



**20 YEARS OF  
LED COMPETENCE**



**LIGHT IS TECHNOLOGY**



# Welcome to the age of the LED

There are many reasons why light emitting diodes are being used in more and more automotive areas. First of all, they have simply proven themselves to be the better solution in many ways. Secondly, as a lighting pioneer, HELLA made use of these "better solutions" early on in a broad range of applications.

When it comes to lighting technology, achieving milestones is nothing new for HELLA. Again and again, the international family-owned and operated company has assumed a pioneering role by pooling its expertise from the fields of light, electronics and thermal management to create new and innovative products. A uniquely strong combination for developing LED products, especially with regard to dynamic LED lighting systems, which will be increasingly relied on for active lighting functions.

## **Technology follows design!**

Cutting-edge product designs can only be realised by applying the best possible technological expertise. Long-term experience in electronics, thermal engineering and design ensure that LED headlights and lighting systems are developed with consistently high lighting performance.

By constantly developing and enhancing the options and areas of applications for LEDs, HELLA is not only involved in definitively shaping the LED era, but is also making a significant contribution toward increasing active safety.

## **The technical, economic and safety-related advantages of LEDs speak for themselves**

- High service life
- No downtimes or assembly times
- Minimal energy consumption
- Wear-free and maintenance-free
- Higher effective visibility
- Dust and water-resistant
- Compact sizes
- Rapid response times
- New scope for design

**HELLA built 364,000,000 LEDs in 2010.**





# Trendsetter

The prevalence of LEDs in more and more areas of automotive technology is noticeably increasing and serial productions are reflecting this unmistakable new trend, which can be clearly seen in the complete LED headlights in the new Audi A6. After introducing the complete LED headlight in the Audi A8, the high-end variant is currently introduced in the new Audi A6. The combination of sportiness and dynamics characterises its unmistakable face. Demanding design and intelligent LED lighting technology are optimally combined here in a small installation space. 64 LEDs distribute the light necessary for a given situation by switching ON/OFF individual LEDs automatically depending on the weather, road and speed conditions. For example, the all-weather light, which replaces the fog light, reduces the back-glare when driving in fog or heavy rain by scattering the light more broadly.





## LEDs – Benefits in series production

LEDs are replacing conventional light bulbs in more and more vehicles - in the meantime, even in series production at many locations. Decisive in this case are the technical benefits, such as longer service life or smaller sizes, which guarantee, among others, better feasibility from an ergonomic perspective. For design engineers, an important factor resulting from this is the considerable increase in design freedom. The result is cutting-edge product designs, such as the "LEDayFlex" daytime running light modules for passenger cars, trucks and caravans.

HELLA installs LEDs in different optical lighting systems based on customer requirements or special product requirements. In this case, simply through LED positioning, new design possibilities can be tapped into. In conjunction with the so-called light aperture bodies or light transmitters, technology is increasingly becoming an inherent element in innovative developments for combination rear lights.



Complete LED headlights  
**2008**



Complete LED headlights  
with AFS functions  
**2010**



First signal functions in headlights  
**2003**



Hybrid combination rear lights  
**2000**



High-mounted stop lights  
**1992**

# LED technology

## **But what do LEDs consist of?**

Basically, an LED consists of several layers of semiconductor compounds. Semiconductors, such as silicon, are materials whose electrical conductivity lies between that of conductors, such as the metals silver and copper, and non-conducting materials (insulators) such as Teflon or quartz glass. The conductivity of semi-conductors can be strongly influenced by adding electrically active foreign matter (doping). The different semi-conductor layers together make up the LED chip. The structure and type of these layers (various semi-conductors) has a crucial bearing on the light yield (efficiency) and light colour of the LED. This LED chip is coated with a plastic (epoxide resin lens) which is responsible for the LED's beam characteristics – whilst at the same time protecting the diode.

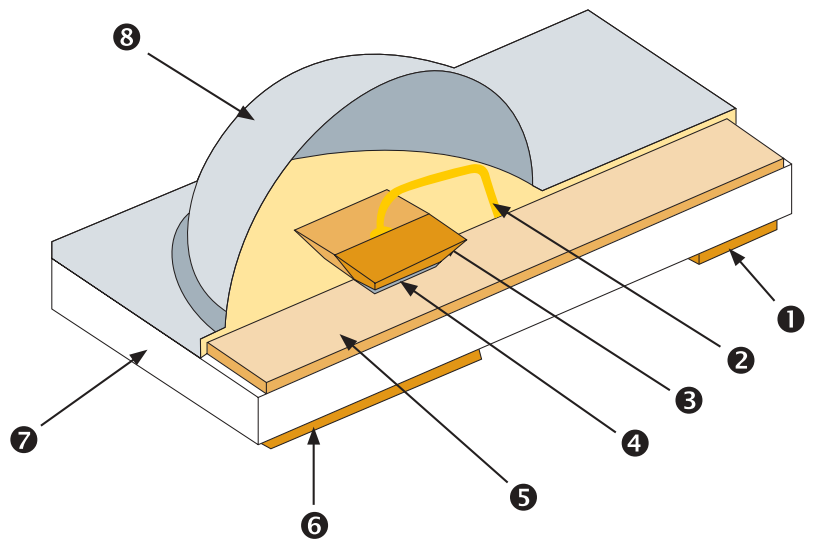
## **When a current flows through the LED**

### **(from the anode + to cathode –), light is produced (emitted)**

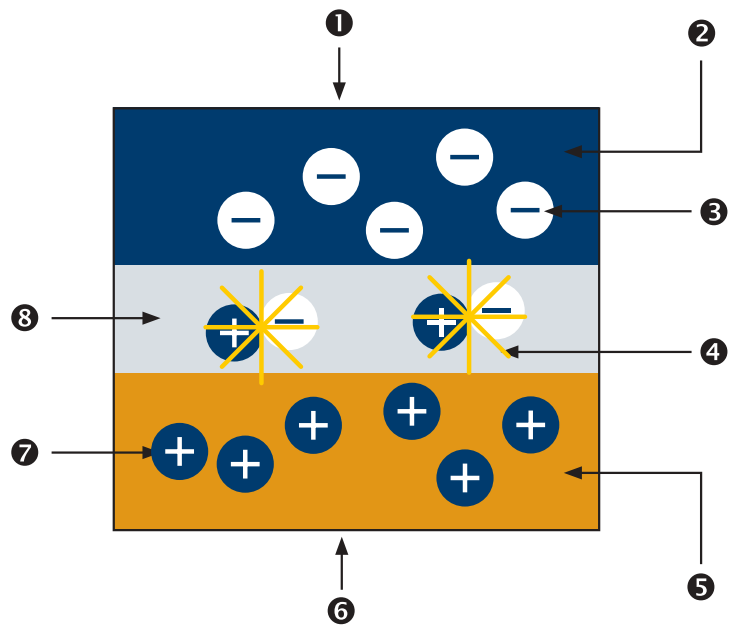
The adjacent diagram explains the functioning of an LED:

Foreign atoms have been added to the n-doped layer to create a surplus of electrons. In the p-doped layer, there are only a small number of these charge-carriers. This produces so-called electron holes (band gaps). When a voltage (+) is applied across the p-doped layer and n-doped layer (-), the charge-carriers move towards each other. At the pn junction, recombination takes place (where oppositely-charged particles combine to form a neutral entity). This process releases energy in the form of light.

- ① Cathode
- ② Bond wire
- ③ LED die
- ④ Die bond
- ⑤ Metal interconnect layer
- ⑥ Thermal pad (electrically insulated)
- ⑦ Ceramic substrate
- ⑧ Silicone lens



- ① Cathode
- ② n-doped layer
- ③ Electron
- ④ Light radiation
- ⑤ p-doped layer
- ⑥ Anode
- ⑦ "Band gap"
- ⑧ Active layer (pn junction)



# Operational safety

Using the LED stop lights as an example, it can be clearly explained how a supposedly small difference can have considerable positive effects:

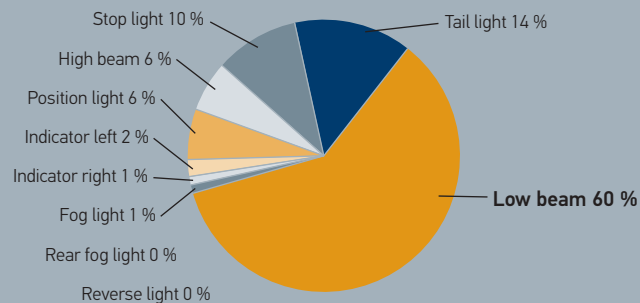
In conventional bulbs, the filament has to be warmed 200 ms so that it can transmit the necessary brightness. LEDs, on the other hand, require no warm-up phase. This means the light signal reaches its target value faster. This optimises the early warning system for the road users following your car and reduces their response time. Such fractions of a second can prevent or mitigate rear-end collisions: **at a speed of 90 km/h, the stopping distance is reduced** by about 4 m (see graphic 2).

## Energy consumption

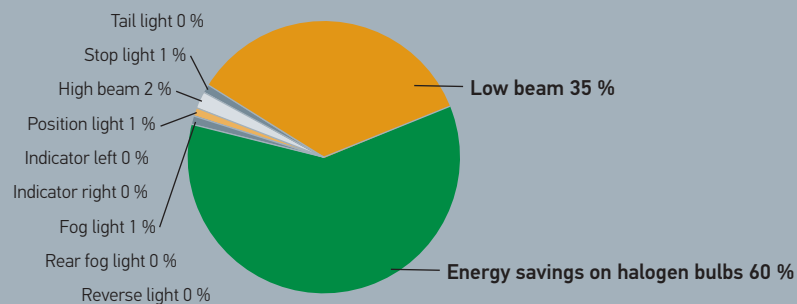
Compared to conventional bulbs, the use of LEDs considerably reduces energy consumption with the same light output. Consequently, fuel consumption and exhaust gas emissions are also reduced (see graphic 1).

## No maintenance

LEDs with a service life of up to 100,000 hours last almost as long as the service life of a vehicle. Because they are non-wearing and maintenance-free, there are no additional costs from failures or service downtimes.



100 % energy demand of a vehicle: equipped with a combination of bulbs (rear lights) and halogen lights (headlights)



If LED lighting is used exclusively (headlights and lights), this reduces energy consumption by about 60 %.

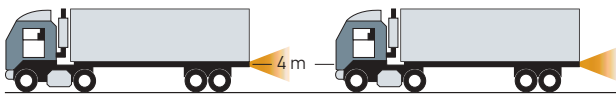
Information in 0 % = energy demand is so low that it is not accounted for.



