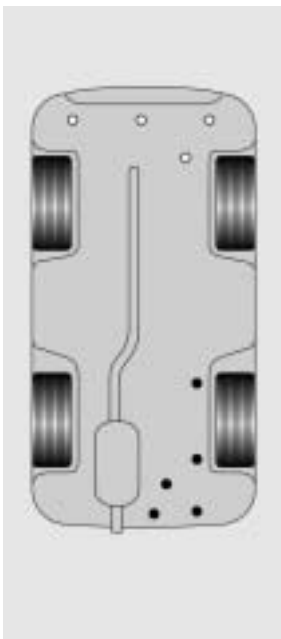
Ultrasonic headlight range adjustment (H/L)

The ultrasonic system is a versatile H/L system which can be used as original equipment and for retrofitting to vehicles with xenon headlights.

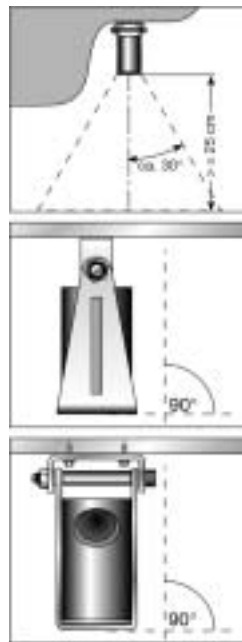
The system sensor measures the distance from the underside of the vehicle to the road surface, forwards the signal to the central control unit which then achieves optimum setting of the xenon headlights via the setting motors.

See mounting instructions for detailed information.

Optimum sensor placement



Sensor installation



Installation fittings



E1 917

12 V, one sensor (passenger cars)

8XX 008 614-011

12 V, Two sensors (3,5 t)

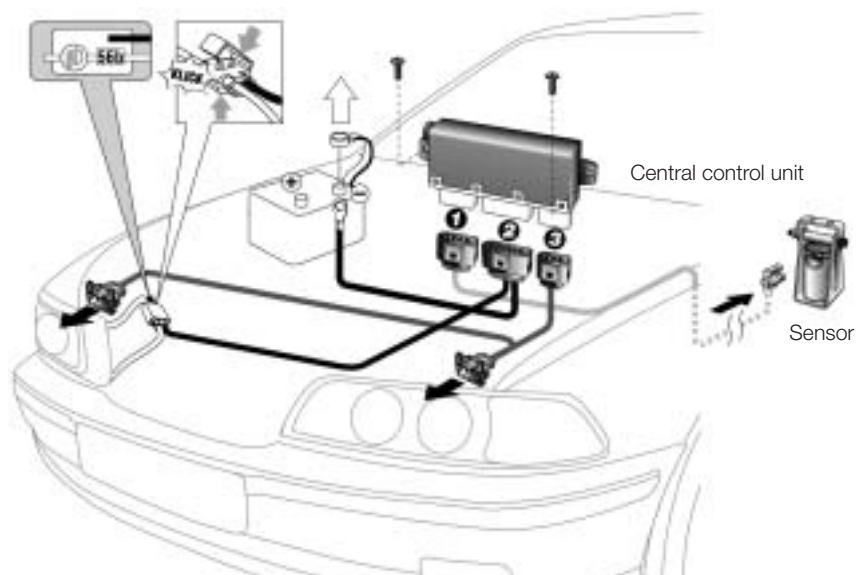
8XX 008 614-031

Add-on set / 2nd sensor

8XX 008 644-001

incl. wiring assembly

System structure in the vehicle



(Setting motors etc., see page 17, 18, 20 and 21)

Frontlighting

Twin headlight system

Fiat Ducato (05/02 →) incl. indicator and position light, also suitable for Citroën Jumper (05/02 →) and Peugeot Boxer (05/02 →)

- Xenon or halogen DE low beam headlight
- Halogen FF spotlight
- With indicator and position light
- Design trim can be painted in the required colour
- Headlights can be adjusted from the front
- Professional wiring harness



Twin headlight system

Xenon low beam, halogen main beam set
incl. lens cleaning and automatic headlight
levelling system

1DL 008 945-911

Halogen low beam,
halogen main beam set

1DL 008 945-891

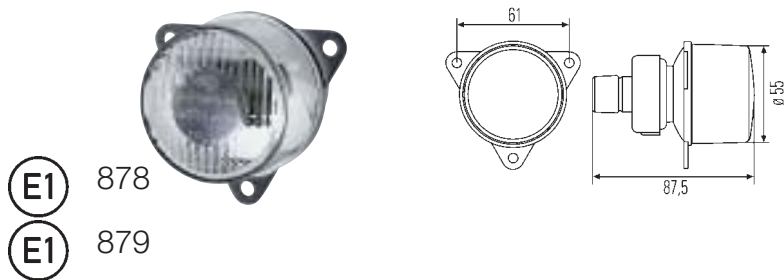
(E1) 584

(E1) 878

(E1) 917

Frontlighting

Auxiliary frontlighting



(E1) 878

(E1) 879

Indicator

with amber 12 V / 21 W bulb fitted

2BA 008 221-107

Position light

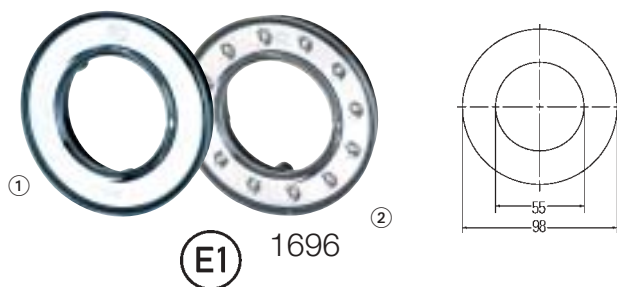
(not illustrated, version as indicator)

2PF 008 221-011

Harness with grommet

8KA 152 134-007

LED



①

②

(E1) 1696

Chrome-plated circular plate ①

for flush-fitting

8XU 008 405-301

Position light ②

for flush-fitting

12 V

2PF 008 405-061*

12 V / 1.8 W, current consumption = approx. 0.15 A

60 mm Premium lights



(E4) 6546

(E4) 7613

Type approval
ECE SAE
(USA)

Indicator

12 V 2BA 009 001-071

X

■

12 V 2BA 009 001-091

■

■

with silver-coloured bulb

12 V 2BA 009 001-201

X

■

Position light

12 V 2PF 009 001-081

X

■

LED



(E1) (type approval number on request)

60 mm Premium LED light

Position light, for flush-fitting, with 12 LEDs

2PF 009 001-421*

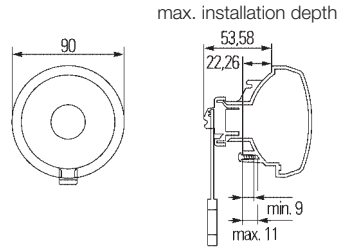
2PF 009 001-521*

Frontlighting

Auxiliary frontlighting



(E4) 10215



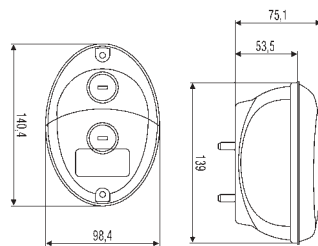
90 mm

| | | Type approval | |
|-----------------------------|------------------------|---------------|-----------|
| | | ECE | SAE (USA) |
| Indicator | | | |
| 12 V | 2BA 965 039-067 | X | |
| Position light | | | |
| 12 V | 2PF 965 039-077 | X | ■ ● |
| Daytime running light, 21 W | | | |
| 12 V | 2PT 965 039-161 | | |



(E4) 6550

(E4) 10202



Oval light series

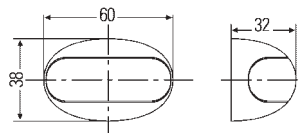
for horizontal or vertical surface-mounting, with grommet

| | | Type approval | |
|----------------------------------------|------------------------|---------------|-----------|
| | | ECE | SAE (USA) |
| Indicator, without bulb (USA) | | | |
| 12/24 V | 2BA 343 130-057 | X | ■ ● |
| Indicator/position light, without bulb | | | |
| 12/24 V | 2BE 343 130-007 | X | |

LED



(E4) 7575



Position light

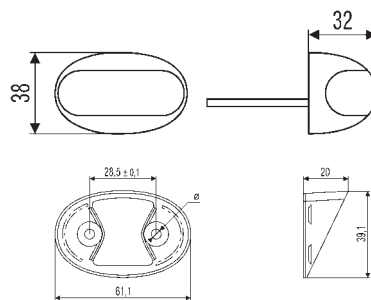
for horizontal surface-mounting

Black housing

| | |
|-----------------------------|-------------------------|
| with 0.5 m cable, 10 – 33 V | 2PF 959 570-401* |
| with 5 m cable, 10 – 33 V | 2PF 959 570-411* |



(E4) 7575



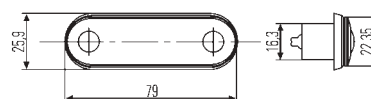
White housing

| | |
|----------------------------------------------------|-------------------------|
| with 0.5 m cable, 10 – 33 V | 2PF 959 570-427* |
| with matching white 25° adapter base | 8HG 959 571-007 |
| (order separately) | |
| 12 V / 0.5 W, current consumption = approx. 0.04 A | |

LED



(E4) 7597



Position light

for horizontal or vertical flush-fitting

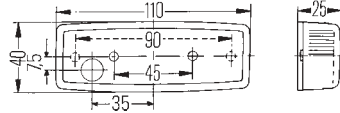
| | |
|----------------------------------------------------|-------------------------|
| with 0.5 m cable, 10 – 33 V | 2PF 959 590-401* |
| with 5 m cable, 10 – 33 V | 2PF 959 590-411* |
| 12 V / 0.5 W, current consumption = approx. 0.04 A | |

Frontlighting

Auxiliary frontlighting

(E17) 789

(E17) 378



Position light

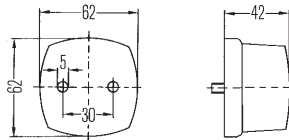
for horizontal or vertical surface-mounting, 12 V with reflector

2PG 006 717-021

without reflector (not illustrated)

2PF 006 717-011

(E17) 803



Position light

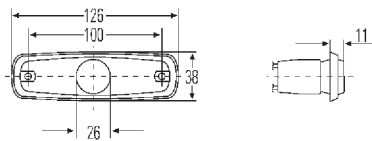
for surface-mounted to sloping surfaces, for 12 and 24 V without reflector for slopes from +15° to -30°

2PF 004 081-001

without reflector for slopes of 23° (not illustrated)

2PF 004 081-107

(E1) 21656



Position light

for horizontal or vertical flush-fitting, with pre-fitted 12 V / 3 W bulb with reflector

2PF 962 964-041

Seal (please order separately)

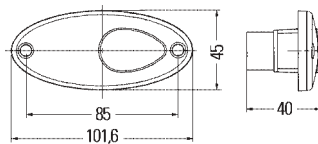
9GD 963 281-001

Grommet (please order separately)

9GT 963 129-001

(E4) 7499

(E4) 3153



Position light

for horizontal flush-fitting, with pre-fitted 12 V / 5 W bulb and seal with reflector

2PG 964 295-011

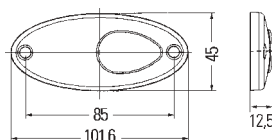
for horizontal or vertical flush-fitting without reflector (not illustrated)

2PG 964 295-021

(E17) 9806

(E17) 811

LED



Position light

for horizontal surface-mounting, with reflector, with 2 LEDs

2PG 964 295-121*

12 V / 0.3 W, current consumption = approx. 0.03 A

(E17) 0301

* For LED-light failure check, please observe the note on page 7

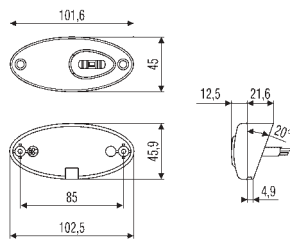
Frontlighting

Auxiliary frontlighting

LED



E17 817



Position light

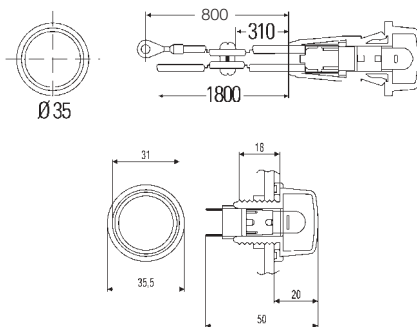
for horizontal surface-mounting,
with ineffective reflector,
with 20° adapter base included loose

2PF 964 295-257*

12 V / 0.3 W, current consumption = approx. 0.03 A



E1 584



Position light

for flush-fitting, for 12 V and 24 V,
clear-glass lens,
with 800 mm ground cable and 1800 mm positive lead

2PF 003 563-151

as -151, however without positive lead

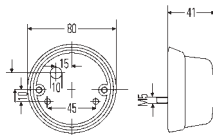
2PF 003 563-167

Light mounted with M 20 x 1.5 plastic nut;
without cable, with flat plug connection,
with 12 V bulb

2PF 003 563-177



E1 21624



Position light

for surface-mounting, clear-glass lens,
2 x M5 fastening screws

2PF 001 259-631

Adapter

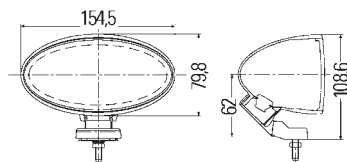
for surface-mounted for 45° slops (order separately)

8HG 002 247-001



E1 651

E1 650



Comet FF 100

with 12 V bulbs, wiring harness and relay,
installation upright or pendant

Spotlight

Body colour

ivory

1FA 007 891-811

Fog light

Body colour

ivory

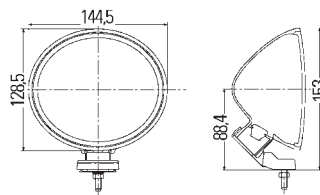
1NA 007 891-801

basalt grey

1NA 007 891-841

Frontlighting

Auxiliary frontlighting



(E1) 646

(E1) 645

Comet FF 200

with 12 V bulbs, wiring harness and relay,
installation upright or pendant

Spotlight

Body colour ivory

1F4 007 893-811

Spotlight, single

Body colour basalt grey, blue lens, ref. 37.5

1F4 007 893-241

Chrome-plated housing, ref. 17.5

1F4 007 893-201

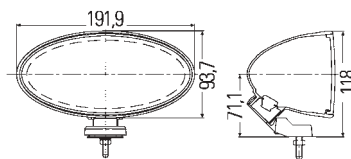
Ref. 37.5

1F4 007 893-191

Fog light, single

Chrome-plated housing

1N4 007 893-181



(E1) 649

Comet FF 300

with 12 V bulbs, wiring harness and relay,
installation upright or pendant

Spotlight

Body colour ivory

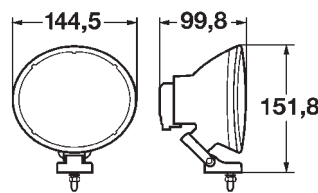
1FB 007 892-811

Spotlight, single

Body colour basalt grey, blue lens, ref. 17.5

1FB 007 892-131

Xenon



(E1) 646

Comet 200 Xenon

with gas discharge bulbs and 12 V electronic ballast

Spotlight

Body colour anthracite, frame silver-coloured

1F4 007 893-871



Universal wiring set

for 1 to 2 auxiliary headlights incl. relay, fuse,
wiring and installation material (not for CELIS®, Xenon)