Combination rear lights with bulbs at 90 km/h



Combination rear lights with LEDs at 90 km/h



2 Early warning through LED: shortens the response time



3 Halogen – yellowish

Xenon – bluish

LED – like daylight

## Functional safety

Fleet managers and drivers expect functional safety without any ifs and buts; In other words, vehicle components with a high quality standard and long service life. HELLA LED lights meet these requirements. They are developed and produced according to the strictest quality standards. HELLA tests their everyday driving suitability in the toughest series of simulations: Stress factors such as temperature, moisture and current feed lead to internationally recognised **AECQ** qualification in long-term reliability tests. But this norm is not sufficient for HELLA. The LEDs are therefore subjected to thousands of hours of additional stress and service life testing. This is why, in addition to the visual features, the electrical and thermal features are decisive for HELLA.

### LED-light failure check and correct electrical connection

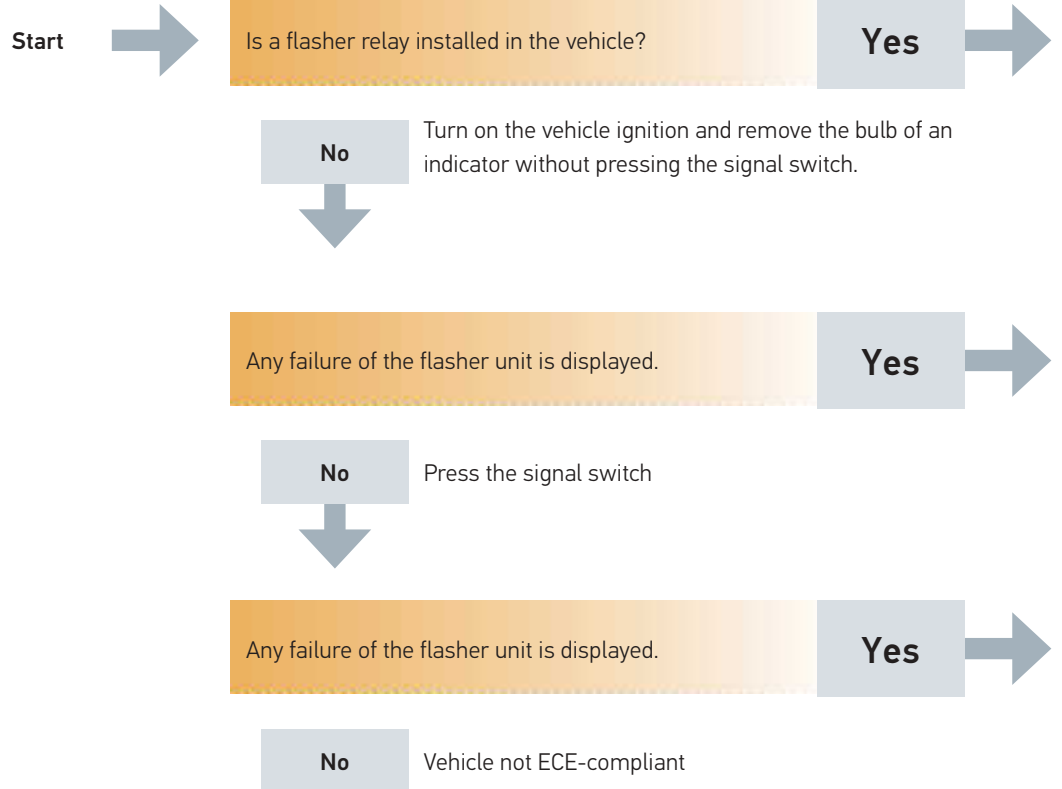
Operation of LED lights / LED headlights with AC voltage or synchronised DC voltage is not permitted. The light's individual functions may only be operated with an on-board fuse of max. 3 A, the individual functions of a headlight with an on-board fuse of max. 10 A (vehicle-specific 5 A). In case of an on-board current limit amounting to the above specification due to the on-board control unit, there is no need for an additional fuse for the lights. Due to the low watt output of LED lights, which are distinctly different from a bulb version, problems can arise in bulb failure control when operating traction vehicles.

As checking of the indicators is required by law, we recommend operating the light only in conjunction with an indicator control unit, LED flasher unit, or a simulation device for cold checking. Furthermore, some traction vehicles detect other light functions. This represents a vehicle comfort function that is not required by law and does not release the driver from his obligation to visually inspect the lighting equipment. Even in this case, low outputs can lead to misdiagnoses (instrument panel in the cab shows a light failure even though it is working fine).

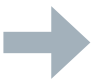
Should misdiagnoses, as described above, occur while operating your traction vehicle, please contact the traction vehicle manufacturer.

# The right solution for your vehicle electronics

## CONVERSION VEHICLE



## TRAILER



**Solution 1:  
LED flasher unit**



**Solution 2:  
Simulation device for cold checking**

	12 V	24 V
Operating voltage	10 – 15 V	18 – 32 V
Functional voltage	11 – 14 V	20 – 28 V
Operating temperature	-40 °C to +85 °C	-40 °C to +85 °C
Protection class	IP 53 (contacts below)	IP 53 (contacts below)
<b>LED flasher units 3+1</b>		
3 Indicators on the vehicle/traction vehicle 1 Indicator on optional trailer	<b>4DW 009 492-111</b>	<b>4DW 009 492-011</b>
<b>LED flasher units 2+1</b>		
2 Indicators on the vehicle/traction vehicle 1 Indicator on optional trailer	<b>4DM 009 492-101</b>	<b>4DM 009 492-001</b>

	12 V	24 V
Operating voltage	9 – 16 V	18 – 32 V
Nominal current	1.5 A	1.5 A
Operating temperature	-40 °C to +85 °C	-40 °C to +85 °C
Protection class	IP 54 (contacts below)	IP 54 (contacts below)
<b>Simulation device</b>		
for cold checking	<b>5DS 009 602-011</b>	<b>5DS 009 602-001</b>

**Safe conversion to LED indicators using patented HELLA electronics**

HELLA supplies electronic ballast for HELLA LED indicators, which makes it possible to implement the indicator failure display in a diverse range of vehicles. This is necessary if the vehicle manufacturer does not guarantee indicator bulb failure control via the vehicle's electrical system. The method is patented by HELLA. There are currently three different ballasts and several different LED flasher unit types available.

**Solution 1:**

Replace the existing device with an LED flasher unit from HELLA with ISO pin basis



One flasher unit is required per vehicle. Any possible combination of bulbs and HELLA LED indicators is permitted: from a full package with bulbs through mixed versions to a full package with LED lights. Bulbs or HELLA LED indicators are also permitted on trailers.

**Solution 2:**

With simulation device for cold checking



One simulation device is required per LED light.

**Solution 3:**

By LED indicator control unit



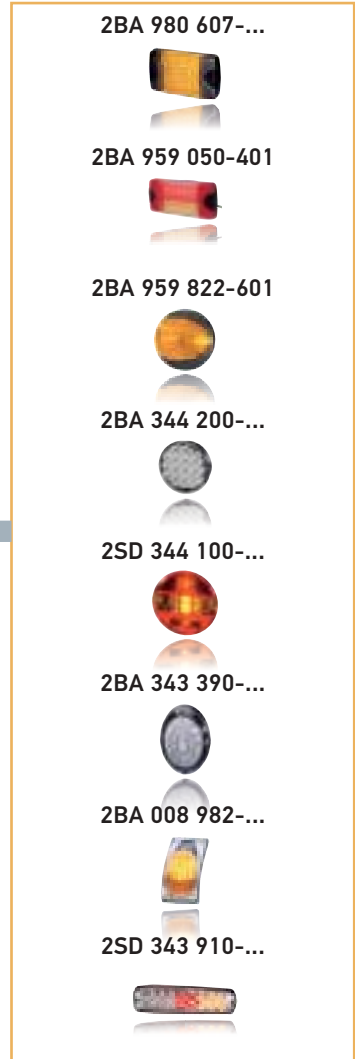
Two LED indicators can be monitored per vehicle using one simulation device. (Only one simulation device can be used per vehicle.)

**Solution 3:**

By LED indicator control unit



Failure pulse



**Solution 3:**  
Indicator control unit



**Solution 4:**  
Light control device with integrated failure pulse

	<b>24 V</b>
Operating voltage	18–32 V
Reverse-polarity protection voltage	-28 V
On-board voltage input Flasher unit left/right	24 V
Operating temperature	-40 °C to +50 °C
Extended operating temperature*	-40 °C to +80 °C
Storage temperature	-40 °C to +90 °C
With female contacts	<b>5DS 009 552-011</b>
For EasyConn connectors	<b>5DS 009 552-001</b>

In future, light control devices can query the failure pulse. Hence, interim solutions 1-3 will not be necessary and communication will take place directly with the indicators.

\* Above 50 °C, simulation of the bulb is deactivated for thermal reasons.

[www.daytime-running-light.com](http://www.daytime-running-light.com)  
[www.hella.com/truck](http://www.hella.com/truck)  
[www.hella.com/offroad](http://www.hella.com/offroad)  
[www.hella.com/bus](http://www.hella.com/bus)



## LEDayFlex

LEDayFlex makes the impossible possible: Ultimate extra safety with a personal touch. Two module chains with round high-performance LEDs are waiting only for that stylistic touch in the front of their vehicles to shine. Each module chain consists of five to eight LED light modules that can be flexibly installed within the framework of legal requirements and are available with or without position light. One revolutionary piece of freedom that additionally combines all the benefits of the LED daytime running light: Increased safety and reduced consumption compared to driving with low beam lights and imminent high-tech optics. The LEDayFlex daytime running light set consists of two pre-wired module chains with five to eight round light modules (diameter and installation depth about 30 mm) as well as two electronic boxes for controlling the daytime running lights. The system is connected to the vehicle's electrical system via a 3-pin AMP supersealed connector. For Ford Focus II and VW Golf V, vehicle-specific bezel kits for installation in LEDayFlex daytime running lights are available.



### **LEDayFlex**

LED daytime running light set with or without position light  
2 module chains with 5–8 round LED modules incl.  
electronics box 12/24 V, 5.8 W







## Luminator LED

The first HELLA auxiliary headlight in 100 % LED technology. This means never having to replace bulbs. Thanks to the computer-optimised fine-tuning of the three high-boost reflectors with the high-performance LEDs, the Luminator LED achieves an optimal light yield. This means you get: Greater comfort during night driving and less tiredness caused by homogenous and intensive high beam lights on the motorway. Additional increased warning effect with delay-free flasher function: With LED technology, the cold white light beam is immediately available at 100%. And do not forget the new design options that the LED light offers you both for daytime as well as night-time driving: The position light made of three Kartoval lenses arranged in a star shape creates a distinct night design on the vehicle. High energy efficiency with reduced current consumption: with the cold LED light, barely any heat radiation comes from the reflector. Thanks to passive heat dissipation with cooling ribs on the housing rear, an active fan for the electronics in the high-performance LEDs is redundant. In addition to all these LED benefits, the Luminator LED is above all: a robust full-metal headlight and a reliable HELLA quality product.