Wiring harness

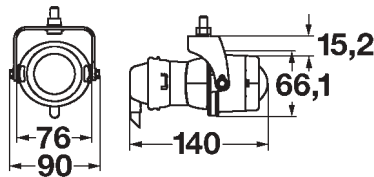
8KA 002 309-811

Frontlighting

Auxiliary frontlighting



(E1) 877



Micro DE Premium Edition

Fog light set

with 12 V bulbs,
with radio frequency switching system and aluminium finisher

1NL 008 090-871

Fog light, single

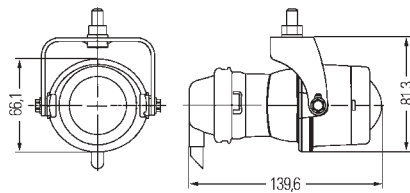
with 12 V bulbs, aluminium finisher

1NL 008 090-301

Xenon



(E1) 1120



Spotlight

Ref. 17.5, 12 V, black housing, incl. D2S Xenon
bulb and electronic ballast,
aluminium finisher

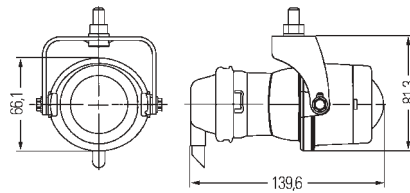
Set 1FO 008 390-821

Single 1FO 008 390-301

Xenon



(E1) 1120



DE Xenon

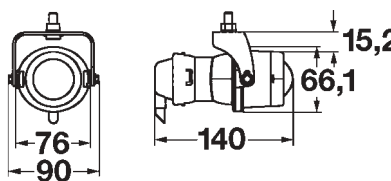
DE spotlight set, with black decorative rings,
gas discharge bulbs and 12 V electronic ballast

Spotlight set

1FO 008 390-801



(E1) 877



Micro DE

Fog light set

with black decorative ring

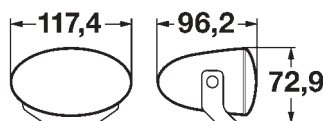
1NL 008 090-821

with universal radio frequency switching system and black
decorative ring

1NL 008 090-831



(E1) 1210



FF 50

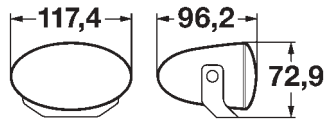
with 12 V / H7 bulbs, relay with wiring and accessories,
upright surface-mounting

Spotlight set

1FA 008 283-811

Frontlighting

Auxiliary frontlighting



(E1) 1209

FF 50

with 12 V / H7 bulbs, relay with wiring and accessories, upright surface-mounting

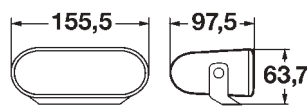
Spotlight, single

with blue lens

1FA 008 283-031

Fog light set

1NA 008 283-801



(E1) 1212

FF 75

with 12 V / H7 bulbs, relay with wiring and accessories, upright surface-mounting

Spotlight set

1FA 008 284-811

Fog light set

1NA 008 284-801



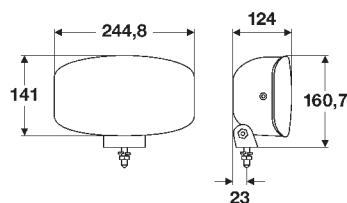
(E1) 1211

Spotlight, single

with blue lens

1FA 008 284-031

Xenon



(E1) 1741

Jumbo 320 FF

Black housing

Xenon spotlight

with gas discharge bulb and 12 V electronic ballast with position light

1F4 008 773-021



(E1) 1655

Spotlight

for 12 and 24 V, without position light, with blue lens

1FE 008 773-061

with clear lens

1FE 008 773-001



(E1) 1689

Fog light

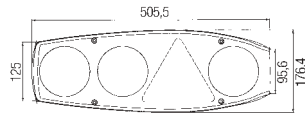
for 12 and 24 V

1NE 008 773-031

Rear lighting



(E4) 9836



Combination rearlight Caraluna II Plus

for horizontal flush-fitting, with 12 V bulbs, with combined indicator and reverse light module, can also be used as an upgrade for the basic version 2..343 419-...

Type approval
ECE SAE
(USA)

with triangular reflector

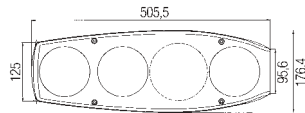
| | | | | |
|-------|------------------------|---------------|---|--|
| left | 2VP 343 590-017 | ① ② ③ ④ ⑤ ⑥ ⑦ | X | |
| right | 2VP 343 590-027 | ① ② ③ ④ ⑤ ⑥ ⑦ | X | |

with round reflector

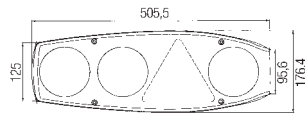
| | | | | |
|-------|------------------------|---------------|---|--|
| left | 2VP 343 590-037 | ① ② ③ ④ ⑤ ⑥ ⑦ | X | |
| right | 2VP 343 590-047 | ① ② ③ ④ ⑤ ⑥ ⑦ | X | |



(E4) 9836



(E4) 10217



Combination rearlight Caraluna II Plus Chromium

for horizontal flush-fitting, with 12 V bulbs, in brilliant-finish look, with combined indicator and reverse light module, can also be used as an upgrade for the basic version 2.. 343 419-... 343 419-...

Type approval
ECE SAE

without side marker reflector light

with triangular reflector

(USA)

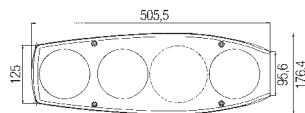
| | | | | |
|-------|------------------------|-------------|---|--|
| left | 2VP 343 590-057 | ① ② ③ ④ ⑤ ⑥ | X | |
| right | 2VP 343 590-067 | ① ② ③ ④ ⑤ ⑥ | X | |

with round reflector

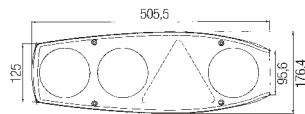
| | | | | |
|-------|------------------------|-------------|---|--|
| left | 2VP 343 590-077 | ① ② ③ ④ ⑤ ⑥ | X | |
| right | 2VP 343 590-087 | ① ② ③ ④ ⑤ ⑥ | X | |



(E4) 10217



(E4) 10217



Combination rearlight Caraluna II Chromium

for horizontal flush-fitting, with 12 V bulbs in brilliant-finish look, without side marker reflector light

Type approval
ECE SAE

with triangular reflector

(USA)

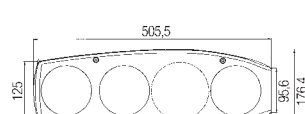
| | | | | |
|-------|------------------------|-----------|---|--|
| left | 2VA 341 419-097 | ① ② ③ ④ ⑥ | X | |
| right | 2VP 341 419-107 | ① ② ③ ⑤ ⑥ | X | |
| left | 2VP 341 419-157 | ① ② ③ ⑤ ⑥ | X | |
| right | 2VA 341 419-167 | ① ② ③ ④ ⑥ | X | |

with round reflector

| | | | | |
|-------|------------------------|-----------|---|--|
| left | 2VA 341 419-077 | ① ② ③ ④ ⑥ | X | |
| right | 2VP 341 419-087 | ① ② ③ ⑤ ⑥ | X | |
| left | 2VP 341 419-177 | ① ② ③ ⑤ ⑥ | X | |
| right | 2VA 341 419-187 | ① ② ③ ④ ⑥ | X | |



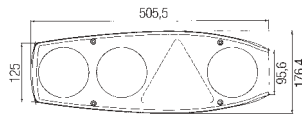
(E4) 10217



Rear lighting



E4 9836



Combination rearlight Caraluna II

for horizontal flush-fitting,
with 12 V bulbs and

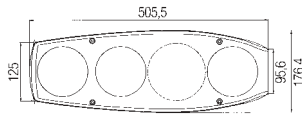
Type approval
ECE SAE
(USA)

with triangular reflector

| | | | | |
|-------|------------------------|-------------|---|--|
| left | 2VA 341 419-017 | ① ② ③ ④ ⑥ ⑦ | X | |
| right | 2VA 341 419-027 | ① ② ③ ⑥ ⑦ | X | |
| left | 2VP 341 419-037 | ① ② ③ ⑤ ⑥ ⑦ | X | |
| right | 2VP 341 419-047 | ① ② ③ ⑤ ⑥ ⑦ | X | |
| right | 2VA 341 419-067 | ① ② ③ ④ ⑥ ⑦ | X | |



E4 9836

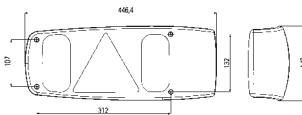


with round reflector

| | | | | |
|-------|------------------------|-------------|---|-------|
| left | 2VA 341 419-117 | ① ② ③ ④ ⑥ ⑦ | X | |
| right | 2VA 341 419-147 | ① ② ③ ④ ⑥ ⑦ | X | |
| right | 2VP 341 419-127 | ① ② ③ ⑤ ⑥ ⑦ | X | X ■ ● |
| left | 2VP 341 419-137 | ① ② ③ ⑤ ⑥ ⑦ | X | X ■ ● |



E17 9604



Combination rearlight Caraluna I

for horizontal flush-fitting,
with 12 V bulbs and

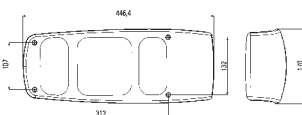
Type approval
ECE SAE
(USA)

with triangular reflector

| | | | | |
|-------|------------------------|-------------|---|--|
| left | 2VA 007 502-011 | ① ② ③ ④ ⑥ ⑦ | X | |
| right | 2VA 007 502-061 | ① ② ③ ④ ⑥ ⑦ | X | |
| left | 2VP 007 502-031 | ① ② ③ ⑤ ⑥ ⑦ | X | |
| right | 2VA 007 502-021 | ① ② ③ ⑥ ⑦ | X | |
| right | 2VP 007 502-041 | ① ② ③ ⑤ ⑥ ⑦ | X | |



E17 9604



with square reflector

| | | | | |
|-------|------------------------|-------------|---|-------|
| left | 2VA 007 502-111 | ① ② ③ ④ ⑥ ⑦ | X | |
| right | 2VP 007 502-121 | ① ② ③ ⑤ ⑥ ⑦ | X | |
| left | 2VA 007 502-217 | ① ② ③ ⑤ ⑥ ⑦ | | X ■ ● |

■ SAE type approval for vehicles < 2,032 mm in width

● SAE type approval for vehicles > 2,031 mm in width

- ① Taillight ② Stoplight ③ Indicator

- ④ Rear fog light ⑤ Reverse light

⑥ Reflector

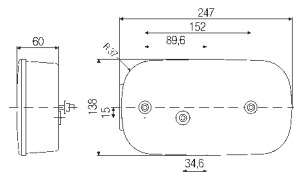
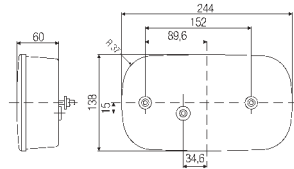
⑦ Side marker light with reflector

⑧ Licence plate light

Rear lighting



E9 5447



Combination rearlight

with integrated triangular reflector and pre-fitted 12 V bulbs, with grommet

Lens white/red
for horizontal flush-fitting

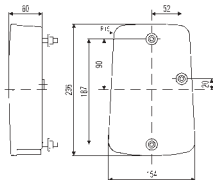
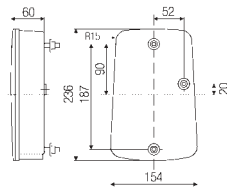
| | | | | | | | | Type approval | |
|-------|------------------------|---|---|---|---|---|---|---------------|-----|
| | | | | | | | | ECE | SAE |
| | | | | | | | | (USA) | |
| left | 2VA 998 232-251 | ① | ② | ③ | ④ | ⑥ | X | | |
| right | 2VP 998 232-261 | ① | ② | ③ | ⑤ | ⑥ | X | | |

for horizontal surface-mounting

| | | | | | | | | | |
|-------|------------------------|---|---|---|---|---|---|---|--|
| left | 2VA 998 232-291 | ① | ② | ③ | ④ | ⑥ | ⑦ | X | |
| right | 2VP 998 232-301 | ① | ② | ③ | ⑤ | ⑥ | ⑦ | X | |



E4 10162



Combination rearlight

with integrated triangular reflector and pre-fitted 12 V bulbs, with grommet

Lens white/red
for vertical flush-fitting

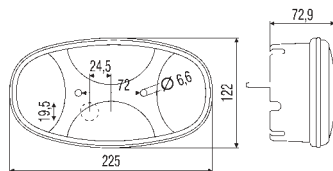
| | | | | | | | | Type approval | |
|-------|------------------------|---|---|---|---|---|---|---------------|-----|
| | | | | | | | | ECE | SAE |
| | | | | | | | | (USA) | |
| left | 2VA 998 233-251 | ① | ② | ③ | ④ | ⑥ | ⑦ | X | |
| right | 2VP 998 233-261 | ① | ② | ③ | ⑤ | ⑥ | ⑦ | X | |

for vertical surface-mounting, with 5-pin central plug

| | | | | | | | | | |
|-------|------------------------|---|---|---|---|---|---|---|--|
| left | 2VA 998 233-271 | ① | ② | ③ | ④ | ⑥ | ⑦ | X | |
| right | 2VP 998 233-281 | ① | ② | ③ | ⑤ | ⑥ | ⑦ | X | |



E17 0303



Combination rearlight

for horizontal or vertical surface-mounting
with integrated reflector

| | | | | | | | | Type approval | |
|-------|------------------------|---|---|---|---|---|---|---------------|-----|
| | | | | | | | | ECE | SAE |
| | | | | | | | | (USA) | |
| left | 2VA 343 640-077 | ① | ② | ③ | ④ | ⑥ | X | | |
| right | 2VA 343 640-037 | ① | ② | ③ | ⑤ | ⑥ | X | | |
| left | 2VA 343 640-027 | ① | ② | ③ | ⑤ | ⑥ | X | | |
| right | 2VA 343 640-067 | ① | ② | ③ | ④ | ⑥ | X | | |

■ SAE type approval for vehicles < 2,032 mm in width

● SAE type approval for vehicles > 2,031 mm in width

① Taillight

② Stoplight

③ Indicator

④ Rear fog light

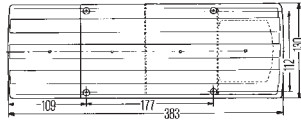
⑤ Reverse light

⑥ Reflector

⑦ Side marker light with reflector

⑧ Licence plate light

Rear lighting



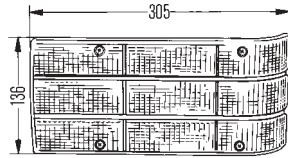
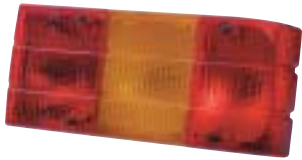
E17 9303,
9301

Combination rearlight

with 12 V bulb,
for horizontal flush-fitting

Type approval
ECE SAE
(USA)

| | | | |
|------------------------|-----------|---|-----|
| 2SK 004 460-031 | ① ② ③ ④ ⑤ | X | |
| 2SD 004 460-001 | ① ② ③ ④ | X | |
| 2SD 004 460-011 | ① ② ③ | X | |
| 2SK 004 460-041 | ① ② ③ ⑤ | X | |
| 2SK 004 460-087 | ① ② ③ ⑤ | | X ■ |



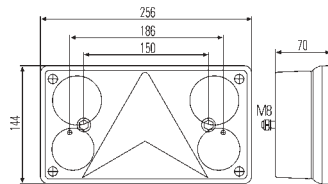
E17 8904, 8906, 8902, 9402

Combination rearlight

3-chamber light with 12 V bulb,
for horizontal flush-fitting

Type approval
ECE SAE
(USA)

| | | | |
|------------------------|---------|---|--|
| 2SD 006 459-031 | ① ② ③ ④ | X | |
| 2SK 006 459-041 | ① ② ③ ⑤ | X | |
| 2SD 006 459-021 | ① ② ③ | X | |



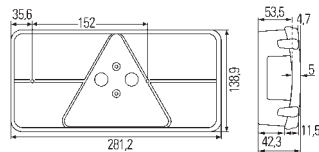
E1 864

Combination rearlight

with triangular reflector,
for 12 V and 24 V bulb,
for horizontal surface-mounting or flush-fitting

Type approval
ECE SAE
(USA)

| | | | | |
|-------|------------------------|---------------|---|--|
| left | 2VP 340 400-151 | ① ② ③ ④ ⑤ ⑥ | X | |
| right | 2VP 340 400-141 | ① ② ③ ④ ⑤ ⑥ | X | |
| left | 2VP 340 400-131 | ① ② ③ ④ ⑤ ⑥ ⑦ | X | |
| right | 2VP 340 400-121 | ① ② ③ ④ ⑤ ⑥ ⑦ | X | |



E17 9005

E17 418 = Licence plate light

Combination rearlight

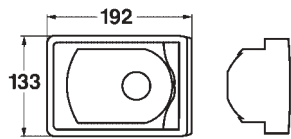
for horizontal flush-fitting,
with triangular reflector,
for 12 V

Type approval
ECE SAE
(USA)

| | | | | |
|-------|------------------------|-------------|---|--|
| left | 2VB 341 032-111 | ① ② ③ ④ ⑥ ⑧ | X | |
| right | 2VB 341 032-141 | ① ② ③ ④ ⑥ ⑧ | X | |
| right | 2VB 341 032-121 | ① ② ③ ⑥ ⑧ | X | |
| left | 2VB 341 032-131 | ① ② ③ ⑥ ⑧ | X | |

Rear lighting

LED



(E17) 10880



(E17) 10880

Combination rearlight

for horizontal flush-fitting
brilliant finish,

Type approval
ECE SAE
(USA)

2SB 008 982-307 ① ② red lens X

2SB 008 982-367 ① ② clear-glass lens X

12 V / 3 W, current consumption = approx. 0.25 A

2BA 008 982-347* ③ clear-glass lens X

12 V / 2 W, current consumption = approx. 0.17 A

* with impulse for indicator failure check, see page 7

Accessories

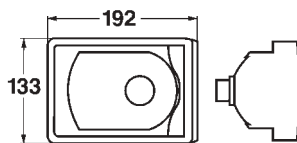
for LED and bulb version

8GD 159 740-007 Seal

Combination rearlight

for horizontal flush-fitting
brilliant finish,

Type approval
ECE SAE
(USA)



(E4) 10151

2SA 008 805-007 ① X ■ ●

2DA 008 805-017 ② X ■ ●

2SB 008 805-027 ① ② X ■ ●

2BA 008 805-067 ③ red lens X ■ ●

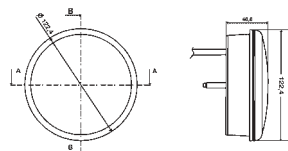
2BA 008 805-057 ③ clear-glass lens X

2NE 008 805-077 ④ X ■ ●

2NE 008 805-037 ④ X

2ZR 008 805-047 ⑤ X X ■ ●

LED



Combination rearlight

for flush-fitting,
clear-glass lens, multi-voltage 9-32 V

Type approval
ECE SAE
(USA)

2SD 344 200-007 ① ② ③ X X

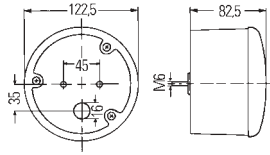
Taillight: 12 V / 0.2 W, current consumption = approx. 0.02 A

Stoplight: 12 V / 1 W, current consumption = approx. 0.08 A

Indicator*: 12 V / 1.5 W, current consumption = approx. 0.13 A

* with impulse for indicator failure check, see page 7

Rear lighting



Combination rearlight

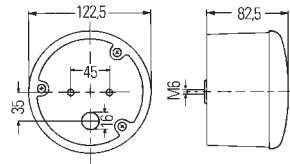
for flush-fitting,
brilliant finish

Type approval
ECE SAE
(USA)

| | | | | |
|------------------------|-----|----------|---|-------|
| 2BA 964 169-507 | ③ | E17 653 | X | X ■ ● |
| 2SB 964 169-537 | ① ② | E17 816 | X | X ■ ● |
| 2ZR 964 169-517 | ⑤ | E17 2312 | X | X ■ ● |
| 2NE 964 169-527 | ④ | E17 3809 | X | X ■ ● |

as above, but without fastening screws

| | | | | |
|------------------------|-----|----------|---|-------|
| 2BA 964 169-647 | ③ | E17 653 | X | X ■ ● |
| 2SB 964 169-677 | ① ② | E17 816 | X | X ■ ● |
| 2ZR 964 169-657 | ⑤ | E17 2312 | X | X ■ ● |
| 2NE 964 169-667 | ④ | E17 3809 | X | X ■ ● |



Combination rearlight

for surface-mounting or flush-fitting

Type approval
ECE SAE
(USA)

| | | | | |
|------------------------|---------------------------|----------|---|-------|
| 2DA 964 169-007 | ② | E17 808 | X | X ■ ● |
| 2BA 964 169-017 | ③ | E17 648 | X | X ■ ● |
| 2NE 964 169-027 | ④ | E17 3808 | X | X ■ ● |
| 2ZR 964 169-037 | ⑤ | E17 2311 | X | X ■ ● |
| 2BA 964 169-047 | ③ ④ | E17 9804 | X | |
| 2BN 964 169-057 | ③ ⑤ | E17 9801 | X | X ■ |
| 2TA 964 169-067 | ① ② ⑥ | E17 9805 | X | X ■ |
| 2BE 964-169-077 | Indicator/position light: | E17 9802 | X | |
| 2SW 964 169-087 | ① ③ | E17 9803 | X | X ■ |
| 2SA 964 169-097 | ① | E17 810 | X | X ■ ● |
| 2SD 964 169-117 | ① ② ③ | E17 9903 | X | |
| 2BA 964 169-127 | ③ ④ | | | ■ |
| 2SD 964 169-137 | ① ② ③ | | | ■ |
| 2TA 964 169-147 | ① ② ⑥ | | | ■ |
| 2SW 964 169-167 | ① ③ | | | ■ |
| 2SB 964 169-287 | ① ② | E17 815 | X | X ■ ● |
| 2BR 964 169-297 | ③ ⑥ | | X | |

but without fastening screws

| | | | | |
|------------------------|-------|----------|---|-------|
| 2NE 964 169-227 | ④ | E17 3808 | X | X ■ ● |
| 2BA 964 169-237 | ③ ④ | E17 648 | X | X ■ |
| 2BN 964 169-247 | ③ ⑤ | E17 9801 | X | X ■ |
| 2TA 964 169-257 | ① ② ⑥ | E17 9805 | X | X ■ |
| 2SA 964 169-277 | ① | E17 810 | X | X ■ ● |
| 2SB 964 169-717 | ① ② | E17 815 | X | X ■ ● |

■ SAE type approval for vehicles < 2,032 mm in width

● SAE type approval for vehicles > 2,031 mm in width

① Taillight

② Stoplight

③ Indicator

④ Rear fog light

⑤ Reverse light

⑥ Reflector

⑦ Side marker light with reflector

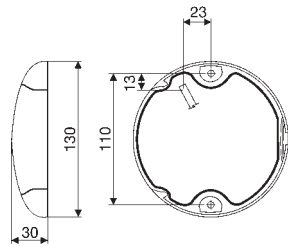
⑧ Licence plate light

Rear lighting

LED



(E4) 10208



EuroLED

for surface-mounting, cast in one piece with black base plate, electrical connection through a cable 2500 mm long, Multi-volt 9-33 V, with 1 Power-LED

Type approval
ECE SAE
(USA)

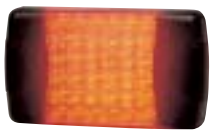
| | | | |
|-------------------------|-----|---|--|
| 2SB 959 821-601 | ① ② | X | |
| 2ZR 959 820-601 | ⑤ | X | |
| 2BA 959 822-601* | ③ | X | |
| 2NE 959 821-201 | ④ | X | |

12 V / 2.5 W, current consumption = approx. 0.21 A

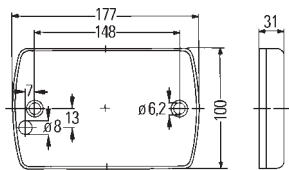
12 V / 4 W, current consumption = approx. 0.33 A

* with impulse for indicator failure check, see page 7
SAE versions on request.

LED



(E13) 0533



DuraLED

for horizontal or vertical surface-mounting, clear-glass lens, with 36 LEDs and potted cable 2,400 mm long with stripped cable ends, multi-volt 9-33 V

Type approval
ECE SAE
(USA)

| | | | |
|-------------------------|-------|---|--|
| 2SP 959 060-601* | ① ② ⑨ | X | |
| 2BA 959 070-631* | ③ | X | |

12 V / 13 W, current consumption = approx. 1.08 A

12 V / 9 W, current consumption = approx. 0.75 A

* with impulse for indicator failure check, see page 7

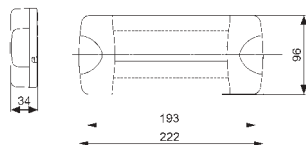


(E13) 0363

LED



(E4) 10176



DuraLED Combi

for horizontal surface-mounting, clear-glass lens, with 40 LEDs and potted cable 2,500 mm long with stripped cable ends, multi-volt 8-28 V

Type approval
ECE SAE
(USA)

| | | | |
|-------------------------|-------|---|--|
| 2SD 959 050-401* | ① ② ③ | X | |
|-------------------------|-------|---|--|

12 V / 11 W, current consumption = approx. 0.92 A

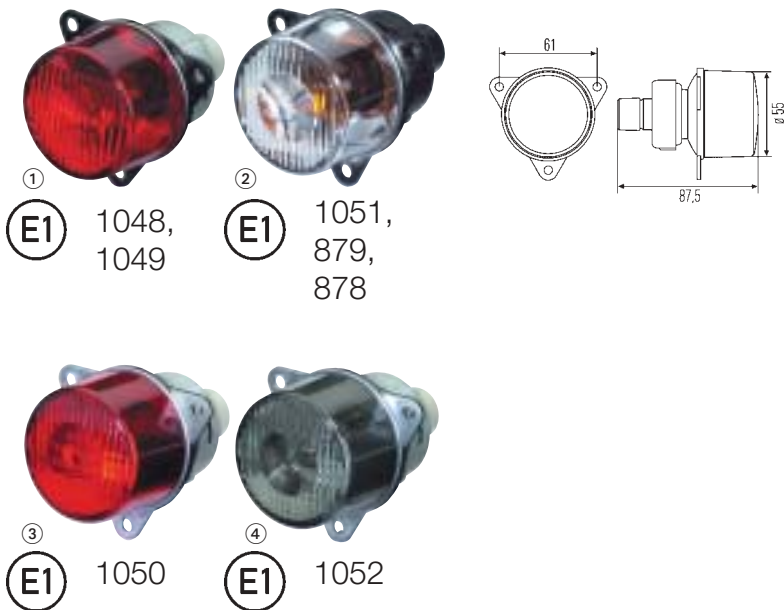
* with impulse for indicator failure check, see page 7

- ① Taillight
- ⑥ Reflector

- ② Stoplight
- ⑦ Side marker light with reflector
- ③ Indicator

- ④ Rear fog light
- ⑧ Licence plate light
- ⑤ Reverse light
- ⑨ Park light

Rear lighting

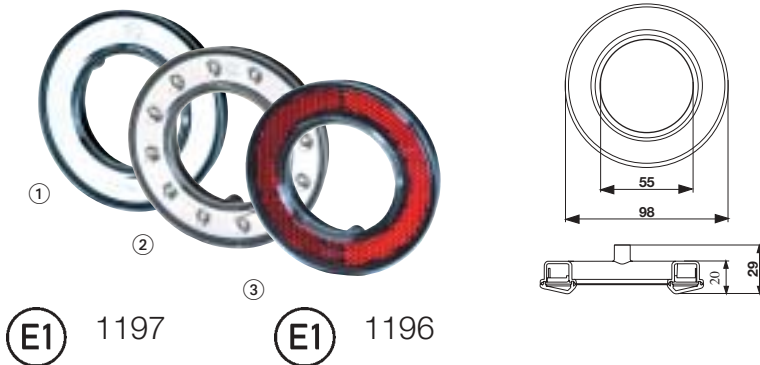


Combination rearlights

12 V and 24 V, for flush-fitting

| | |
|-----------------------------------|------------------------|
| ① Taillight | 2XA 008 221-021 |
| with 12 V/5 W bulb fitted | 2SA 008 221-127 |
| Stoplight | 2XA 008 221-021 |
| with 12 V/21 W bulb fitted | 2DA 008 221-167 |
| ② Indicator with smoked glass | 2BA 008 221-041 |
| with amber 12 V/21 W bulb fitted | 2BA 008 221-147 |
| ③ Rear fog light | 2NE 008 221-031 |
| with 12 V/21 W bulb fitted | 2NE 008 221-137 |
| ④ Reverse light with smoked glass | 2ZR 008 221-051 |
| with 12 V/21 W bulb fitted | 2ZR 008 221-157 |
| Harness with grommet | 8KA 152 134-007 |
| Separate grommet | 9GT 137 236-007 |