### Luminator LED

LED auxiliary headlight (Ref. 40) with LED position light  
30 W, Multivoltage 12 V – 24 V, weight: 2,800 g

# VEHICLE AND SMALL MANUFACTURERS RELY ON HELLA LED EXPERTISE







## 90 mm Premium LED low beam headlights

The light colour, which is similar to daylight, offers comfortable, fatigue-free driving and therefore greater safety. Three white high-performance LEDs function as a light source. The light is projected through the 70 mm glass lens homogeneously on the street. The service life of the headlight, normally more than 15,000 operating hours at a about a 50° operating temperature, offers major cost savings when it comes to maintenance and repair costs compared to other light systems. The Premium headlights without moving parts and with passive cooling system can be combined with more than 40 other modules in the 90 mm series.



### **90mm Premium LED low beam headlights**

LED low beam function, 35 W, Multivoltage 12 V – 24 V,  
no moving parts, with passive cooling system



## EasyConn NextGeneration

The modular multifunction combination rear lights (24 V) with rear stop light in LED technology leaves nothing to be desired when it comes to customer needs. All additional optional functions can be selected with bulbs or LED technology. The patented lens is replaceable. Individual parts and modules can be replaced and upgraded according to the modular principle. By combining efficient LEDs with precision lenses, the lights achieve the light distribution specified by law - and all of this with up to 67 % less power in comparison with bulb lighting. Through the HELLA-patented system for monitoring the indicators, the light can be used together with the HELLA 5DS 009 552-001 ballast in accordance with ECE R48. The light (also the complete LED version) is designed so that, according to the current condition, no error message is displayed in the vehicle's electrical system. Inverse-polarity protection ensures that the light is not damaged due to accidental contact of the poles. To extend the service life, all components are attuned to one another's optimal temperatures in order to avoid an overload of the LEDs at high ambient temperatures. The lights are designed for the service life of a vehicle and are therefore a convincing, economic and environmental solution.



**EasyConn Next Generation**  
Modular hybrid trailer lights



# Power consumption of LED lights

## Advantages of the LED:

- Generally, LED lights need less power than bulb lighting.
- Savings of up to 90 % are possible (CO<sub>2</sub> relevant).

## DESCRIPTION

## COMMENTS

### On-board voltage



Defines the voltage supply of the light, whether 12 V, 24 V or for a voltage range of 9–32 V (multi-voltage).

Multi-voltage is most flexible: Requires fewer versions, but has more electronic circuit components and thus a higher price.

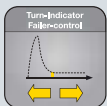
### Dust and water protection IP



International Protection (IP) according to DIN 40050 section 9.  
6K = Dust protection  
9K = Water resistance during high-pressure/steam cleaning. Specific definition for road vehicles.

The higher the protective class, the better the protection against penetrating media. IP 6K9K maximal value => completely sealed against dust and water.

### Indicator failure check according to ECE R 48



Regulation according to ECE R 48: The driver must be informed of a failure of the indicator function. To remain legally compliant, this requirement must also be fulfilled for LED lights. This requirement is fulfilled by means of an integrated self-diagnostic unit on the PCB of the LED and an electrical pulse. By the end of 2011, this failure check with pulse by HELLA will become an ISO standard.

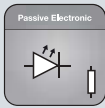
If the indicator failure check is not ensured, the general vehicle certification becomes void. Therefore, it is not legal to operate vehicles without indicator failure check in countries subject to ECE R 48. In combination with ballasts HELLA part No. 5DS 009 552-... the indicator failure check is ensured.

## DESCRIPTION

## COMMENTS

### Electronic circuit

Basically, two different circuits are possible for LED lights.



**Passive:** LED current limit by means of a dropping resistor.

**Passive:** cost-effective solution without complex protective measures. In case of failure, reduced LED service life. No EMC approval necessary.



**Active:** LED current regulation by means of active electronics

**Active:** Higher expenditure during development because of complex circuit and necessary EMC approval. Higher price because of electronic components, but electronic current regulation allows for maximum LED service life.

### Thermal management



Optimal placement of components for an even temperature distribution, e.g. by means of 2 separate PCBs, 2-sided configuration, large copper areas and thermal vias = through connections on the PCB.

The warmer the LED gets through exterior factors or heating caused by its own operation, the shorter the service life.



Electronic power control of the LED in case of impermissible high ambient temperatures. This ensures the protection of the LED against destruction by overheating.

Higher expenditures with active thermal management for development and higher parts prices ensure optimal conditions for maximum service life.

### Overvoltage protection



Supplement to the electronics for protecting the LED against high voltage/current in the on-board network according to ISO 7637-2 (Patric M.)

Overloading of the LEDs can be caused by voltage spikes in the vehicle because of:

- Jump-starting
- Defective control units
- Load-dump impulse (faulty battery contact)

These can stress or damage the LED, which can lead to a failure or a reduction in the service life. By supplementing the circuit with appropriate components, it can be protected, so that the service life is extended and failures are prevented.

### Bi-polarity of a lamp



When the connecting cable is attached with reverse polarity, the LED functions fully.

The semiconductor in an LED must always be operated with the correct polarity. The wrong polarity damages the LED, so that LED lights are always equipped with a reverse polarity protection (diode). This function only works when "+" and "-" are correctly connected, though.

If a lamp has a bi-polar circuit, the functioning is independent of the contact connections.

This ensures Poka-yoke (avoiding faulty installations) in connection with the indentation clamping technology, for instance. However, the additional components on the PCB also increase the costs.

**DESCRIPTION****COMMENTS****Approval for transport of dangerous goods**

Lamp approved for transport of dangerous goods according to Hazardous Waste Road Directive (GGVS).

Generally required for truck and trailer lighting. Precondition for approval: a damage of the light source must not cause explosive media to ignite. For LED applications, GGVS/ADR is generally possible.

**Electromagnetic compatibility**

Electromagnetic compatibility (EMC) tested and EC type approval obtained.

If the lamp is not constructed according to EMC specifications, and thus is not certified, interaction between it and other safety-relevant electronic systems may occur (e.g. crackling sounds in radio, loudspeakers, disruption of ABS electronics or failure of the light due to susceptibility to interference).

**Automotive Electronic Council**

Components qualified according to automotive standards.

Electronic components (LEDs, diodes, ...) are more robust and safer than electronic components for industry due to automotive specifications. By using certified suppliers, a more robust design of the circuit is possible even for longer periods, at a constant quality. Thus slight additional costs for the components improve the service life of LED lighting functions.

**Automotive Safety Integrity Level**

Product electronics developed according to most current methods and the ISO 26262 safety guidelines. Since July 2011, this is a legal requirement.

Due to the always increasing complexity of vehicle electronics, the potential for malfunctions also rises. In order to make systems safer, these methods according to ISO 26262 are now legally required in car development. HELLA KGaA has also followed these regulations. For safety-relevant electronics (e.g. the LED indicator) additional methods must be considered in development.

1. Analysis of potentials in road traffic during use on a vehicle.

2. Definition of a safety concept for failure or malfunction of the light.

Basically, ASIL thus requires more effort in

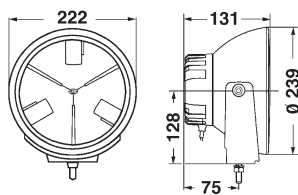
- quality management methods,
- in system testing,
- in designing a safety concept for safe products.



# Catalogue overview

→ Front lighting	24–33
→ Spotlights	24–26
→ Daytime running lights	26–27
→ Side lighting	34–41
→ Rear lighting	42–73
→ Interior Lighting	74–83
→ Worklights	84–87

# Spotlights



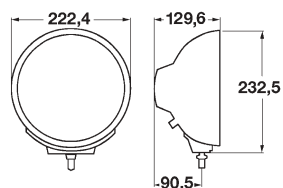
### Luminator LED

PU

LED auxiliary lights with LED position light,  
Weight: 2,800 g

Spotlight (Ref. 40)	<b>1F8 011 002-001*</b>	1
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Type approval 3161



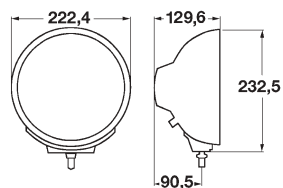
### Luminator with LED position light

PU

H1 Spotlight with LED position light,  
Weight: 2,600 g

Spotlight (Ref. 25)	<b>1F8 007 560-451*</b>	1
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Type approval 3047



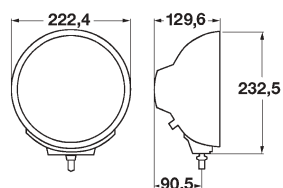
### Luminator Metal CELIS®

PU

Spotlight, with CELIS® LED position light,  
black housing.

Spotlight (Ref. 17.5)	<b>1F8 007 560-201*</b>	1
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Type approval 18245



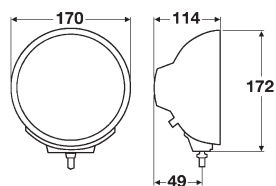
### Luminator Chromium CELIS®

PU

Spotlight, with CELIS® LED position light, high-sheen chrome-plated housing.

Spotlight (Ref. 17.5)	<b>1F8 007 560-211*</b>	1
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Type approval 1753



### Luminator Compact Metal CELIS®

PU

Spotlight, with CELIS® LED position light,  
black housing.

Spotlight (Ref. 37.5)	<b>1F1 009 094-041*</b>	1
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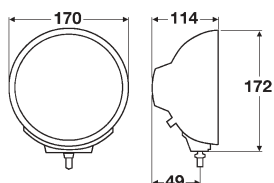
Spotlight (Ref. 17.5)	<b>1F1 009 094-081*</b>	1
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Type approval 1901 (Ref. 37,5) and 1902 (Ref. 17,5)

\* Please see the note on pages 8 and 9 regarding LED indicators and LED indicator failure check.



# Spotlights



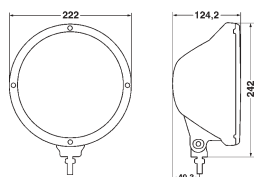
## Luminator Compact Chromium CELIS®

PU

Spotlight with CELIS® LED position light, high-shine chrome-plated housing.