LED



① Chrome-plated circular plate

for flush-fitting **8XU 008 405-031**

② LED combined circular tail/clearance light

for flush-fitting
12 V **2SA 008 405-021***

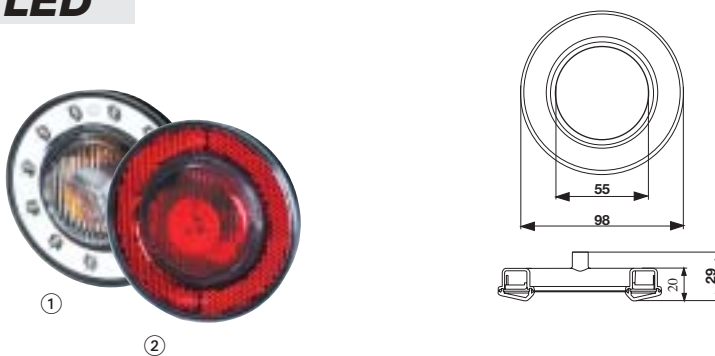
LED combined circular tail/stoplight

12 V **2SB 008 405-101***

③ Circular reflector

for flush-fitting **8RA 008 405-001**

LED



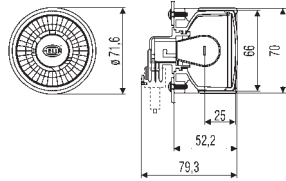
Examples for combination possibilities

| | |
|-----------------|----------------------------|
| ① Rear lighting | 2BA 008 221-041 |
| | und 2SA 008 405-021 |
| ② Rear lighting | 2XA 008 221-021 |
| | und 8RA 008 405-001 |

Accessories

Heat conducting shield
(required in the case of > 50 °C ambient temperature)
9XB 161 749-007

Rear lighting

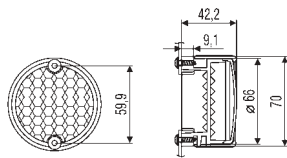


60 mm Premium lights

● with pre-fitted 12 or 24 V bulbs

| | | | Type approval | |
|------|------------------------|-----|-------------------------|-----|
| | | | ECE | SAE |
| | | | (USA) | |
| 12 V | 2SA 009 001-047 | ① | X | |
| 12 V | 2DA 009 001-057 | ② | X | |
| 12 V | 2SB 009 001-067 | ① ② | X | |
| 12 V | 2BA 009 001-007 | ③ | X | |
| 12 V | 2BA 009 001-191 | ③ | X | |
| | | | with silver vision bulb | |
| 12 V | 2NE 009 001-027 | ④ | X | X |
| 12 V | 2ZR 009 001-017 | ⑤ | X | X |

E4 3917, 6546,
7613, 23255

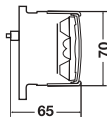


Macro reflector

| | | | | |
|------|------------------------|---|-----------------|---|
| 12 V | 8RA 009 001-037 | ⑥ | X | X |
| | | | Macro reflector | |

E4 3189

LED



● 12 Power Topled LEDs

| | | | | |
|--|-------------------------|-----|---|--|
| | 2SB 009 001-401* | ① ② | X | |
| | 2BA 009 001-511* | ③ | X | |

E4 (type approval number on request)



● Design ring Ø 71,6 mm

suitable for 60 mm light modules Ø 71,6 mm

(Part number ... 009 001-...),

one "click" is all it takes for a perfect high-sheen finish

| | |
|--------------------------|------------------------|
| high-sheen chrome-plated | 9HB 161 122-012 |
| silver | 9HB 161 122-007 |
| Premium silver | 9HB 164 168-002 |



Combination example

of a combination rearlight 009 001 with a high-sheen chrome-plated design ring

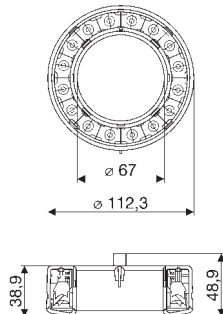
■ SAE type approval for vehicles < 2,032 mm in width

● SAE type approval for vehicles > 2,031 mm in width

- ① Taillight ② Stoptlight ③ Indicator
④ Reflector ⑦ Side marker light with reflector

- ④ Rear fog light ⑤ Reverse light
⑧ Licence plate light

LED



Ring modules

available either with a clear-glass or red cover lens

● Ring module, 12 V

| | | Type approval | |
|------------------|-----------------|---------------|-----------|
| | | ECE | SAE (USA) |
| 2SB 009 362-041* | ① ② red | X | |
| 2SB 009 362-021* | ① ② clear-glass | X | |
| 8RA 009 362-001* | ⑥ red | X | |

● Ring module without light function

for setting up
optically symmetrical light units

| | |
|-----------------|-------------|
| 8XU 009 362-101 | red |
| 8XU 009 362-111 | clear-glass |



● Design ring Ø 118 mm

suitable for ring module 009 362
one "click" is all it takes for a perfect high-sheen finish

| | |
|--------------------------|-----------------|
| high-sheen chrome-plated | 9HB 163 085-012 |
| silver | 9HB 163 085-001 |

Combination example

Macro reflector, ring module 009 362 and high-sheen chrome-plated design ring

Accessories for 60 mm combination rearlights



Adapter ring to be screwed in place from the front for combination rearlights Ø 60 mm

Direct mounting and mounting in the ring module

| | |
|---------|-----------------|
| ① black | 9XD 161 119-007 |
|---------|-----------------|

Adapter ring

for mounting LED lights or the reflector in the ring module

| | |
|-------------------------|-----------------|
| black (not illustrated) | 9XD 161 119-017 |
|-------------------------|-----------------|

Locking ring for front-end installation

| | |
|-----------------|-----------------|
| silver-coloured | 8HG 162 530-007 |
|-----------------|-----------------|

Counter-plug set

| | |
|-------|-----------------|
| 2-pin | 8JD 156 150-807 |
|-------|-----------------|

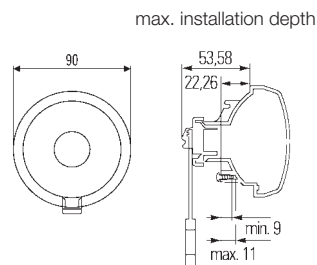
Counter-plug set

| | |
|-------|-----------------|
| 3-pin | 8JD 162 581-802 |
|-------|-----------------|

Rear lighting



(E4) 10215



Combination rearlight Ø 90 mm

for flush-fitting, brilliant look,
screw heads not visible,
with bulbs installed, also available as daytime running light,
reverse light and rear indicators with smoked glass lens

Mounting possible from the front with clips included loose or from the rear using screws

Type approval
ECE SAE
(USA)

| | | | | |
|------|------------------------|-----|---|-------|
| 12 V | 2SA 965 039-007 | ① | X | X ■ ● |
| 12 V | 2DA 965 039-017 | ② | X | X ■ |
| 12 V | 2BA 965 039-027 | ③ | X | X ■ |
| 12 V | 2NE 965 039-037 | ④ | X | X ■ ● |
| 12 V | 2ZR 965 039-047 | ⑤ | X | X ■ ● |
| 12 V | 2SB 965 039-057 | ① ② | X | X ■ |

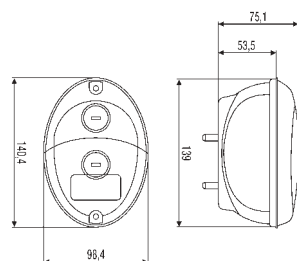
with mounting clips installed

Type approval
ECE SAE
(USA)

| | | | | |
|------|------------------------|-----|---|-------|
| 12 V | 2SA 965 039-307 | ① | X | X ■ ● |
| 12 V | 2DA 965 039-317 | ② | X | X ■ |
| 12 V | 2BA 965 039-347 | ③ | X | X ■ |
| 12 V | 2NE 965 039-327 | ④ | X | X ■ ● |
| 12 V | 2ZR 965 039-337 | ⑤ | X | X ■ ● |
| 12 V | 2SB 965 039-357 | ① ② | X | X ■ |

"Oval" combination rearlight - brilliant finish

suitable for horizontal and vertical flush-fitting and surface-mounting,
right or light (= turn light through 180°),
can be used for 12 V and 24 V operation,
before installation, break out the water drain hole and insert the seal,
black housing colour, clear cover lens



Type approval
ECE SAE
(USA)

| | | | | |
|------------------------|-----|------------|---|-----|
| 2SB 343 130-027 | ① ② | (E4) 7698 | X | ■ ● |
| 2BA 343 130-057 | ③ | (E4) 6550 | X | ■ ● |
| 2NE 343 130-037 | ④ | (E4) 3919 | X | |
| 2ZR 343 130-047 | ⑤ | (E4) 23257 | X | ■ ● |

■ SAE type approval for vehicles < 2,032 mm in width

● SAE type approval for vehicles > 2,031 mm in width

① Taillight

② Stoplight

③ Indicator

④ Rear fog light

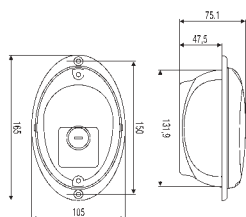
⑤ Reverse light

⑥ Reflector

⑦ Side marker light with reflector

⑧ Licence plate light

Rear lighting



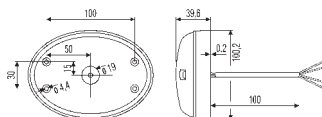
"Oval Light" combination rearlight

for horizontal and vertical surface-mounting, lens with striped look, housing with a black edge all the way round, completely pre-mounted, with 100 mm cable and 12 V bulb fitted

Type approval
ECE SAE
(USA)

| | | | | | |
|-------|------------------------|-----|--------|---|--|
| left | 2SA 343 400-217 | ① | Ⓔ 823 | X | |
| right | 2SA 343 400-227 | ① | Ⓔ 823 | X | |
| left | 2DA 343 400-237 | ② | Ⓔ 821 | X | |
| right | 2DA 343 400-247 | ② | Ⓔ 821 | X | |
| left | 2ZR 343 400-297 | ⑤ | Ⓔ 2314 | X | |
| right | 2ZR 343 400-307 | ⑤ | Ⓔ 2314 | X | |
| left | 2NE 343 400-277 | ④ | Ⓔ 3812 | X | |
| right | 2NE 343 400-287 | ④ | Ⓔ 3812 | X | |
| left | 2BA 343 400-257 | ③ | Ⓔ 655 | X | |
| right | 2BA 343 400-267 | ③ | Ⓔ 655 | X | |
| left | 2SB 343 400-317 | ① ② | Ⓔ 822 | X | |
| right | 2SB 343 400-327 | ① ② | Ⓔ 822 | X | |

LED



"Oval" combination rear light

for horizontal and vertical surface-mounting, clear-glass lens, 24 LEDs, can be used right and left, turned through 180°, 2 body fastening screws (diagonal arrangement) with cable 100 mm long, multi-volt 9-32 V

All LED lights have been designed for operation in DC voltage networks. Their operation with pulsed supply voltage or alternating current is not permissible.

Type approval
ECE SAE
(USA)

| | | | |
|-------------------------|---|-----|--|
| 2BA 343 390-077* | ③ | X | |
| 2BA 343 390-087* | ③ | X ● | |

12 V / 1.5 W, current consumption = approx. 0.13 A
24 amber LEDs; (SAE version 24 red LEDs)
with patented electronics for indicator failure check, see page 7

| | | | |
|-------------------------|-----|-----|--|
| 2SB 344 390-097* | ① ② | X | |
| 2SB 344 390-107* | ① ② | X ● | |

Stoplight: 12 V / 1 W, current consumption = approx. 0.08 A
Taillight: 12 V / 0.2 W, current consumption = approx. 0.02 A (reduced power)

Type approval
ECE SAE
(USA)

| | | | |
|-------------------------|-------|-----|--|
| 2SD 344 390-017* | ① ② ③ | X | |
| 2SD 344 390-027* | ① ② ③ | X ● | |

● 12 red LEDs for stoplight
12 V / 1 W, current consumption = approx. 0.08 A
● 12 red LEDs for taillight reduced power
12 V / 0.2 W, current consumption = approx. 0.02 A
● 12 amber LEDs for indicator (SAE version 12 red LEDs)
with patented electronics for indicator failure check, see page 7
12 V / 1.5 W, current consumption = approx. 0.13 A

| | | | |
|-------------------------|---|-----|--|
| 2SA 344 390-037* | ① | X | |
| 2SA 344 390-047* | ① | X ● | |

12 V / 0.2 W, current consumption = approx. 0.02 A

| | | | |
|-------------------------|---|-----|--|
| 2DA 344 390-057* | ② | X | |
| 2DA 344 390-067* | ② | X ● | |

12 V / 1 W, current consumption = approx. 0.08 A

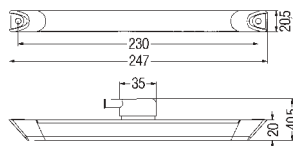
* For LED-light failure check, please observe the note on page 7

Rear lighting

LED



(E13) 0515



Clearance light

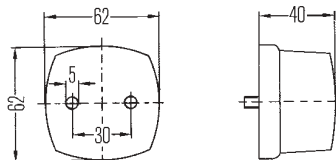
for horizontal or vertical surface-mounting,
with 2 LEDs and light guide strip in red,
2 screw holes \varnothing 5.4 mm for fastening screws

12 V **2XS 008 078-011***

12 V / 1.4 W, current consumption = approx. 0.12 A



(E12) 7106



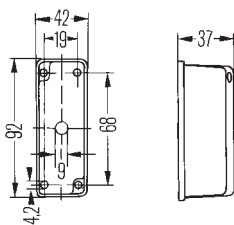
Clearance light

for horizontal surface-mounting

red/white **2XS 005 639-001**



(E1) 31407



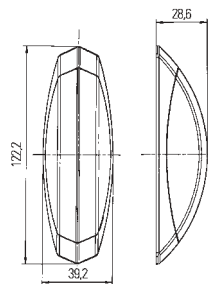
Clearance light

for vertical surface-mounting
2 fastening screws ST 3.5 x 16 -C with grommets

red/white **2XS 005 020-001**



(E1) 1201



Clearance light

for vertical surface-mounting, red/white

● with grey base plate, with 12 V bulb

left **2XS 008 479-001**

right **2XS 008 479-011**

red, PO function silver-coloured

left **2XS 008 479-107**

right **2XS 008 479-117**

left, without bulb **2XS 008 479-061**

right, without bulb **2XS 008 479-071**

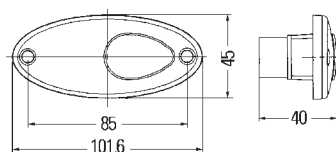
● with white base plate

left **2XS 008 479-081**

right **2XS 008 479-091**



(E17) 812



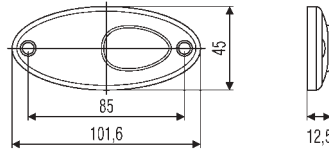
Clearance light

with pre-fitted 12 V bulb and seal,
for horizontal or vertical flush-fitting

oval **2XS 964 295-031**

Rear lighting

LED



(E17) 0302

Clearance light*

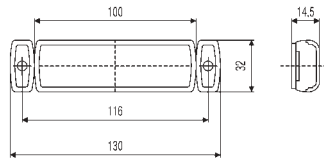
for horizontal surface-mounting, 2 LEDs, 12 V

Seal and cable 5,000 mm long

2TM 964 295-101*

12 V / 0.5 W, current consumption = approx. 0.04 A

LED



(E1) 1395

(E1) 1398

Clearance light*

for horizontal or vertical surface-mounting,

with reflector, 12 V,

2 holes for fastening screws B 4.2

500 mm cable

2TM 008 645-081*

5.000 mm cable

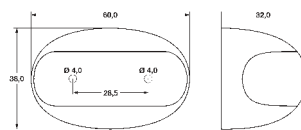
2TM 008 645-091*

12 V / 0.6 W, current consumption = approx. 0.05 A

* With horizontal surface-mounting the LED field must point to the outer vehicle edge. With vertical surface-mounting the LED field may point upwards or downwards.