Spotlight (Ref. 37.5)	<b>1F1 009 094-051*</b>	1
Spotlight (Ref. 17.5)	<b>1F1 009 094-091*</b>	1

Type approval 1901 (Ref. 37,5) and 1902 (Ref. 17,5)



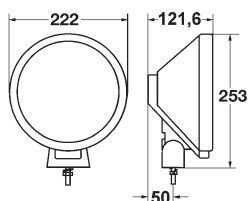
## Rallye 3003 with LED position light

PU

H1 Spotlight with LED position light, Weight: 1,350 g

a) With chrome design ring, spotlight (Ref. 25)	<b>1F8 009 797-431</b>	1
b) With silver-grey design ring, spotlight (Ref. 25)	<b>1F8 009 797-421</b>	1

Type approval 3047



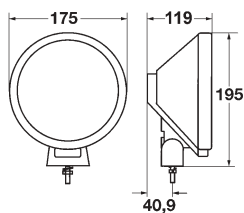
## Rallye 3000 CELIS®

PU

Spotlight, with CELIS® LED position light, black housing.

Spotlight (Ref. 17.5)	<b>1F8 006 800-401*</b>	1
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Type approval 303



## Rallye 3000 Compact CELIS®

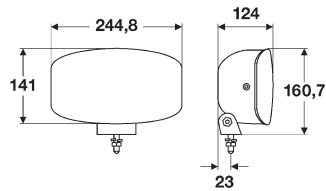
PU

Spotlight, with CELIS® LED position light, black housing.

Spotlight (Ref. 37.5)	<b>1F1 009 390-021*</b>	1
Spotlight (Ref. 17.5)	<b>1F1 009 390-041*</b>	1

Type approval 1901

## Spotlights



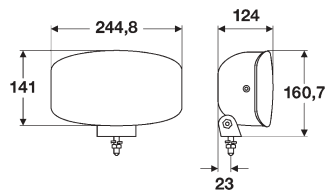
### Jumbo 320 Xenon

PU

Spotlight (Ref. 37,5), LED position light, black housing, incl. D2S Xenon bulb and electronic ballast.

Spotlight 12 V	<b>1FE 008 773-021*</b>	1
Spotlight 24 V	<b>1FE 008 773-051*</b>	1

Type approval 1741



### Jumbo 320 FF Halogen

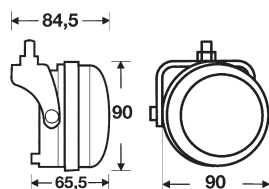
PU

Spotlight (Ref. 37,5), with LED position light, black housing.

Spotlight 12 / 24 V	<b>1FE 008 773-081*</b>	1
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Type approval 1655

## Daytime running lights



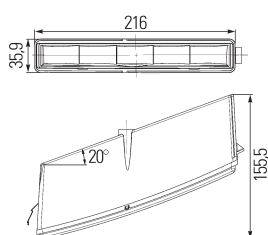
### LED daylight running light set, round 90 mm

PU

LED daylight running light set (round) with integrated electronics, incl. harness, universal bracket, 3 powerful LEDs per light, multi-voltage 9 – 33 V

12 V (approx. 5,5 W) / 24 V (approx. 11 W)	<b>2PT 009 599-801</b>	1
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Type approval 2372



### LEDayLine® Daytime running light set

PU

LED daytime running light set with integrated relay in black plastic housing and fastening springs for mounting in the front apron.

Set includes: 2 lights each with 5 LEDs, professional harness with AMP supersealed plug, fastening springs. Power consumption approx. 8 W.

12 V	<b>2PT 010 043-801*</b>	1
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Type approval 2578

# Daytime running lights



## LED daylight running light set, rod-shaped

PU

LED daytime running light set for horizontal installation, with 2.5 m connecting cable and separate changeover relay to automatically turn the lights on and off.

Set includes: 2 lights each with 12 powerful LEDs, attachment screws and changeover relay. Delivery includes mounting frame.

Set 12 V / approx. 2 W

**2PT 980 680-821\***

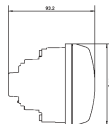
1

Set 24 V / approx. 2 W

**2PT 980 680-861\***

1

Type approval 0001



## Combined daytime running light with LED position light

PU

90 mm daytime running light with Longlife bulb and LED position light.

Ideal in combination with the 90 mm module headlight of series 009 999-..., 009 998-..., 009 997-...

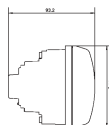
12 V / 0.4 W  
Bulb P21W

**2BE 010 102-101\***

1

Type approval 2586

# Indicator lights



## Combined indicator with LED position light

PU

90 mm indicator light with Longlife bulb and LED position light.

Ideal in combination with the 90 mm module headlight of series 009 999-..., 009 998-..., 009 997-...

12 V / 0.4 W  
Silver-coloured bulb PY21W

**2BE 010 102-001\***

1

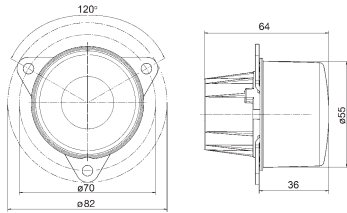
24 V / 0.4 W  
Amber bulb PY21W

**2BE 010 102-011\***

1

Type approval 2586

# Indicator lights



### Modular LED indicator

PU

for front flush mounting, with 3 amber LEDs, clear patterned lens, 500 mm long cable with open ends, protective class IP 6K9K.

12 V/4.8 W, current consumption = approx. 0.4 A  
 24 V/4.8 W, current consumption = approx. 0.2 A

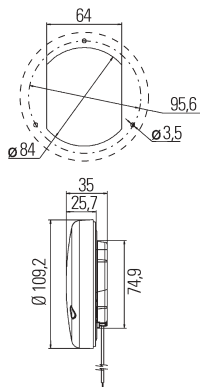
#### Indicator, with pulse for indicator failure check

12 V	<b>2BA 011 172-011*</b>	1
12 V	<b>2BA 011 172-017*</b>	20
24 V	<b>2BA 011 172-411*</b>	1
24 V	<b>2BA 011 172-417*</b>	20

#### Indicator, without pulse for indicator failure check

12 V	<b>2BA 011 172-001</b>	1
12 V	<b>2BA 011 172-007</b>	20
24 V	<b>2BA 011 172-401</b>	1
24 V	<b>2BA 011 172-407</b>	20

Type approval ECE, CCC



### LED indicator/position light

PU

LED indicator for front or rear installation, with 200 mm cable with open ends, multi-voltage 9–33 V.

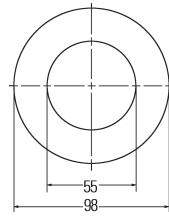
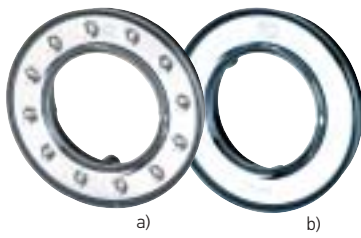
Indicator, front/rear, amber lens	<b>2BA 959 932-011</b>	1
Indicator, front/rear, clear lens	<b>2BA 959 932-051</b>	1
Indicator/position light, front, clear lens	<b>2BE 959 932-131</b>	1

Type approval E24 0023 (indicator) and E24 5851 (Indicator/position light)

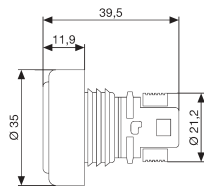
= ADR / GGVS tested

\* Please see the note on pages 8 and 9 regarding LED indicators and LED indicator failure check.

# Position lights

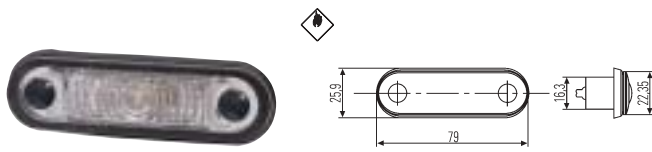


LED position light		PU
for surface mounting, with 12 white LEDs, clear lens, fits light series 011 172-...		
12 V, current consumption = approx. 0.15 A 24 V, current consumption = approx. 0.08 A		
a) 12 V	<b>2PF 008 405-061*</b>	1
a) 12 V	<b>2PF 008 405-067*</b>	60
a) 24 V	<b>2PF 008 405-051*</b>	1
a) 24 V	<b>2PF 008 405-057*</b>	60
a) 24 V, with Deutsch plug	<b>2PF 008 405-127*</b>	60
<b>Also available as chrome-plated decorative trim</b>		
b) Decorative trim, chrome-plated	<b>8XU 008 405-031</b>	1
b) Decorative trim, chrome-plated	<b>8XU 008 405-037</b>	60
<b>Type approval</b> 1696		



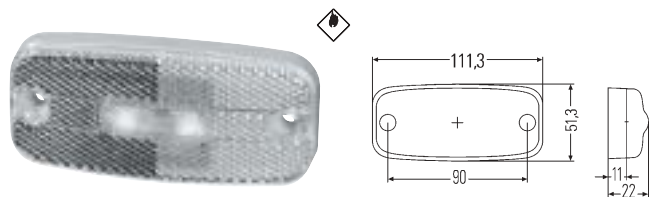
LED position light, flush-mounted		PU
Round flush-mounted light with 2 white LEDs, clear lens, without reflector, diameter 35 mm, depth 39.5 mm, of which 11.9 mm are surface-mounted.		
Black rubber housing with louvres, simple insertion in vehicles with wall thicknesses of 3-10 mm, 24 V/0.9 W, 2-pin EasyConn central plug.	<b>2PF 340 825-001*</b>	1
Black plastic housing with adhesive film for sticking to the body. 12 V/0.6 W, 2-pin cable, 150 mm long, open cable ends, IP 6K9K.	<b>2PF 340 825-041*</b>	1
Black plastic housing with 2-pin cable (2 x 0.5 mm <sup>2</sup> ) 500 mm long, with 2-pin Superseal plug, light firmly bonded with WEVO adhesive, with adhesive tape for sticking to surfaces, polarity-independent, 24 V/0.9 W	<b>2PF 340 825-057</b>	50
Black plastic housing with adhesive foil, 2-wire cable, 1,500 mm long (40 mm casing removed, 10 mm stripped wires, 12 V/0.6 W	<b>2PF 340 825-067</b>	50
<b>Type approval</b> 11371		

# Position lights



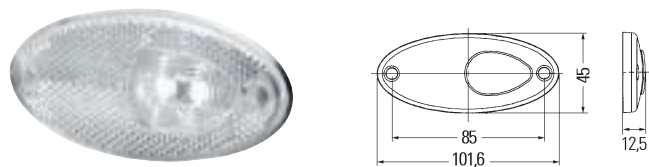
LED position light, flush-mounted		PU
for horizontal or vertical installation, with 1 white LED, white light, clear lens, and black cover caps for screws. Multi-voltage 10 V–33 V.		
current consumption at 12 V = approx. 0.04 A current consumption at 24 V = approx. 0.02 A		
with 500 mm cable	<b>2PF 959 590-202*</b>	2
with 500 mm cable	<b>2PF 959 590-207*</b>	30
with 5,000 mm cable	<b>2PF 959 590-212*</b>	2
with 5,000 mm cable	<b>2PF 959 590-217*</b>	10
with 8,000 mm cable	<b>2PF 959 590-237*</b>	8

Type approval 7597



LED Position light with reflector		PU
for horizontal surface-mounting, with 2 white LEDs, white light, white base plate, without bracket and 2 holes Ø 5.5 mm for mounting screws.		
24 V/0.5 W, current consumption = approx. 0.02 A		
with 500 mm potted cable	<b>2PG 963 639-401*</b>	1
with 5,000 mm potted cable	<b>2PG 963 639-411*</b>	1

Type approval 0002



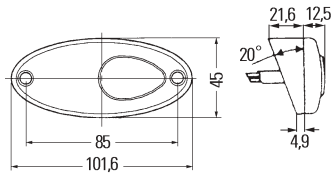
LED Position light with reflector		PU
for horizontal front surface mounting, with 2 white LEDs, clear lens, seal 5,000 mm cable and screw attachment.		
24 V/0.6 W, current consumption = approx. 0.03 A	<b>2PG 964 295-111*</b>	1
24 V/0.6 W, current consumption = approx. 0.03 A	<b>2PG 964 295-117*</b>	20
12 V/0.3 W, current consumption = approx. 0.03 A	<b>2PG 964 295-121*</b>	1
12 V/0.3 W, current consumption = approx. 0.03 A	<b>2PG 964 295-127*</b>	20

Type approval 9806

= ADR / GGVS tested

\* Please see the note on pages 8 and 9 regarding LED indicators and LED indicator failure check.