(Clearance light can also be used as a taillight with reflector.)

LED



(E4) 7574

Clearance light

for horizontal surface-mounting, 2 LEDs, 8-28 V

500 mm cable

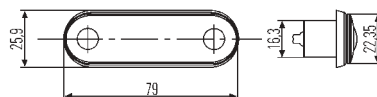
2XA 959 560-401*

5.000 mm cable

2XA 959 560-411*

12 V / 0.5 W, current consumption = approx. 0.04 A

LED



(E13) 0531

Clearance light

for horizontal flush-fitting, 8-28 V

500 mm cable

2XA 959 610-401*

5.000 mm cable

2XA 959 610-411*

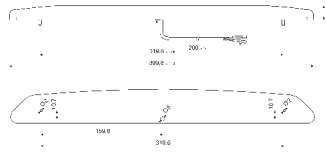
12 V / 0.5 W, current consumption = approx. 0.04 A

Rear lighting

LED



(E4) 7715



Safety stoplight

for horizontal surface-mounting,
with 12 red LEDs, in brilliant finish with 3D effect
due to each LED being embedded in a separate reflector,
with 200 mm cable

red lens

2DA 343 800-007*

with rubber base

2DA 343 800-057*

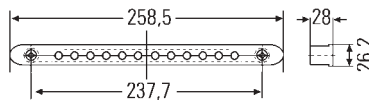
12 V / 1.8 W, current consumption = approx. 0.15 A

Safety stoplight in combination with rear view camera,
see page 62

LED



(E4) 7547



Safety stoplight

for horizontal flush-fitting,
with 12 red LEDs and connected supply cable

red lens

2DA 959 071-537*

clear-glass lens

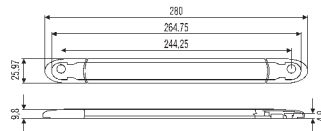
2DA 959 071-037*

12 V / 2 W, current consumption = approx. 0.17 A

LED



(E4) 7696



Safety stoplight

for horizontal or vertical surface-mounting,
with 10 red LEDs, with 3000 mm cable, installed height 9 mm

red lens

with screw attachment

2DA 343 106-007*

self-adhesive (for smooth and clean surfaces)

2DA 343 106-207*

12 V / 0.7 W, current consumption = approx. 0.06 A



(E4) 7696

with smoked glass lens

with screw attachment

2DA 343 106-021*

self-adhesive (for smooth and clean surfaces)

2DA 343 106-221*

12 V / 0.7 W, current consumption = approx. 0.06 A

Safety stoplight

for horizontal flush-fitting, with pre-fitted 12 V bulbs

red lens

with PE foam seal coated with adhesive on both sides

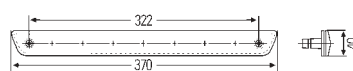
2DA 008 136-027

Screw attachment from the front through the windscreen
(screws are not included)

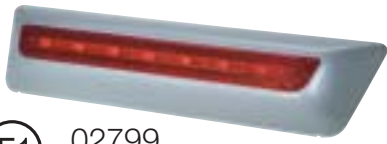
2DA 008 136-017



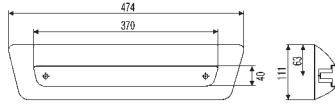
(E1) 02799



Rear lighting



(E1) 02799



Safety stoplight

for horizontal surface-mounting, with 12 V bulbs

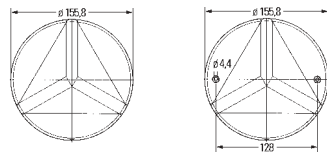
2DA 008 136-031

Accessories (order separately):

| | |
|-----------------------|-----------------|
| Cable with grommet | 8KA 146 751-007 |
| Cable without grommet | 8KA 144 707-007 |
| Grommet only | 9GT 146 757-007 |



(E4) 023191



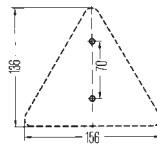
Reflector

with 2 holes for fastening screws

| | |
|---------------|-----------------|
| red | 8RA 343 220-017 |
| self-adhesive | |
| red | 8RA 343 220-007 |



(E17) 01346



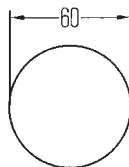
Reflector

2 holes, Ø 6 mm, for fastening screws

| | |
|-----|-----------------|
| red | 8RA 002 020-001 |
|-----|-----------------|



(E2) 0292031



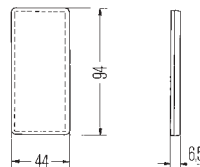
Reflector

self-adhesive

| | |
|-------|-----------------|
| red | 8RA 002 014-081 |
| amber | 8RA 002 014-101 |
| white | 8RA 002 014-091 |



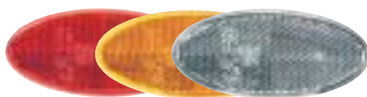
(E2) 01330



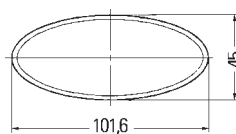
Reflector

self-adhesive

| | |
|-------|-----------------|
| red | 8RA 003 326-031 |
| amber | 8RA 003 326-041 |
| white | 8RA 003 326-051 |



(E4) 3190



Reflector

for horizontal or vertical surface-mounting,

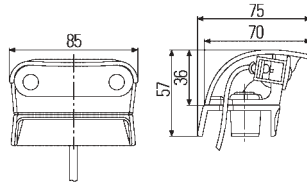
self-adhesive

| | |
|-------|-----------------|
| red | 8RA 343 160-007 |
| amber | 8RA 343 160-027 |
| white | 8RA 343 160-017 |

LED



(E4) 4068



Licence plate light

for surface-mounting to the left and right of the licence plate
520 x 120 mm, with 2.5 m cable, holder for mounting the
light to the body, cover, fastening screws,
cover caps for screws as well as a spacer for
different mounting situations,
Multi-volt 10–33 V, with 2 LEDs 0.5 W

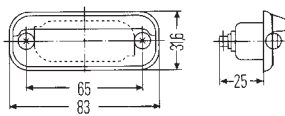
clear-glass lens,
black housing

2KA 959 640-607*

12 V / 0.55 W, current consumption = approx. 0.04 A



(E1) 12958



Licence plate light

for installation above or below the licence plates
520 x 120 mm (2 or 3 lights) and 340 x 240 mm
(2 lights), 2 x M4 fastening screws
Installation depth: approx. 25 mm

clear-glass lens,
with brilliant-chrome edge

2KA 001 378-001

with silver-coloured edge, without fastening material

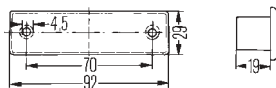
2KA 001 378-041

with black edge and 12 V bulb

2KA 001 378-127



(E1) 22890



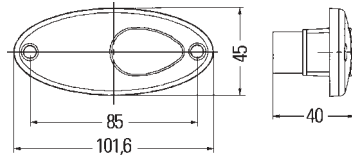
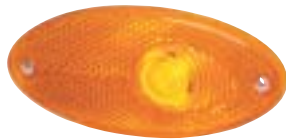
Licence plate light

for installation above or below (2 lights) the licence plate
520 x 120 mm,
2 holes for fastening screws,
Installation depth: approx. 20 mm

clear-glass lens,
with 12 V bulb

2KA 004 331-061

Clearance lighting



(E17) 9807

Side marker light

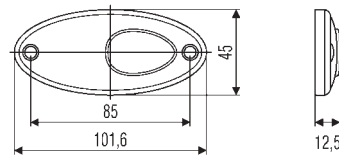
for horizontal flush-fitting, with reflector, with seal, with 12 V bulb

12 V / 5 W

2PS 964 295-001

Red SMLR according to SAE, see page 44

LED



(E17) 0202

Side marker light

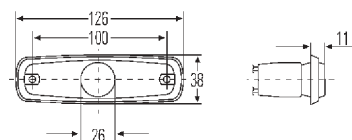
for horizontal surface-mounting, with 2 LEDs, with reflector, with seal and two cables 500 mm long, with fastening screws

2PS 964 295-067*

self-adhesive, without seal, with caps for the screw holes

2PS 964 295-087*

12 V / 0.5 W, current consumption = approx. 0.04 A



(E4) 0004, 3153

Side marker light

for horizontal or vertical flush-fitting, with reflector, with 12 V bulb, with white base plate

12 V / 3 W

2PS 962 964-037

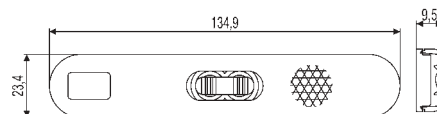
Seal (please order separately)

9GD 963 281-001

Grommet (please order separately)

9GT 963 129-001

LED



(E4) 10236

Side marker light

for horizontal or vertical surface-mounting, with 2 LEDs, with reflector, with cable 195 mm long, with double-sided adhesive tape on the base plate and "adapter cam"

2PS 009 226-027*

12 V / 0.5 W, current consumption = approx. 0.04 A

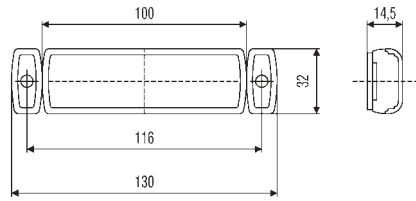
Clearance lighting

For vehicles < 6 m in length and/or < 3.5 t in weight, Category 5 auxiliary indicators are mandatory, and for vehicles > 6 m in length and/or > 3.5 t in weight, Category 6 auxiliary indicators are mandatory.

LED



(E1) 1395, 1396



Side marker light

with reflector, with LED technology,
with two-wire cable 1,500 mm long

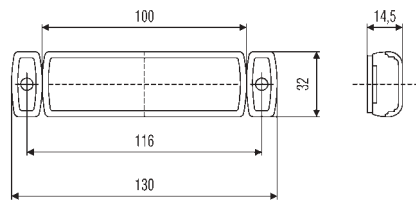
for horizontal surface-mounting

2PS 008 645-011*

12 V / 0.6 W, current consumption = approx. 0.05 A



(E1) 1397



for vertical surface-mounting

2PS 008 645-031*

12 V / 0.6 W, current consumption = approx. 0.05 A

Rubber seal (please order separately)

55 pieces

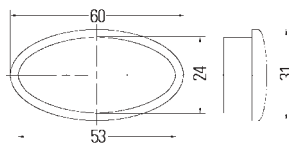
9GD 157 876-007

Red SMLR according to SAE, see page 45

LED



(E1) 9110



Side marker lights set

Category SM2, for horizontal flush-fitting,
for retrofitting to passenger cars < 6 m,
4 units each, with LED technology

Lenses amber, trim silver-grey

Type approval

ECE SAE

(USA)

2PS 008 138-801*

X X

Lenses grey, trim black

2PS 008 138-821*

X X

Lenses grey, trim silver-grey

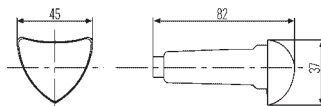
2PS 008 138-811*

X X

12 V / 0.7 W, current consumption = approx. 0.06 A



(E1) 1223



Side marker lights set

Category SM2,

for horizontal and vertical flush-fitting,

4 units each

with amber 12 V/5 W bulb

arrow design

Type approval

ECE SAE

(USA)

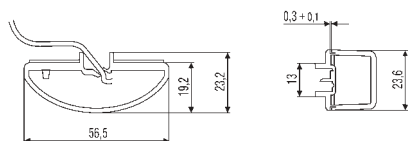
2PS 008 541-801

X

LED



(E1) 1423



Auxiliary indicator

Category 5, for horizontal flush-fitting, in LED technology,
straightforward adhesive mounting

in prepared mirror, can also be used
as a universal auxiliary indicator

Type approval

ECE SAE

(USA)

2BM 008 771-007*

X X

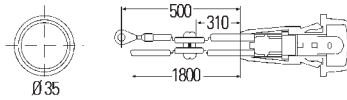
12 V / 0.7 W, current consumption = approx. 0.06 A

Clearance lighting

For vehicles < 6 m in length and/or < 3.5 t in weight, Category 5 auxiliary indicators are mandatory, and for vehicles > 6 m in length and/or > 3.5 t in weight, Category 6 auxiliary indicators are mandatory.



(E1) 42621



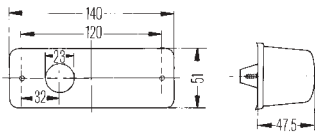
Auxiliary indicator

Category 5
for 12 V, for installation at the side

small, space-saving **2BM 003 563-111**



(E1) 52621



Auxiliary indicator

Category 5 and 6
for 12 V and 24 V/21 W, for surface-mounting at the side

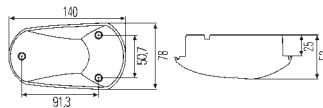
left **2BM 006 692-017**

right **2BM 006 692-027**

(E1) 1059



(E1) 1848



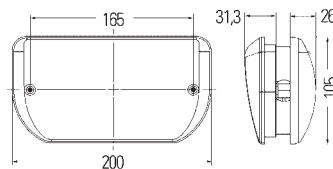
Auxiliary indicator

Category 6
for 12 V and 24 V/21 W, extremely slim design,
for surface-mounting at the side

Lens amber **2BM 008 355-001**

Lens clear-glass **2BM 008 355-017**

Harness for non-splashwater-protected area **8KA 157 425-007**



Entry and awning light

Grey plastic housing and clear-glass lens are screwed together, with grid opening for bulb replacement. For wall thicknesses between 25 mm and 35 mm.

without bulb
(bulb 220 V max. 40 W can be used, base E14)
with cable routing on the right

without on/off switch **2XT 007 945-007**

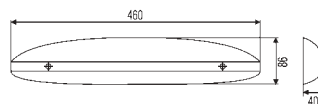
with cable routing on the left **2XT 007 945-057**

with cable routing on the right, with on/off switch on the housing **2XT 007 945-017**

with 12 V bulb,
with cable routing on the right

without switch **2XT 007 945-027**

with dual-pole safety switch **2XT 007 945-077**

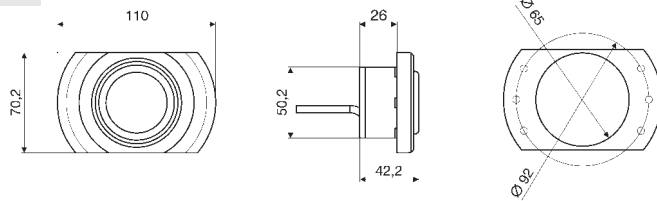


Entry and awning light

for 12 V, for optimum illumination on and in front of the steps, with 3 festoon bulbs each 5 W,
housing painted silver

2XT 008 929-001

LED



Spot LED Oval

1 white LED, black housing, clear lens with matt edging, electrical connection through a cable 200 mm long, multi-volt 9-31 V, narrow illumination, possible to change between white functional lighting and ambient blue or red night design

Ambient Celis® ring

12 V / 1 W, current consumption = approx. 0.06 A

Spot

12 V / 2.5 W, current consumption = approx. 0.18 A



Flush-fitting, fixed

● Black trim*

screw installation, with blue, ambient Celis® ring

2JA 343 680-177

screw installation, without Celis® ring

2JA 343 680-157

● White trim*

screw installation, with blue, ambient Celis® ring

2JA 343 680-077

screw installation, without Celis® ring

2JA 343 680-057

● Grey trim*

screw installation, with blue, ambient Celis® ring

2JA 343 680-127

screw installation, with white, ambient Celis® ring

2JA 343 680-047

screw installation, without Celis® ring

2JA 343 680-007



Flush-fitting, adjustable (swivelling angle 20 degrees)

● Black trim*

screw or spring installation,
with blue, ambient Celis® ring

2JA 343 700-271

without Celis® ring

2JA 343 700-251

screw installation, with red, ambient Celis® ring

2JA 343 700-167

● White trim*

screw or spring installation,
with blue, ambient Celis® ring

2JA 343 700-227

without Celis® ring

2JA 343 700-207

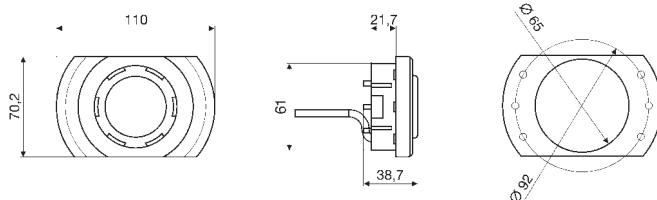
● Grey trim*

screw or spring installation,
with blue, ambient Celis® ring

2JA 343 700-127

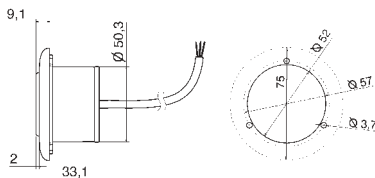
without Celis® ring

2JA 343 700-107



* further trim colours (e.g. real wood look) on request

LED



Spot LED Round

1 white LED, black housing, lens clear with matt-finish edge, electrical connection through a cable 200 mm long, multi-volt 9 – 31 V, narrow illumination, possible to switch between white functional lighting and ambient blue or red night design

Ambient Celis® ring

12 V / 1 W, current consumption = approx. 0.06 A

Spot

12 V / 2.5 W, current consumption = approx. 0.18 A

Flush-fitting, fixed (not illustrated)

● Black trim*

Screw-mounting,
with blue, ambient Celis® ring

2JA 343 980-117

with white, ambient Celis® ring

2JA 343 980-217

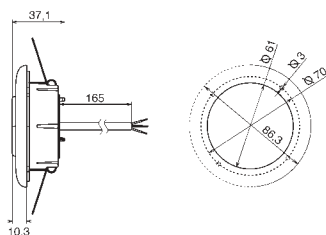
● White trim*

Screw-mounting,
with blue, ambient Celis® ring

2JA 343 980-107

with white, ambient Celis® ring

2JA 343 980-207



Flush-fitting, adjustable (swivelling angle 20 degrees)

● Black trim*

Screw or spring installation,
with blue, ambient Celis® ring

2JA 343 790-117

with white, ambient Celis® ring

2JA 343 790-217

● White trim (not illustrated)*

Screw or spring installation,
with blue, ambient Celis® ring

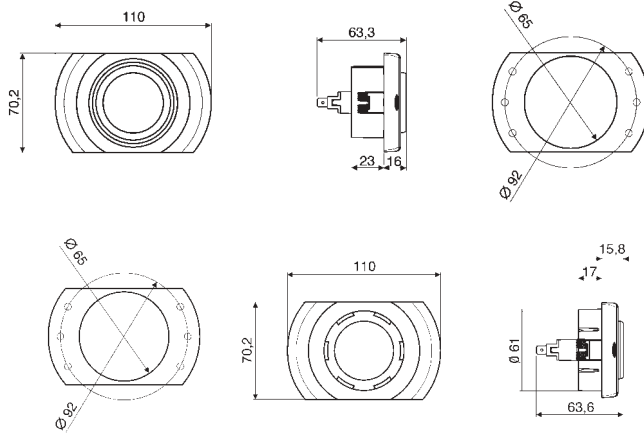
2JA 343 790-107

with white, ambient Celis® ring

2JA 343 790-207

* further trim colours (e.g. real wood look) on request

(ill. LED version)



Spot-Bulb Oval

Flush-fitting, fixed

Screw and spring installation with 12 V bulb

- Black trim (illustration similar)

2JA 343 860-037

- White trim (illustration similar)

2JA 343 860-047

Flush-fitting, adjustable

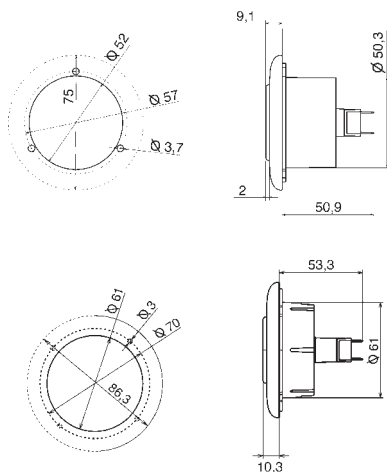
Screw and spring installation with 12 V bulb

- Black trim (illustration similar)

2JA 343 865-037

- White trim (illustration similar)

2JA 343 865-047



Spot-Bulb Round

Flush-fitting, fixed

Screw attachment with 12 V bulb

- Black trim

2JA 343 985-017

- White trim

2JA 343 985-007

Flush-fitting, adjustable

Screw and spring installation with 12 V bulb

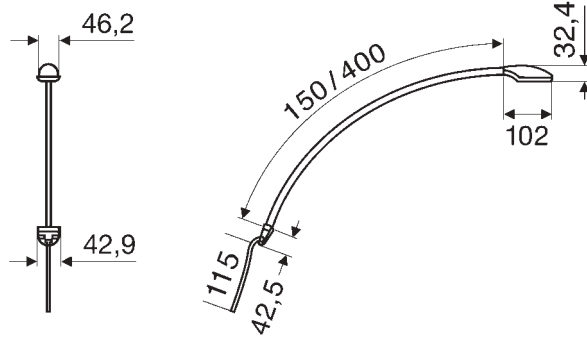
- Black trim

2JA 343 795-017

- White trim

2JA 343 795-007

LED



Reading light

Surface-mounting, flexible arm

1 white LED, patterned lens, electrical connection through a cable 115 mm long, multi-volt 9 – 31 V, narrow illumination, excellent for map-reading 12 V / 2.5 W, current consumption = approx. 0.20 A

Black trim*

flexibly adjustable arm

150 mm **2JA 343 720-021**

400 mm **2JA 343 720-121**

White trim*

flexibly adjustable arm

150 mm **2JA 343 720-011**

400 mm **2JA 343 720-111**

* further trim colours on request



Reading light

Spot reading lights

powerful, glare-free light source with flexible metal arm, with holder for fixed installation, incl. halogen bulb 12 V / 5 W

for fixed installation

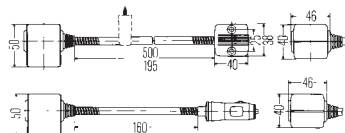
500 mm lang **2AB 004 532-001**

for fixed installation

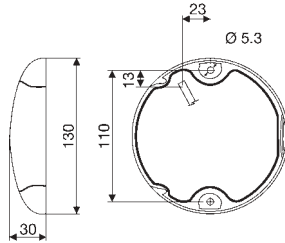
195 mm lang **2AB 004 532-011**

with plug for cigarette lighter

160 mm lang **2AB 004 532-021**



LED



EuroLED

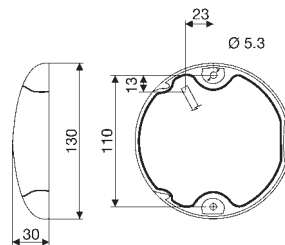
Surface-mounting

Cast in one piece with the base plate, 1 white LED, clear lens, electrical connection through a cable 2,500 mm long, multi-volt 9 – 33 V

12 V / 2.5 W, current consumption = approx. 0.21 A

2JA 959 820-501

LED



EuroLED Touch

Surface-mounting

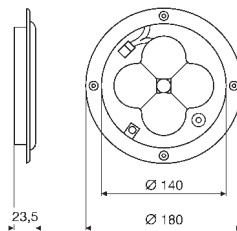
Cast in one piece with the base plate, 1 white and 8 red LEDs, clear lens, electrical connection through a cable 2,500 mm long, multi-volt 9 – 33 V, with sensitive switch, for switching on/off and dimming and changing between white and red light

12 V / 3 W, current consumption = approx. 0.25 A

black cover trim **2JA 959 950-031**

white cover trim **2JA 959 950-041**

LED



CargoLED

Flush-fitting

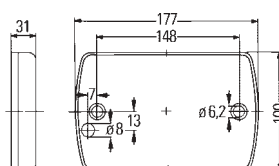
4 white LEDs, clear-glass lens and aluminium installation frame, electrical connection through cable 310 mm long, cable with stripped ends, multi-volt 9 – 31 V, wider illumination at close range, ADR/GGVS tested, IP 69, temperature range -40 °C to +60 °C

12 V / 6 W, current consumption = approx. 0.46 A

white functional lighting **2JB 343 227-001**

ambient functional lighting **2JB 343 227-047**

LED



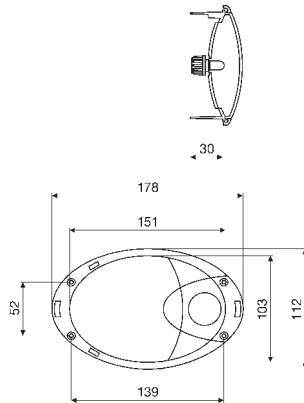
DuraLED

Surface-mounting

Cast in one piece with white base plate, 36 white LEDs, clear-glass lens and white housing, electrical connection through a cable 2,500 mm long, multi-volt 9 – 33 V, wide horizontal and narrow vertical illumination

12 V / 9 W, current consumption = approx. 0.75 A

2JA 959 037-511



Flush-fitting

6 W bulb, broad illumination, warm white light, transparent lens, black housing, connection through blade connector, screw or snap-on attachment possible, IP 3, temperature range $-40\text{ }^{\circ}\text{C}$ to $+60\text{ }^{\circ}\text{C}$
12 V / 6 W, current consumption = approx. 0.5 A

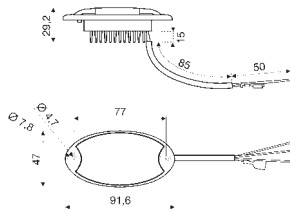
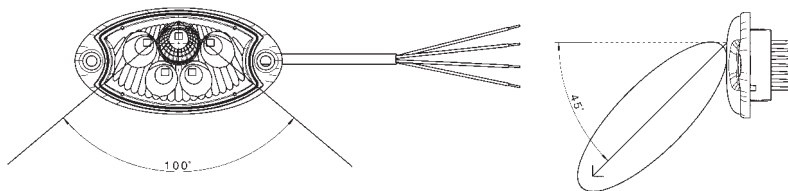
Bulb

2JA 009 294-001

reading spotlight, narrow illumination

2JA 009 294-021

LED



Mini OvalLED

Flush-fitting

4 white LEDs, 1 red LED, brilliant-finish clear lens, black housing, ambient lighting can be switched on in addition, illumination for the driver or instrument panel area at the side, IP 69, temperature range $-40\text{ }^{\circ}\text{C}$ to $+60\text{ }^{\circ}\text{C}$
12 V / 6 W, current consumption = approx. 0.46 A

blue ambient, without frame and switch

Premium G-LED

2JA 343 570-117

Standard E-LED

2JA 343 570-137

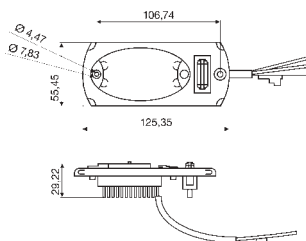
blue ambient, with frame and switch

Premium G-LED

2JA 343 570-157

Standard E-LED

2JA 343 570-177



red ambient, without frame and switch

Premium G-LED

2JA 343 570-017

Standard E-LED

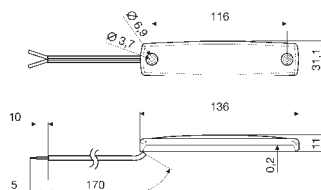
2JA 343 570-031

red ambient, with frame and switch

Premium G-LED

2JA 343 570-057

LED



Mini ThinLED

Surface-mounting

Cast in one piece with the grey base plate, clear lens, electrical connection through a cable 170 mm long, broad illumination at close range, IP 69, temperature range $-40\text{ }^{\circ}\text{C}$ to $+60\text{ }^{\circ}\text{C}$
12 V / 0.7 W, current consumption = approx. 0.06 A

5 white LEDs

2JA 343 660-101

3 white LEDs

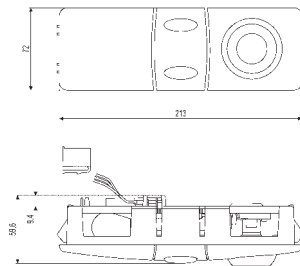
2JA 343 660-007

3 blue LEDs

2JA 343 660-027

3 green LEDs

2JA 343 660-061



Surface-mounting

Halogen bulbs, movable spotlight, clear lens, with cable 500 mm long, grey switch and housing

Spot

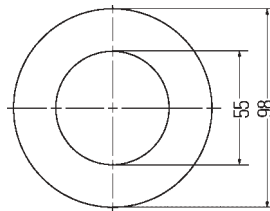
12 V / 10 W, current consumption = approx. 0.83 A

Bulb

12 V / 21 W, current consumption 12 V = approx. 1.75 A

2JA 009 037-017

LED



Flush-fitting

12 LEDs, clear lens

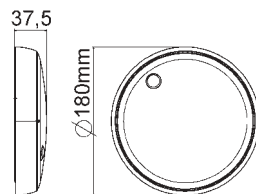
12 V / 1.8 W, current consumption = approx. 0.15 A

white LEDs

2PF 008 405-061

blue LEDs

2JA 008 405-081



Transistor ceiling light

Surface-mounting

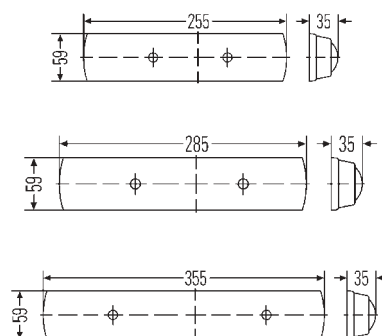
Multi-volt 10-30 V, white lens, white housing, splashwater-proof, with excess and undervoltage protection, incl. light sources 7 W 2G7

with switch

2JA 998 565-011

without switch

2JA 998 565-031



Transistor ceiling light

Surface-mounting

Clear-glass lens, with switch, compact fluorescent light, full interference suppression