# Position lights



## LED Position light without reflector

PU

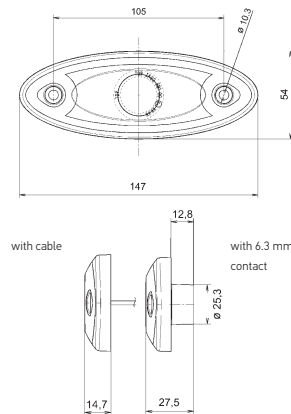
for horizontal front surface mounting, with 2 white LEDs, clear lens, with loosely included angled bracket (RAL 9010) for surface mounting on surfaces with 20° angle, with 100 mm PVC cable and 2.8 mm flat plugs with insulating sleeves.

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

**2PF 964 295-257\***

20

Type approval 817



## LED position light

PU

for horizontal and vertical surface mounting, clear lens, white housing, mounting by screw attachment with 2 screws diameter 6 mm.

12 V/0.5 W, current consumption = approx. 0.04 A  
24 V/1.0 W, current consumption = approx. 0.04 A

### with 6.3 mm flat plug

12 V, only horizontal

**2PG 343 690-107**

96

12 V, only vertical

**2PG 343 690-117**

96

### with 500 mm cable

12 V, only horizontal

**2PG 343 690-301**

1

12 V, only horizontal

**2PG 343 690-307**

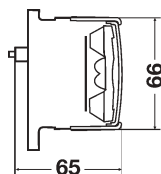
96

12 V, only vertical

**2PG 343 690-317**

96

Type approval 5853



## 60 mm Premium LED light

PU

Position light, for flush-mounting, with 12 LEDs  
12 V/1.5 W, current consumption = approx. 0.125 A  
24 V/1.5 W, current consumption = approx. 0.0625 A

12 V

**2PF 009 001-421\***

1

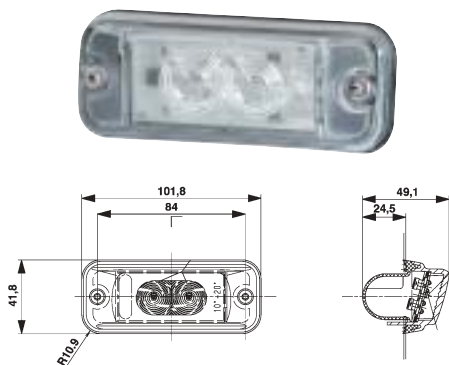
24 V

**2PF 009 001-521\***

1

Type approval 12390 and SAE

# Position lights



## LED position light, flush-mounted

PU

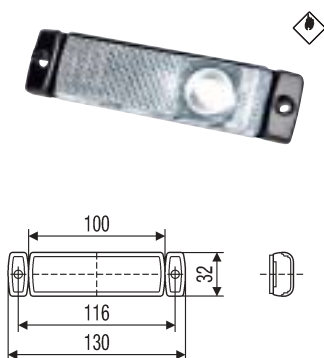
with 2 white LEDs.

24 V/0.5 W, current consumption = approx. 0.02 A

for attachment position 10–20°	<b>2PG 009 514-001*</b>	1
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for attachment position 20–30°	<b>2PG 009 514-011*</b>	1
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Type approval 2300



## LED Position light with reflector

PU

for horizontal and vertical surface mounting, with 1 white LED, white light, black housing and black plastic base plate.

24 V/0.9 W, current consumption = approx. 0.04 A

with 500 mm cable	<b>2PG 008 645-971*</b>	1
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with 500 mm cable	<b>2PG 008 645-977*</b>	50
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with 5,000 mm cable	<b>2PG 008 645-961*</b>	1
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with 5,000 mm cable	<b>2PG 008 645-967*</b>	40
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with cellular rubber seal for the ring, EasyConn connector and 2 mounting holes.

24 V/0.9 W, current consumption = approx. 0.04 A

with 300 mm cable	<b>2PG 008 645-321*</b>	1
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with 1,300 mm cable	<b>2PG 008 645-331*</b>	1
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with 3,000 mm cable	<b>2PG 008 645-341*</b>	1
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with quick link coupling including clamping piece for contact with a 2-wire flat cable, with cellular rubber seal for sealing the light.

24 V/0.9 W, current consumption = approx. 0.04 A

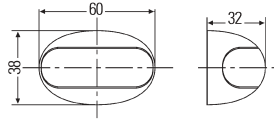
with 300 mm cable	<b>2PG 008 645-631*</b>	1
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with 5,000 mm cable	<b>2PG 008 645-641*</b>	1
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Type approval 1395 and 1398

\* Please see the note on pages 8 and 9 regarding LED indicators and LED indicator failure check.






### LED position light, surface-mounted

PU

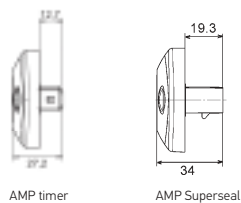
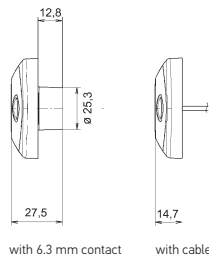
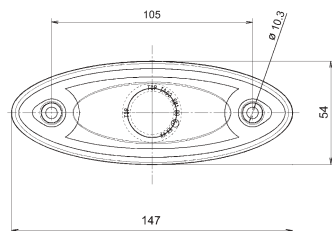
for horizontal surface-mounting, with 1 white LED, white light, clear lens and black housing.  
Multi-voltage 10–33 V.

current consumption at 12 V = approx. 0.04 A  
current consumption at 24 V = approx. 0.02 A

with 500 mm cable	<b>2PF 959 570-202*</b>	2
with 500 mm cable	<b>2PF 959 570-207*</b>	16
with 5,000 mm cable	<b>2PF 959 570-212*</b>	2
with 5,000 mm cable	<b>2PF 959 570-217*</b>	10

Type approval  7575

## Side marker lights

**LED side marker light****PU**

for horizontal and vertical surface mounting, mounting by screw attachment with 2 screws of diameter 6 mm.

12 V/0.5 W, current consumption = approx. 0.04 A  
24 V/1.0 W, current consumption = approx. 0.04 A

**with 6.3 mm flat plug**

12 V, white housing	<b>2PS 343 690-001</b>	1
12 V, white housing	<b>2PS 343 690-007</b>	96
24 V, white housing	<b>2PS 343 690-011</b>	1
24 V, white housing	<b>2PS 343 690-017</b>	96
12 V, grey housing	<b>2PS 343 690-027</b>	96
12 V, black housing	<b>2PS 343 690-061</b>	1
12 V, black housing	<b>2PS 343 690-067</b>	96
24 V, black housing	<b>2PS 343 690-031</b>	1
24 V, black housing	<b>2PS 343 690-037</b>	96
12 V, orange housing	<b>2PS 343 690-047</b>	96
24 V, orange housing	<b>2PS 343 690-057</b>	96

**with AMP timer**

24 V, white housing	<b>2PS 343 690-407</b>	96
24 V, black housing	<b>2PS 343 690-411</b>	1
24 V, black housing	<b>2PS 343 690-417</b>	96
24 V, orange housing	<b>2PS 343 690-427</b>	96

**with AMP Superseal**

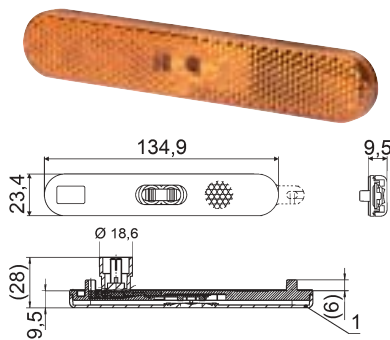
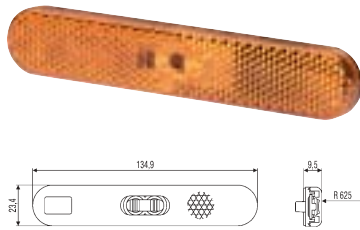
12 V, white housing	<b>2PS 343 690-601</b>	1
12 V, white housing	<b>2PS 343 690-607</b>	84
12 V, black housing	<b>2PS 343 690-611</b>	1
12 V, black housing	<b>2PS 343 690-617</b>	84
24 V, black housing	<b>2PS 343 690-621</b>	1
24 V, black housing	<b>2PS 343 690-627</b>	84

**with 500 mm cable**

12 V, white housing	<b>2PS 343 690-201</b>	1
12 V, white housing	<b>2PS 343 690-207</b>	96
12 V, orange housing	<b>2PS 343 690-227</b>	96
24 V, black housing	<b>2PS 343 690-237</b>	96

Type approval  5853


# Side marker lights



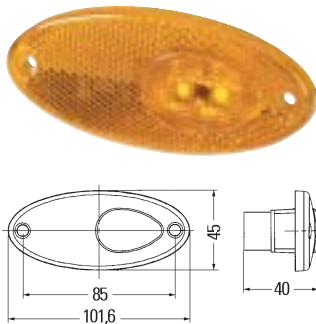
Accessories for LED side marker light 2PS 343 690-...		PU
Rubber seal, black	<b>9GD 343 697-007</b>	50
Rubber seal, grey	<b>9GD 343 697-107</b>	50
Grommet	<b>9GT 343 367-002</b>	30