255 mm long,

12 V / 7 W, current consumption = approx. 0.3 A

2JA 007 373-001

285 mm long,

12 V / 9 W, current consumption = approx. 0.38 A

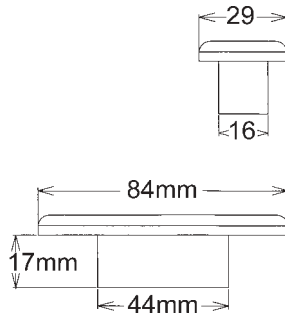
2JA 007 373-031

355 mm long,

12 V / 11 W, current consumption = approx. 0.55 A

2JA 007 373-061

LED



Step light

Flush-fitting, emergency and night-lighting

2 LEDs, clear-glass lens, seal, fastening screws and screw caps, dustproof and waterproof, with polarity inversion protection, multi-volt 10 – 33 V 12 V / 0.35 W, current consumption = approx. 0.03 A

white LEDs

electrical connection through a cable 120 mm long

2XT 959 510-427

electrical connection through a cable 150 mm long and 2-pole Packard plug

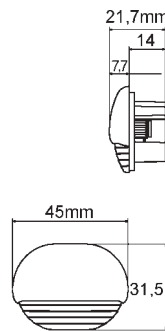
2XT 959 510-467

blue LEDs

electrical connection through a cable 120 mm long

2XT 959 510-657

LED



Step light

Flush-fitting

1 LED, clear lens, electrical connection through a potted cable 100 mm long, white cover cap, seal, installation possible using 2 screws or with snap-on attachment, broad illumination at close range 12 V / 0.5 W, current consumption = approx. 0.04 A

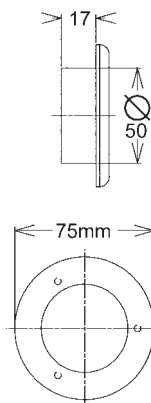
white LED

2JA 998 560-017

blue LED

2JA 998 560-057

LED



Step light

Flush-fitting, cockpit or map-reading light, emergency and night-lighting

4 LEDs, clear-glass lens, with white ring for covering the 3 fastening screws, with cable 120 mm long, seal and fastening screws, dust and waterproof, with polarity inversion protection, multi-volt 10 – 33 V 12 V / 0.7 W, current consumption = approx. 0.06 A

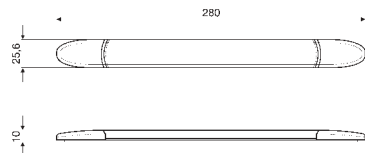
white LEDs

2XT 959 500-677

blue LEDs

2XT 959 500-207

LED

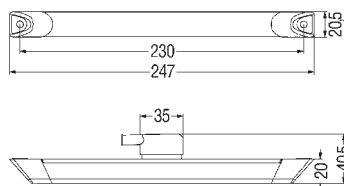


Step light Surface-mounting

Cast in one piece with the grey base plate, 10 white LEDs, clear lens, grey cover caps, electrical connection through a cable 500 mm long, broad illumination at close range, IP 69, temperature range - 40 °C to + 60 °C
12 V / 1.8 W, current consumption = approx. 0.15 A

2JA 343 606-007

LED



Step light Surface-mounting

welded to base plate, clear-glass lens, grey housing, for horizontal or vertical surface-mounting, electrical connection through blade connector and grommet
12 V / 1.8 W, current consumption = approx. 0.12 A

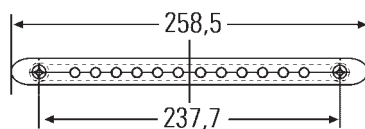
2 white LEDs
with prism rod as light aperture body

2JA 008 078-031

2 blue LEDs
with prism rod as light aperture body

2JA 008 078-021

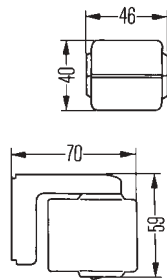
LED



Step light Flush-fitting

Cast in one piece, 10 white LEDs, clear-glass lens, cable 2,500 mm long, with screws, screw caps, seal and cable clips
12 V / 2 W, current consumption = approx. 0.17 A

2JA 959 073-001

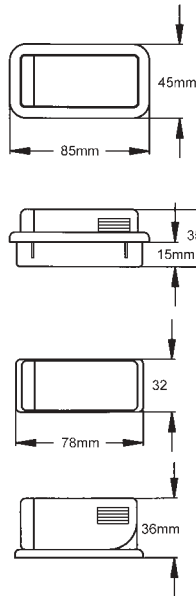


Reading light Surface-mounting

Halogen bulb, white lens, black housing, integrated on/off switch in the light head, can be rotated (340°) and swivelled (330°), cable 250 mm long, with replaceable red lens
12 V / 5 W, current consumption = approx. 0.42 A

2AB 004 532-102

Xenon



Reading light Flush-fitting / surface-mounting

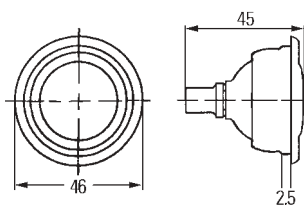
Xenon gas discharge light, black housing with high-sheen vapour-plated aluminium reflector, electrical connection through a cable 100 mm long, switch on/off by lifting the light head, light can be rotated (340°) and vertically adjusted
12 V / 6 W, current consumption = approx. 0.5 A

Flush-fitting, screw-less with retaining spring

2AB 004 813-072

Surface-mounting, incl. mounting screws

2AB 004 813-082



Reading light Flush-fitting

Bulb, white lens, black housing, electrical connection through two cables 120 mm long, adjustable light head
12 V / 5 W, current consumption = approx. 0.42 A

2AB 004 074-027

Rear view camera system RVS-1 ... see what's behind

- Minimum dimensions
(W x H x D with hoop: 56 x 47 x 38 mm)
- Is activated automatically when the vehicle is put into reverse gear
- Extremely large visible range: 92° vertical and 120° horizontal
- High night vision ability
- Extremely resistant to vibrations
- High temperature resistance: -40° to +85° C
- Variable surface-mounting possibilities
(e.g. to tailgates, spoilers, handles)
- Compact TFT monitor with diagonal screen size 12.6 cm.
Also suitable for connection to other video sources (DVD, DVB-T etc.).
- High-quality, digital image recording:
1/3-inch CMOS with 250,000 Pixels
- In many cases, the camera can also be connected to a display already mounted in the vehicle.
- Image signal: NTSC
- All the components comply with the high quality requirements of the automotive industry.



Representation of the situation behind the vehicle



For motor homes ...



For motor home extensions ...

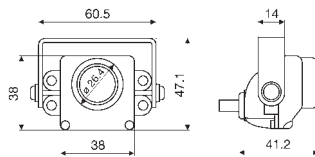


Rear view camera system RVS-1

Scope of supply: High-quality rear view camera RVC-1, incl. 5 inch TFT monitor in absolutely top quality 10 m professional harness and installation material. *

5BD 009 690-001


Monitor:  034873



Rear view camera RVC-1

incl. installation material

5BD 166 175-001

Camera:  034874

* Optionally available:

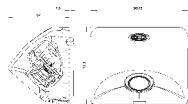
Cinch cable adapter

for camera **8KB 169 080-001**

for monitor **8KB 169 079-001**

10 m supplementary harness

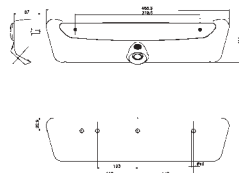
8KB 166 530-001



Installation housing for

RVC-1 solo

9BG 169 974-001



RVC-1 in combination with CHMSL

9BG 169 975-001

New generation of modular switches: Microswitches



Benefits

■ Enhanced power efficiency:

The increasing number of electronic control components puts a large strain on the vehicles' power system. Since it is very costly to supply the required power, there is a noticeable trend towards very low control currents which still need to be reliably switched.

Our solution: a system of snap-action friction switches and chosen pairs of mating contacts. The standard AgNi version reliably makes or breaks contacts under as low as mA loads.

Particularly efficient Power LEDs are another means of reducing power requirements by up to 70% per switch compared to previous switch ranges.

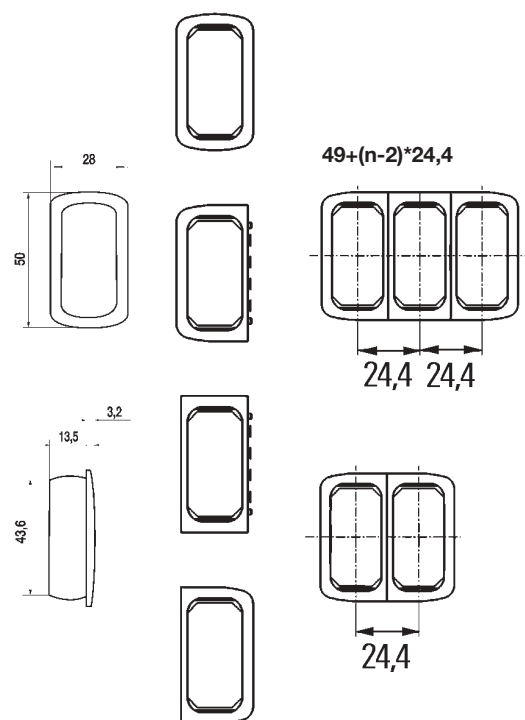
■ Maintenance-free:

Operators expect the switch to work reliably and without maintenance throughout the vehicle's entire life cycle. Key influencing parameters are the expected life (cycles) of the contacts and the expected life of the light source.

We provide our customers with our particularly wear-resistant "Microswitch System". Its snap-action friction switch minimises wear and contamination of contact faces with every flick of the switch. The average expected life of each LED is 100,000 h.

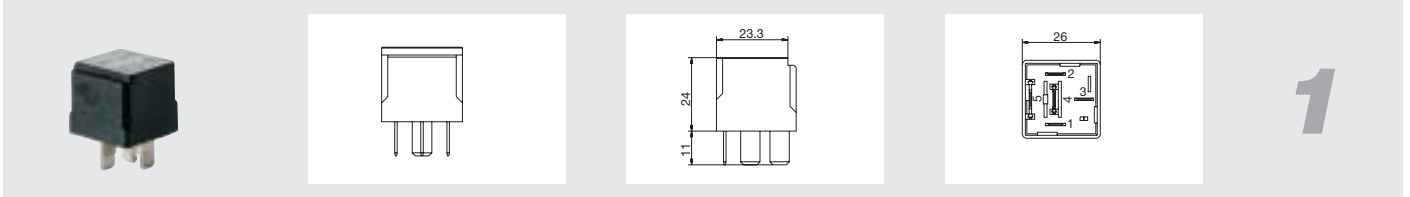
Technical data

| | |
|--------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Material, rocker | PC white, painted |
| Material, base | PA black |
| Terminal contacts | 3 mm Junior Power Timer |
| Light source | max. 4 LEDs: 2x orientation lighting, green 2x functional lighting, red |
| Symbol type | lasered |
| Life | 5mA / 24V resistive, 500,000 cycles 10A / 24V resistive, 80,000 cycles 4A / 24V lamp, 90,000 cycles 5A / 24V inductive, 270,000 cycles |
| Impermeability | IP30 |
| Op. temperature | -35 °C ... +85 °C |
| Storage temp. | -40 °C ... +100 °C |
| Dashboard depth | 2 mm (direct installation) |
| Accessories | <ul style="list-style-type: none"> • Single mounting frame: 9AR 168 396-001/-007 • Modular mounting frame: <ul style="list-style-type: none"> End frame, left: 9AR 169 209-001/-007 Middle frame: 9AR 169 208-001/-007 End frame, right: 9AR 169 210-001/-007 • Connector skirt: 8JD 010 076-001/-007 |

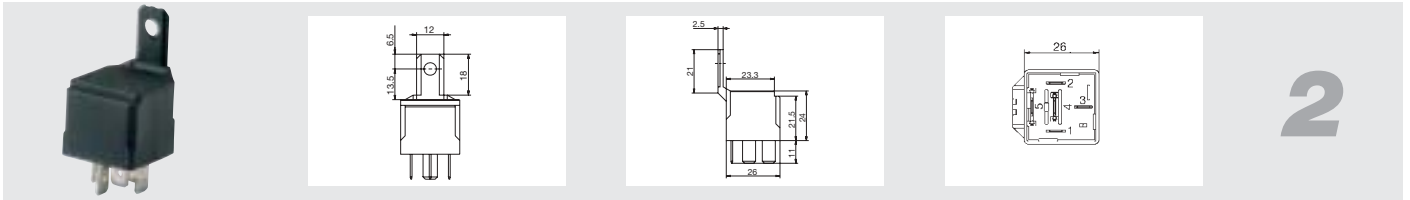


For further information and details on ordering, please follow the link www.hella.de/modulschalter or www.hella.com/rockerswitch or refer to Hella's Electrics Main Catalogue