LED side marker light with reflector		PU
for horizontal surface mounting, with 2 amber LEDs, amber lens, with pre-assembled 195 mm cable with plug contacts. Attachment by means of double-sided adhesive tape.		
24 V/1.0 W, current consumption = approx. 0.04 A AMP plug housing loosely included	<b>2PS 009 226-017*</b>	300
12 V/1.0 W, current consumption = approx. 0.08 A without AMP plug housing	<b>2PS 009 226-021*</b>	1
12 V/1.0 W, current consumption = approx. 0.08 A without AMP plug housing	<b>2PS 009 226-027*</b>	300
24 V/1.0 W, current consumption = approx. 0.04 A without AMP plug housing	<b>2PS 009 226-037*</b>	300
12 V/1.0 W, current consumption = approx. 0.08 A vertical installation	<b>2PS 009 226-077*</b>	300
24 V/1.0 W, current consumption = approx. 0.08 A vertical installation	<b>2PS 009 226-087*</b>	300

Type approval  10236

LED side marker light with reflector		PU
for horizontal surface mounting, with 2 amber LEDs, with integrated 6.3 mm flat plug (optionally contact with 2 x 2.8 mm flat plugs), attachment with double-side adhesive tape.		
12 V/1 W	<b>2PS 009 226-067</b>	300
Type approval  10236		
<b>Accessories</b>		
Grommet (available separately)	<b>9GT 186 597-007</b>	600

## Side marker lights

**LED side marker light with reflector**

PU

for horizontal surface-mounting, with 2 amber LEDs, amber lens, amber light, with two 500 mm cables with and without rubber seal, with screw attachment or adhesive version (including caps for screw holes).

**Screw attachment, with rubber seal**

12 V/0.5 W, current consumption = approx. 0.04 A  
24 V/1.0 W, current consumption = approx. 0.04 A

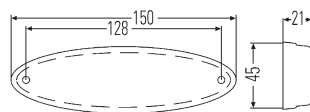
12 V	<b>2PS 964 295-061*</b>	1
12 V	<b>2PS 964 295-067*</b>	80
24 V	<b>2PS 964 295-051*</b>	1
24 V	<b>2PS 964 295-057*</b>	80

**Adhesive version, without rubber seal**

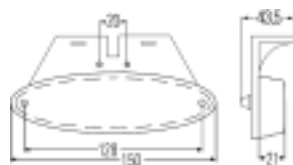
12 V/0.5 W, current consumption = approx. 0.04 A  
24 V/1.0 W, current consumption = approx. 0.04 A

12 V	<b>2PS 964 295-081*</b>	1
12 V	<b>2PS 964 295-087*</b>	80
24 V	<b>2PS 964 295-071*</b>	1
24 V	<b>2PS 964 295-077*</b>	80

Type approval 0202



without bracket



with angled bracket

**LED side marker light with reflector**

PU

for horizontal surface-mounting, with 3 amber LEDs, amber lens, amber light, grey base plate, with 500 m cable and stripped ends, 2 holes (Ø 4.5 mm) for attachment screws.

**without bracket**

12 V/0.7 W, current consumption = approx. 0.06 A  
24 V/1.4 W, current consumption = approx. 0.06 A

12 V	<b>2PS 007 943-311*</b>	1
12 V	<b>2PS 007 943-317*</b>	105
24 V	<b>2PS 007 943-011*</b>	8
24 V	<b>2PS 007 943-017*</b>	105

**with angled bracket, inclined toward front**

12 V/0.7 W, current consumption = approx. 0.06 A  
24 V/1.4 W, current consumption = approx. 0.06 A

24 V	<b>2PS 007 943-021*</b>	10
24 V	<b>2PS 007 943-027*</b>	124
12 V	<b>2PS 007 943-321*</b>	10

Type approval 9417

= ADR / GGVS tested

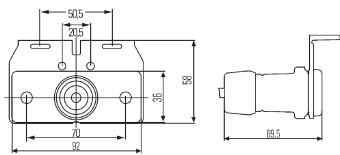
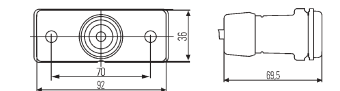
\* Please see the note on pages 8 and 9 regarding LED indicators and LED indicator failure check.

# Side marker lights

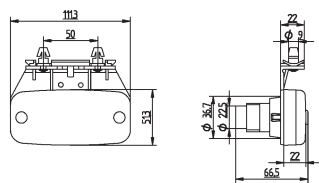


a)

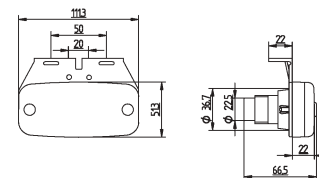
b)



a)



b)



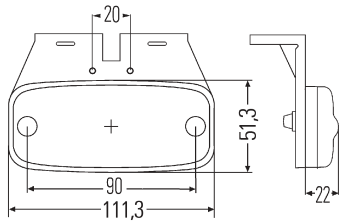
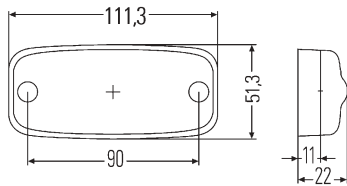
LED side marker light	PU
for horizontal flush-mounting, with 4 amber LEDs, amber lens, amber light, without reflector.	
<b>a) without bracket</b> 24 V/1.0 W, current consumption = approx. 0.04 A (can be combined with reflector 9EL 154 637-001)	
<b>2PS 008 382-001*</b>	1
<b>2PS 008 382-007*</b>	60
<b>b) Side marker light set</b> without bracket, with separate reflector	
<b>2PS 008 382-801*</b>	1
<b>2PS 008 382-807*</b>	60
<b>Side marker light set</b> with angled bracket, angle toward front, surface mounting	
<b>2PS 008 382-811*</b>	1
<b>2PS 008 382-817*</b>	60

Type approval 3169

LED side marker light with reflector	PU
for horizontal surface-mounting, with 2 amber LEDs, amber lens, amber light. 24 V/1.3 W, current consumption = approx. 0.05 A	
a) mounted on a bracket, with clip angle across towards front	<b>2PS 340 001-001*</b> 1
b) mounted on a universal bracket, with angle towards rear	<b>2PS 340 001-011*</b> 1
<b>Accessories</b> (please order separately) Usable cables and connection sets	
Round cable (100 m)	<b>8KL 340 055-001*</b> 1
2-pin connection set	<b>9XX 340 220-011*</b> 10
2-pin connection set (for 10 lights)	<b>9XX 340 220-801*</b> 1

Type approval 9605

## Side marker lights

**LED side marker light with reflector**

PU

for horizontal surface-mounting, with 2 amber LEDs, amber lens, amber light, black base plate.

**without bracket**

12 V/0.7 W, current consumption = approx. 0.06 A  
24 V/1.3 W, current consumption = approx. 0.05 A

12 V, with 500 mm cable	<b>2PS 963 639-001*</b>	1
24 V, with 500 mm cable	<b>2PS 963 639-011*</b>	1
24 V, with 1,500 mm cable	<b>2PS 963 639-197*</b>	1
24 V, with 200 mm cable	<b>2PS 963 639-207*</b>	20
24 V, with 5,000 mm cable	<b>2PS 963 639-137</b>	20
24 V, with 10,000 mm cable,	<b>2PS 963 639-147*</b>	20

**With bracket, angle towards rear**

12 V/0.7 W, current consumption = approx. 0.06 A  
24 V/1.3 W, current consumption = approx. 0.05 A

12 V, with 500 mm cable	<b>2PS 963 639-061*</b>	1
24 V, with 500 mm cable	<b>2PS 963 639-071*</b>	1
24 V, with 1,500 mm cable	<b>2PS 963 639-167*</b>	20

**With 1,500 mm cable, plug and bracket**

24 V/1.3 W, current consumption = approx. 0.05 A

Angle towards rear	<b>2PS 963 639-157*</b>	20
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**With 1,500 mm cable and base**

24 V/1.3 W, current consumption = approx. 0.05 A

without bracket	<b>2PS 963 639-177*</b>	20
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**With 2,000/500 mm cable and cut ends**

24 V/1.3 W, current consumption = approx. 0.05 A

without bracket	<b>2PS 963 639-101*</b>	1
with bracket	<b>2PS 963 639-111*</b>	1

**With 4,000/500 mm cable and system plug**

24 V/1.3 W, current consumption = approx. 0.05 A

without bracket	<b>2PS 963 639-041*</b>	1
with bracket	<b>2PS 963 639-021*</b>	1

**With 4,500 mm cable and system plug**

24 V/1.3 W, current consumption = approx. 0.05 A

without bracket	<b>2PS 963 639-051*</b>	1
With bracket (angle towards rear)	<b>2PS 963 639-031*</b>	1

**With 5,500/500 mm cable and 6.3 mm flat plug**

24 V/1.3 W, current consumption = approx. 0.05 A

without bracket	<b>2PS 963 639-081*</b>	1
with bracket	<b>2PS 963 639-091*</b>	1

<b>Spare part, seal</b>	<b>9GD 341 063-007</b>	20
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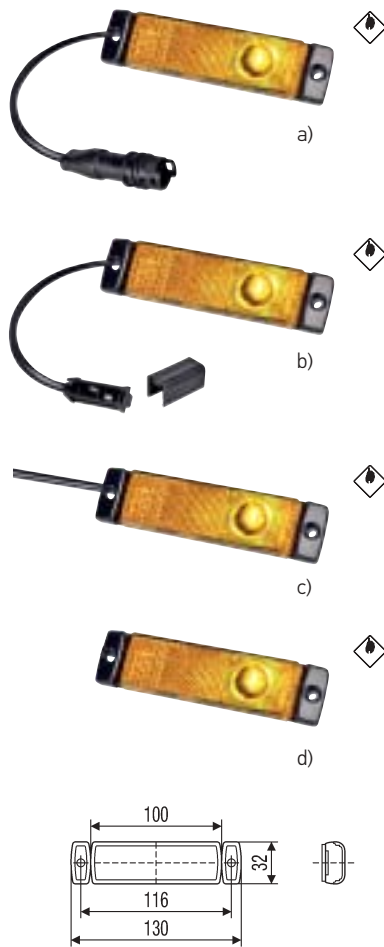
Type approval 9605



= ADR / GGVS tested

\* Please see the note on pages 8 and 9 regarding LED indicators and LED indicator failure check.

# Side marker lights



## LED side marker light with reflector

PU

for horizontal or vertical surface-mounting, with 1 amber LED, amber lens, black housing, with cellular rubber seal for sealing the light and 2 holes for attachment screws B4,2.

With horizontal surface-mounting, the optical field must point to the outer vehicle edge.

### a) for horizontal surface-mounting

with 2-pin EasyConn plug housing  
24 V/1.2 W, current consumption = approx. 0.05 A

with 300 mm cable	<b>2PS 008 645-301*</b>	1
with 1,300 mm cable	<b>2PS 008 645-311*</b>	1
with 2,000 mm cable	<b>2PS 008 645-361*</b>	1

### b) for horizontal surface-mounting

with quick link cabling for contacting a 2-wire flat cable, complete with clamping piece.  
24 V/1.2 W, current consumption = approx. 0.05 A

with 300 mm cable	<b>2PS 008 645-611*</b>	1
with 300 mm cable	<b>2PS 008 645-617*</b>	50
with 1,300 mm cable	<b>2PS 008 645-621*</b>	1
with 1,300 mm cable	<b>2PS 008 645-627*</b>	50

### c) for horizontal surface-mounting

24 V/1.2 W, current consumption = approx. 0.05 A

24 V, with 450 mm cable and AMP Superseal plug	<b>2PS 008 645-897*</b>	50
24 V, with 1,500 mm cable	<b>2PS 008 645-001*</b>	1
24 V, with 1,500 mm cable	<b>2PS 008 645-007*</b>	50

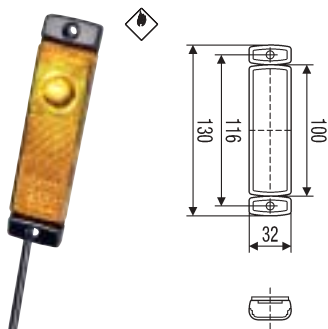
### d) for horizontal surface-mounting

12 V/0.6 W, current consumption = approx. 0.05 A  
24 V/1.2 W, current consumption = approx. 0.05 A

12 V, with 1,500 mm cable	<b>2PS 008 645-011*</b>	1
12 V, with 1,500 mm cable	<b>2PS 008 645-017*</b>	24
24 V, with 5,000 mm cable,	<b>2PS 008 645-187*</b>	50
24 V, with 10,000 mm cable	<b>2PS 008 645-497*</b>	50
24 V, with 150 mm cable, quick link coupling incl. clamping piece for contacting a 2-wire flat cable	<b>2PS 008 645-601*</b>	1
24 V, with 150 mm cable, quick link coupling incl. clamping piece for contacting a 2-wire flat cable	<b>2PS 008 645-607*</b>	50

Type approval 1395 and 1396

## Side marker lights

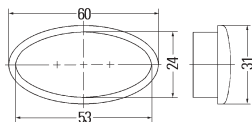
**LED side marker light with reflector**

PU

for vertical surface-mounting, with 1 amber LED, amber lens, black housing, with cellular rubber seal for sealing the light and 2 holes for attachment screws B4,2.  
 12 V/0.6 W, current consumption = approx. 0.05 A  
 24 V/1.2 W, current consumption = approx. 0.05 A

24 V, with 180 mm cable and AMP Superseal plug	<b>2PS 008 645-887*</b>	50
24 V, with 1,500 mm cable and open cable ends	<b>2PS 008 645-991*</b>	1
12 V, with 1,500 mm cable and open cable ends	<b>2PS 008 645-981*</b>	1

Type approval 1397

**LED side marker light set**

PU

for horizontal flush-mounting for retrofitting cars < 6 m, with 3 amber LEDs.  
 Contents: 4 lights and mounting hardware for flush mounting in front or rear plastic bumper.  
 12 V/0.7 W, current consumption = approx. 0.06 A

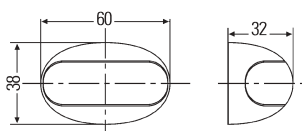
Yellow lenses, silver-grey bezel	<b>2PS 008 138-801</b>	1
Grey lenses, black bezel	<b>2PS 008 138-811</b>	1
Grey lenses, silver-grey bezel	<b>2PS 008 138-821</b>	1

**Spare Parts**

Side marker light

for -801	<b>2PS 008 138-001</b>	1
for -811	<b>2PS 008 138-101</b>	1
for -821	<b>2PS 008 138-111</b>	1

Type approval 9110

**LED side marker light**

PU

for horizontal surface-mounting, 2 amber or red LEDs, clear lens, with 500 mm cable.

amber	<b>2PS 959 660-207*</b>	16
red	<b>2PS 959 660-407*</b>	16

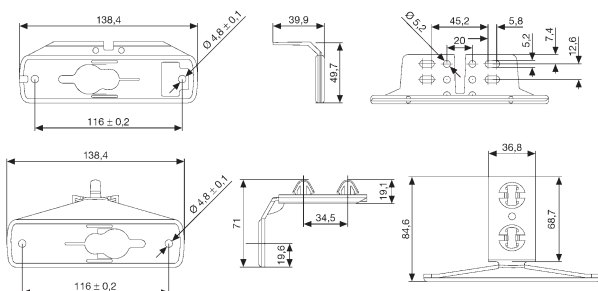
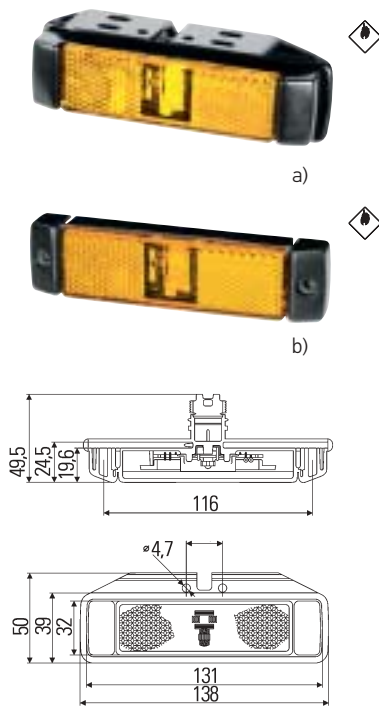
Type approval only SAE

= ADR / GGVS tested

\* Please see the note on pages 8 and 9 regarding LED indicators and LED indicator failure check.



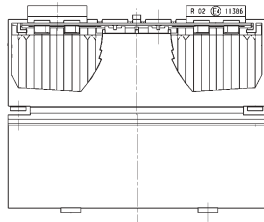
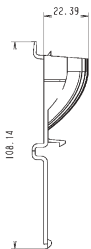
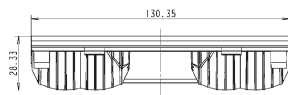
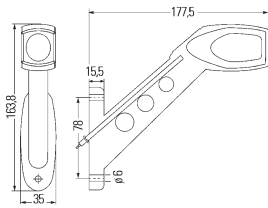
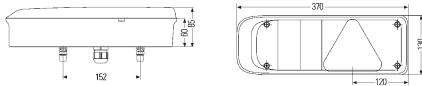
# Side marker lights



LED side marker light with reflector		PU
for horizontal surface-mounting, with 2 amber LEDs, amber lens. Reverse polarity protection through bridge circuit. 24 V/1.4 W, current consumption = approx. 0.06 A		
<b>a) Angled bracket attachment "forward" or "backward"</b>		
with 2-pin EasyConn central plug	<b>2PS 340 836-051*</b>	1
with 2-pin EasyConn receptacle housing and potted 1,300 mm long cable	<b>2PS 340 837-111*</b>	1
with quick link cabling (fits HELLA flat cable 8KA 340 822-...), with 1,300 mm cable	<b>2PS 340 837-041*</b>	1
<b>b) Attachment via side mounting holes</b>		
with 2-pin EasyConn central plug	<b>2PS 340 836-011*</b>	1
with 2-pin EasyConn receptacle housing and potted 1,300 mm long cable	<b>2PS 340 837-101*</b>	1
with quick link cabling (fits HELLA flat cable 8KA 340 822-...), with 1,300 mm cable	<b>2PS 340 837-031*</b>	1
<b>Type approval</b> 10213		
<b>Accessories</b> (please order separately)		
Clamping piece for quick link cabling	<b>8KW 998 602-002</b>	15
Universal bracket, angle towards rear	<b>8HG 340 489-001</b>	1
clip angle towards rear	<b>8HG 340 413-001</b>	1

Accessories (please order separately)		PU
Mounting pliers for quick link cabling	<b>8PE 008 932-001</b>	1
Rubber seal as base between light and vehicle	<b>9GD 157 876-001</b>	22
Angle bracket, angle towards rear, for all lights of series 008 645-... Universal angle bracket with 2 mounting screws for attaching the lights on the bracket	<b>8HG 160 409-002</b>	10
Universal bracket, angle towards rear	<b>8HG 340 489-001</b>	1

# Combination rearlights



## EasyConn I Multifunction rearlight

PU

for horizontal surface-mounting. Triangular rear reflector, stop/indicator/rear fog light/reversing light with 4 vibration dampers, 7-pin EasyConn central plug. 2 x taillight with 2 red LEDs each. Protection class IP54.

24 V/1 W, current consumption for LED taillight = approx. 0.04 A

right (without rubber arm)	<b>2VP 340 932-001*</b>	1
left (without rubber arm)	<b>2VP 340 932-011*</b>	1

With clearance and side marker light in the rubber arm. With 2 white LEDs for the position light, 1 red LED for the clearance light and 2 amber LEDs for the side marker light. 24 V/1.5 W, current consumption = approx. 0.05 A

right	<b>2VP 340 934-101*</b>	1
left	<b>2VP 340 934-111*</b>	1

Type approval E4 11386

## Retrofit set "LED module for taillight function"

PU

For converting the taillight function from bulbs to LED technology. For EasyConn taillights with bulbs (2VP 340 830-..., 2VP 340 831-..., 2VP 340 930-... and 2VP 340 931-...)

Set	<b>9XX 340 173-801*</b>	1
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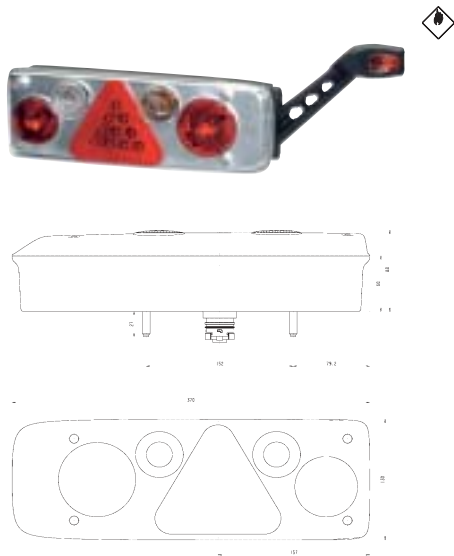
The set consists of 2 reflectors, one for the right and one for the left light, with one PCB each, including 4 red LEDs and adapter cable to connect to the bulb holder. The PCB is seawater-resistant. Module can be simply snapped into the reflector. The two tabs serve for a flat placement of the module. The type approval number is clearly visible and has been stamped into the right tab. At the same time, the tabs cover the type approval number of the bulb version.