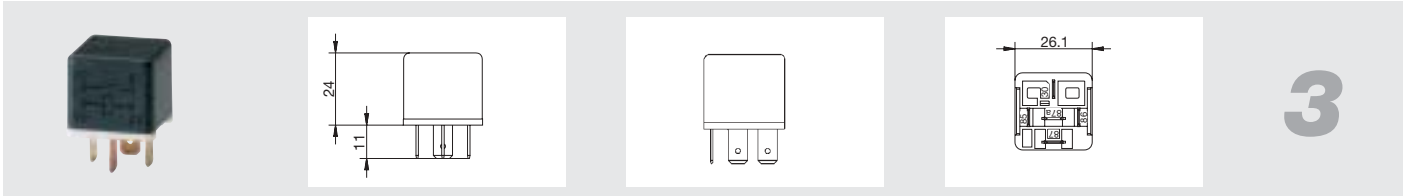
Relay without bracket - S2



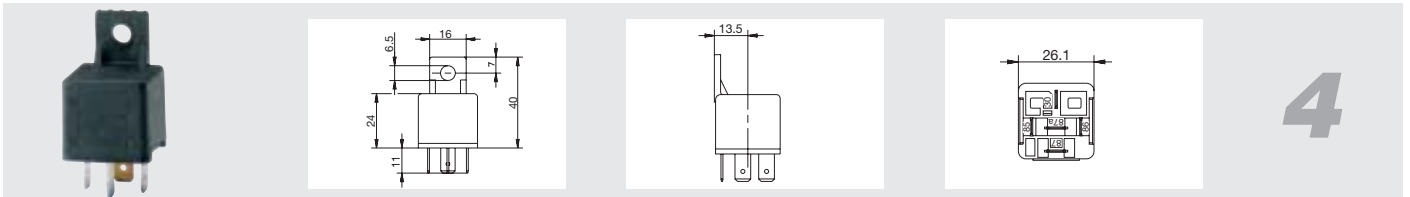
Relay with bracket - S2



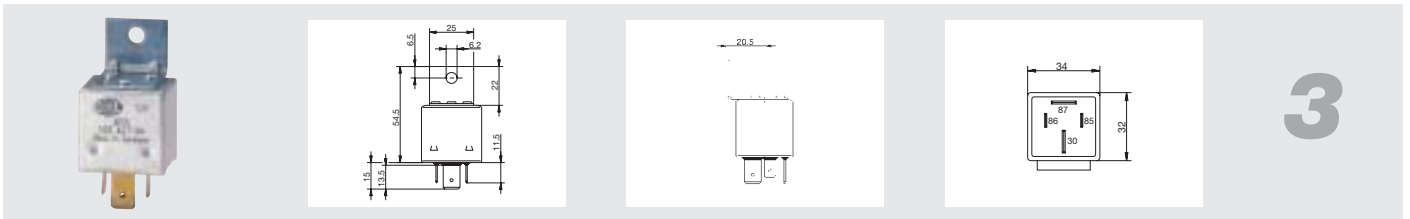
Relay without bracket - S1



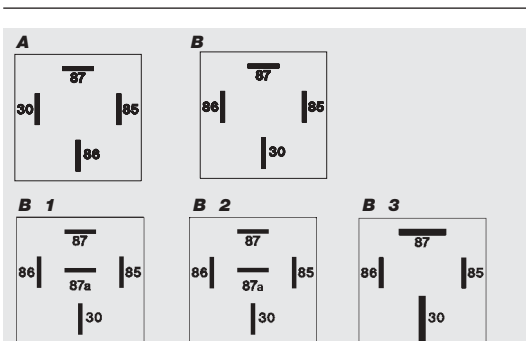
Relay with bracket - S1



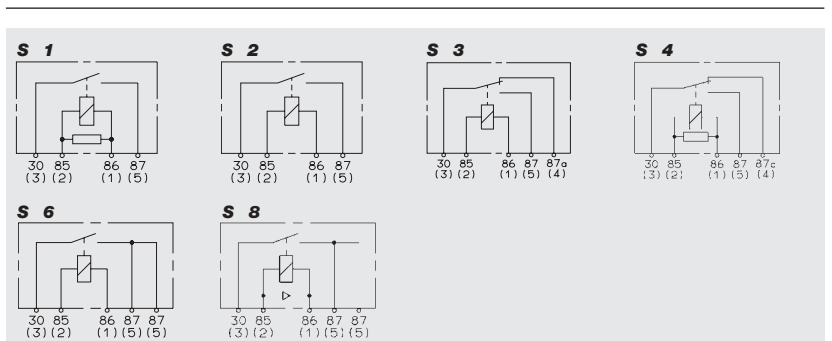
High-power make contact relay / Battery cut-off relay



Plug matrices



Switching matrices



Plug matrices acc. to ISO 7588 / Blade connectors acc. to ISO 8092

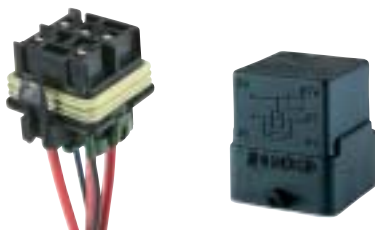
Contacts

| Current appl. (A) | Ohmic load | | | | Inductive load | | | | Light load | | | | Simplified drawing | Plug matrix | Switching matrix | Coil resistance | Parallel resistance | Parallel diode | Contact resistance | Pack. | Part number |
|-------------------|-------------------------------|----------------------------|-------------------------------|----------------------------|-------------------------------|----------------------------|-------------------------------|----------------------------|-------------------------------|----------------------------|-------------------------------|----------------------------|--------------------|-------------|------------------|-----------------|---------------------|--------------------|--------------------|-------|-----------------|
| | Make contact (87) | | Break contact (87a) | | Make contact (87) | | Break contact (87a) | | Make contact (87) | | Break contact (87a) | | | | | | | | | | |
| | Nominal switching current (A) | No. of switchings (thous.) | Nominal switching current (A) | No. of switchings (thous.) | Nominal switching current (A) | No. of switchings (thous.) | Nominal switching current (A) | No. of switchings (thous.) | Nominal switching current (A) | No. of switchings (thous.) | Nominal switching current (A) | No. of switchings (thous.) | | | | Ohm | Ohm | 1N ₄₀₀₅ | mV/10A | | |
| 12 V | | | | | | | | | | | | | | | | | | | | | |
| 40 | 30 | 100 | - | - | 30 | 100 | - | - | 30 | 150 | - | - | 1 | B | S1 | 85 | 470 | - | 50 | E | 4RA 007 791-011 |
| 40 | 30 | 100 | - | - | 30 | 100 | - | - | 30 | 150 | - | - | 3 | B | S1 | 85 | 470 | - | 50 | E | 4RA 007 791-021 |
| 50 | 50 | 100 | - | - | 50 | 100 | - | - | 50 | 100 | - | - | 1 | B3 | S1 | 100 | 470 | - | 50 | E | 4RA 007 793-031 |
| 50 | 50 | 100 | - | - | 50 | 100 | - | - | 50 | 100 | - | - | 3 | B3 | S1 | 100 | 470 | - | 50 | E | 4RA 007 793-041 |
| 40 | 30 | 100 | - | - | 25 | 100 | - | - | 16 | 100 | - | - | 4 | A | S2 | 85 | - | - | 50 | E | 4RA 003 510-081 |
| 40 | 30 | 100 | - | - | 25 | 100 | - | - | 16 | 100 | - | - | 4 | B2 | S6 | 85 | - | - | 50 | E | 4RA 003 510-261 |
| 40 | 30 | 100 | - | - | 25 | 100 | - | - | 16 | 100 | - | - | 2 | B | S2 | 85 | - | - | 50 | E | 4RA 003 510-111 |
| 40 | 30 | 100 | - | - | 25 | 100 | - | - | 16 | 100 | - | - | 2 | B2 | S6 | 85 | - | - | 50 | E | 4RA 003 510-131 |
| 40 | 30 | 100 | - | - | 25 | 100 | - | - | 16 | 100 | - | - | 4** | B2 | S8 | 85 | - | X | 50 | E | 4RA 940 010-671 |
| 60 | 70 | 100 | - | - | 50 | 100 | - | - | 20 | 50 | - | - | 5 | B | S2 | 85 | - | - | 50 | E | 4RA 003 437-041 |
| 60 | 70 | 100 | - | - | 50 | 100 | - | - | 20 | 50 | - | - | 5 | B | S2 | 85 | - | - | 50 | I | 4RA 003 437-047 |
| 60 | 70 | 100 | - | - | 50 | 100 | - | - | 20 | 50 | - | - | 5 | B | S9 | 85 | - | - | 50 | E | 4RA 003 437-061 |

** Housing turned through 180° E = Individual packaging I = Industrial packaging

Changeover contacts

| Current appl. (A) | Ohmic load | | | | Inductive load | | | | Light load | | | | Simplified drawing | Plug matrix | Switching matrix | Coil resistance | Parallel resistance | Parallel diode | Contact resistance | Pack. | Part number |
|-------------------|-------------------------------|----------------------------|-------------------------------|----------------------------|-------------------------------|----------------------------|-------------------------------|----------------------------|-------------------------------|----------------------------|-------------------------------|----------------------------|--------------------|-------------|------------------|-----------------|---------------------|--------------------|--------------------|-------|-----------------|
| | Make contact (87) | | Break contact (87a) | | Make contact (87) | | Break contact (87a) | | Make contact (87) | | Break contact (87a) | | | | | | | | | | |
| | Nominal switching current (A) | No. of switchings (thous.) | Nominal switching current (A) | No. of switchings (thous.) | Nominal switching current (A) | No. of switchings (thous.) | Nominal switching current (A) | No. of switchings (thous.) | Nominal switching current (A) | No. of switchings (thous.) | Nominal switching current (A) | No. of switchings (thous.) | | | | Ohm | Ohm | 1N ₄₀₀₅ | mV/10A | | |
| 12 V | | | | | | | | | | | | | | | | | | | | | |
| 40/20 | 30 | 100 | 20 | 100 | 30 | 100 | 20 | 100 | 30 | 150 | 20 | 150 | 1 | B1 | S4 | 85 | 470 | - | 50/60 | E | 4RD 007 794-021 |
| 40/20 | 30 | 100 | 20 | 100 | 30 | 100 | 20 | 100 | 30 | 150 | 20 | 150 | 3 | B1 | S4 | 85 | 470 | - | 50/60 | E | 4RD 007 794-031 |
| 40/20 | 30 | 100 | 20 | 100 | 25 | 100 | 16 | 100 | 16 | 100 | 8 | 100 | 4 | B1 | S3 | 85 | - | - | 50/80 | E | 4RD 003 520-081 |
| 40/20 | 30 | 100 | 20 | 100 | 25 | 100 | 16 | 100 | 16 | 100 | 8 | 100 | 2 | B1 | S3 | 85 | - | - | 60/80 | E | 4RD 003 520-131 |
| 40/20 | 30 | 100 | 20 | 100 | 25 | 100 | 16 | 100 | 16 | 100 | 8 | 100 | 2 | B1 | S5 | 85 | - | X | 40/80 | E | 4RD 003 520-251 |



Our relay catalogue contains additional relays with detailed information.

The range includes:

- Micro relays
- Special relays
- Skirted relays
- Solid-state relays



Battery circuit breaker

for flush-fitting or surface-mounting, side wall can be removed
– several switches can be connected to one another, cable connection: 2 x M10 screws, protective rating IP 56 acc. to DIN 40 050, Load capacity: 225 A (permanent load) at 12 V / 24 V, max. 1000 A (10 s) at 12 V / 24 V, Centre contact (58L/7) with contact pin
Load capacity: 20 A at 12 V

6EK 002 843-071



Battery circuit breaker

max. load: 1000 A at 12 V (10 s), 500 A at 24 V (10 s)
max. permanent load: 50 A with 35 mm cable connected
Protective rating DIN 40 050, IP X 2

6EK 002 843-002



Rocker-type switch series

without illumination, with orientation lighting or with functional lighting

6EH 007 832-...

You can find the complete switch range in the main Hella catalogue.



Door contact switch

Load capacity: 0.4 A at 12 V

6ZF 007 239-001



Socket

7-contact to ISO 1724, plastic version, screw terminals, 12 V

8JB 001 943-003



Plug

7-pin to ISO 1724, plastic version, screw terminals, 12 V

8JA 001 930-003



Socket

13-contact to ISO 11 446, plastic version,
screw terminals, 12 V
with rubber grommet and rubber seal in cover

8JB 005 949-001

with rear fog light switch-off

8JB 005 949-011



Plug

13-contact to ISO 11 446, plastic version,
screw terminals, with rubber grommet, 12 V

8JA 005 951-001



Super short adapter

from 13-contact socket (ISO 11 446) on towing vehicle
to 7-pin plug (ISO 11 446) on trailer, 12 V

8JA 008 969-001



Cable adapter

from 13-contact socket (ISO 11 446) on towing vehicle
to 7-pin plug (ISO 11 446) on trailer,
with 250 mm cable, 12 V

8JA 005 952-001



Miniature short adapter

from 7-contact socket (ISO 1724) on towing vehicle
to 13-pin plug (ISO 11 446) on trailer, 12 V

8JA 008 981-001



Socket

2-contact acc. to ISO 4165, without cover,
6.3 mm blade terminal connections,
load capacity: max. 16 A, 6 – 24 V

8JB 001 946-072



Socket

2-contact acc. to ISO 4165, with spring-loaded cover, 6.3 mm blade terminal connections, load capacity: max. 16 A, 6 – 24 V

8JB 001 946-082



Socket

2-contact acc. to ISO 4165, with arresting cover, 6.3 mm blade terminal connections, load capacity: max. 16 A, 6 – 24 V

8JB 001 946-092



Surface-mounted socket

2-contact acc. to ISO 4165, screw terminals, load capacity: max. 16 A, 6 – 24 V

8JB 004 123-001



Power socket

2-contact with cover and clamping sleeve, suitable for cigarette lighter plug, 6.3 mm blade terminal connections, load capacity: max. 16 A, 6 – 24 V

8JB 008 023-001



Universal plug

2-contact with screwed strain relief and 8 A fuse, suitable for cigarette lighter and standard sockets (ISO 4165), screw connection up to 2.5 mm², 6 – 24 V

8JA 007 589-001



Plug

2-pin acc. to ISO 4165, 6 – 24 V

8JA 002 262-001



Two-cylinder air pump

Capacity per stroke approx. 420 cm³,
for caravans, motorbikes and bicycles

8TM 003 792-001



Hand-held light

with reading and work light, infinite adjustment from spot to scatter light, incl. magnetic bracket for temporary attachment to the bodywork, with plug for cigarette lighter socket and spiral cable (can be pulled out to 3 m)
incl. Xenon bulb 12 V / 6 W

2XM 004 444-001



Halogen hand-head search light

with two matched light sources for close-in and remote range, electrical connection through 3.5 m spiral cable, with universal plug for cigarette lighter socket or ISO sockets, protective system IPX6K, conversion to 24 V possible, light aperture Ø 154 mm
incl. 12 V bulb

1HS 998 502-002



Ultra Beam work light

however with spiral cable and plug

1GA 997 506-157



Safety warning flashing light

Model 3003 ACCU ①

The accumulator is charged via contacts in the charging bracket when the engine is running. Automatic switchover of on-board mains voltage 12/24 V, operating time when flashing 40 hours, or 7 hours as a work light, charging bracket and lead-jelly accumulator included in the scope of supply
with type approval

2XW 007 146-011

Safety warning flashing light

Model 3003 ②

With fixing bracket (for battery operation through 5 mono-cells, not included in the scope of supply)

with type approval

2XW 007 146-001



Safety warning triangle

Extremely stable, easy to set up

with type approval

8RW 341 421-001



Battery charger Mini-Charger Automatic 6/12 V

CE-approved, 230 V/50 Hz/10 W, charging current at 6 V = 0.8 A or at 12 V = 0.6 A, automatic switch-off, suitable for bonded batteries, with polarity inversion protection

8ES 006 266-011



Battery charger Power-Charger 10 Automatic

CE-approved, 230 V/50 Hz/130 W, normal charge 7 A, quick charge 10 A, overload protection for safe operation and automatic switch-off

8ES 004 417-041



Battery charger Turbo-Charger

CE-approved, 230 V/50 Hz/350 W, normal charge 9 A, quick charge 17 A, overload protection for safe operation

8ES 004 417-031



Hand-held light

with 11 W PL-tube, impact-resistant protective tube, handle and cap made of oil-proof and petrol-proof rubber, length 44 cm, protective rating IP 64

Protection class II

2XM 001 974-051



Bulb replacement boxes

A must for every responsible camper.

The set contains one bulb each for the most common lighting functions and various replacement fuses.

H4, 12 V

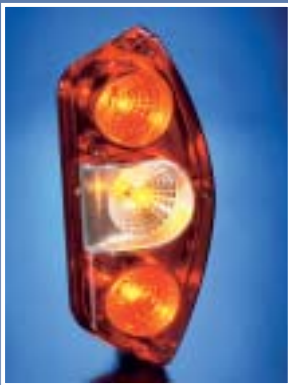
8GJ 002 525-913

H9, 12 V (not illustrated)

8GH 007 157-901

LED competence from Hella





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Internet: www.hella.com



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the cars of tomorrow*



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Internet: www.hella.ie



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the cars of tomorrow*