24 V/1 W, current consumption = approx. 0.04 A

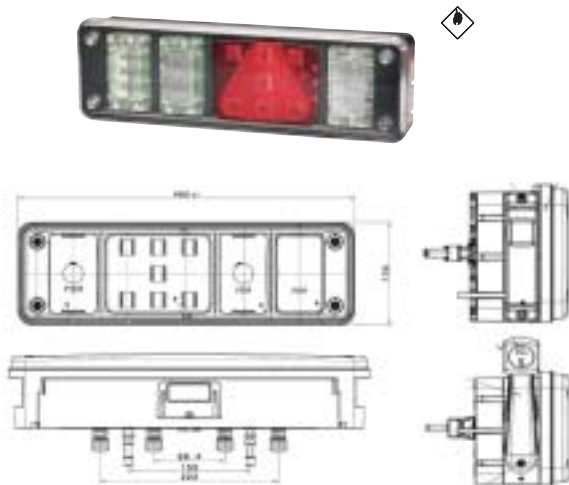
= ADR / GGVS tested

\* Please see the note on pages 8 and 9 regarding LED indicators and LED indicator failure check.

# Combination rearlights



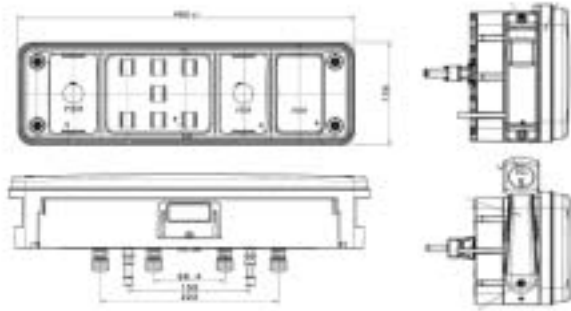
EasyConn I Multifunction rearlight		PU
for horizontal surface-mounting. Triangular rear reflector, stop/indicator/rear fog light/reversing light with 4 vibration dampers, 7-pin EasyConn central plug, 24 V.		
Taillight function behind the triangular reflector with 10 red LEDs. 24 V/2 W, current consumption = approx. 0.08 A		
right (without rubber arm)	<b>2VP 340 942-001*</b>	1
left (without rubber arm)	<b>2VP 340 942-011*</b>	1
With 10 red LEDs in taillight, with clearance and side marker light in LED in the rubber arm.. 2 white LEDs for position light 1 red LED for clearance light 2 amber LEDs for side marker light 24 V/1.5 W, current consumption = approx. 0.05 A		
right	<b>2VP 340 940-101*</b>	1
left	<b>2VP 340 940-111*</b>	1
<b>Type approval</b> E24 11779		



LED hybrid trailer light		PU
Modular multi-function combination rearlight 24 V for horizontal surface-mounting, clear lens, 7-pin EasyConn plug connection and 4 x 2-pin plug for connecting various functions, with pulse for indicator failure check . Tail light/stop light with 7 red LEDs, indicator with 7 amber LEDs, reversing light with 6 white LEDs, rear fog light with 7 red LEDs.		
Taillight: 24 V/10 W, current consumption = approx. 0.42 A Stop light: 24 V/13 W, current consumption = approx. 0.54 A Indicator: 24 V/3 W, current consumption = approx. 0.13 A Reversing light: 24 V/2.5 W, current consumption = approx. 0.10 A Rear fog light: 24 V/2.5 W, current consumption = approx. 0.10 A Clearance light: 24 V/1.2 W, current consumption = approx. 0.05 A Side marker reflector light: 24 V/1 W, current consumption = approx. 0.04 A		
IP protection classes: Light IP 5K4K, LED modules IP 6K9K		
<b>Full-LED tail light/triangular reflector/brake light, indicator, rear fog light, reversing light</b>		
left	<b>2VP 340 960-011*</b>	1
right	<b>2VP 340 960-021*</b>	1
<b>Full-LED tail light/triangular reflector/brake light, indicator, rear fog light, reversing light, clearance light in the rubber arm</b>		
left	<b>2VP 340 960-111*</b>	1
right	<b>2VP 340 960-121*</b>	1
<b>Type approval</b> E24 5855 and E24 5856		

**Note:**  
The functions stop light, taillight, side maker light and clearance light contain passive electronics with dropping resistors. According to the current state, this does not generate an error message in the on-board electronics.

# Combination rearlights



## Modular multifunction rearlight

PU

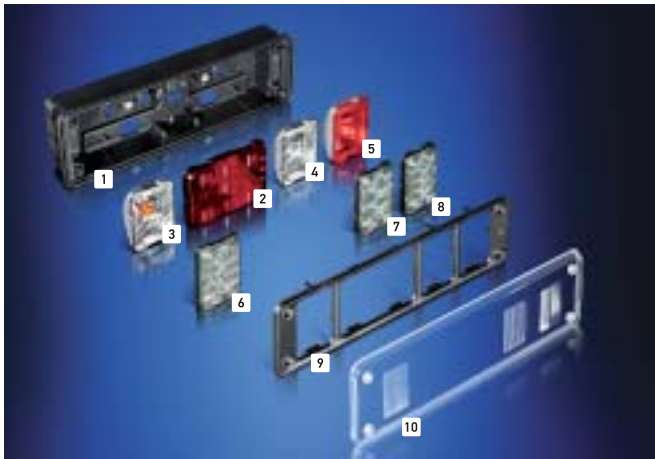
24 V, tail light/stop light generally in LED, all other functions are possible with bulb or LED technology.

Type approval 5855 and 5856

## Program overview

Part Number	Variations			Functions					
	Hybrid	Left	Right	Tail light/triangular reflector/ stop light	Indicator light	Rear fog light	Reversing light	Clearance light	Side marker light
2VP 340 961-011	X	X	-	LED	Bulb	Bulb	Bulb	-	-
2VP 340 961-021	X	-	X	LED	Bulb	Bulb	Bulb	-	-
2VP 340 961-031	X	X	-	LED	Bulb	LED	Bulb	-	-
2VP 340 961-041	X	-	X	LED	Bulb	LED	Bulb	-	-
2VP 340 961-111	X	X	-	LED	Bulb	Bulb	Bulb	LED	-
2VP 340 961-121	X	-	X	LED	Bulb	Bulb	Bulb	LED	-
2VP 340 961-131	X	X	-	LED	Bulb	LED	Bulb	LED	-
2VP 340 961-141	X	-	X	LED	Bulb	LED	Bulb	LED	-
2VP 340 961-211	X	X	-	LED	Bulb	Bulb	Bulb	-	LED
2VP 340 961-221	X	-	X	LED	Bulb	Bulb	Bulb	-	LED

## Design of a modular hybrid combination rearlight



- 1) Housing
- 2) LED module tail light/stop light
- 3) Bulb module indicator
- 4) Bulb module reversing light
- 5) Bulb module rear fog light
- 6) LED module indicator
- 7) LED module reversing light
- 8) LED module rear fog light
- 9) Carrier frame, black
- 10) Lens

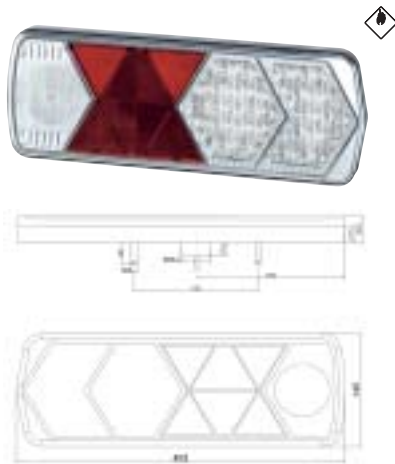
## Spare parts program / Conversion to LED

Part Number	LED Tail light/triangular reflector/ stop light 9DW 178 904-001	LED indicator 9DW 178 909-001	Bulb indicator 9DE 179 677-001	LED rear fog light 9DW 178 909-021	Bulb rear fog light 9DE 179 677-021	LED reversing light 9DW 178 909-011	Bulb reversing light 9DE 179 677-011	Left LED clearance light 2XS 340 418-191	Right LED clearance light 2XS 340 418-181	Side marker light 2PS 008 645-801	Lens 9EL 183 432-001	Cover 8XS 340 092-011
2VP 340 961-011	X	X <sup>2</sup>	X	X	X	X	X	-	-	-	X	X
2VP 340 961-021	X	X <sup>2</sup>	X	X	X	X	X	-	-	-	X	X
2VP 340 961-031	X	X <sup>2</sup>	X	X	X	X	X	-	-	-	X	X
2VP 340 961-041	X	X <sup>2</sup>	X	X	X	X	X	-	-	-	X	X
2VP 340 961-111	X	X <sup>2</sup>	X	X	X	X	X	X	-	-	X	X
2VP 340 961-121	X	X <sup>2</sup>	X	X	X	X	X	-	X	-	X	X
2VP 340 961-131	X	X <sup>2</sup>	X	X	X	X	X	X	-	-	X	X
2VP 340 961-141	X	X <sup>2</sup>	X	X	X	X	X	-	X	-	X	X
2VP 340 961-211	X	X <sup>2</sup>	X	X	X	X	X	-	-	X	X	X
2VP 340 961-221	X	X <sup>2</sup>	X	X	X	X	X	-	-	X	X	X

X<sup>1</sup>: In case of a subsequent conversion of the LED indicator module to bulbs, the ballast must be disconnected. This ensures the functioning of the vehicle's electrical system.

X<sup>2</sup>: For conversion of the indicator function to LED, ballast 5DS 009 552- ... must be used.

# Combination rearlights



## Full LED multi-function combination rear light

PU

Taillight/triangular rear reflector, stop/indicator/reversing light for horizontal surface-mounting, with 500 mm cable and 7-pin EasyConn plug housing, tightly glued lens, clear on outside, reflector red on inside, ventilation via membrane, with pulse for indicator failure check, protection class IP 6K9K.

Taillight: 15 red LEDs,  
24 V/0.7 W, current consumption = approx. 0.03 A  
Stop light: 15 red LEDs,  
24 V/5 W, current consumption = approx. 0.21 A  
Indicator: 15 amber LEDs,  
24 V/3 W, current consumption = approx. 0.125 A  
Reversing light: 1 white LED,  
24 V/5.5 W, current consumption = approx. 0.23 A

Left light with additional outlet from 7-pin EasyConn plug housing to a 500 mm long cable with 2-pin EasyConn receptacle housing for attaching a rear fog light.

left	<b>ZVP 340 950-011*</b>	1
right only with 7-pin connection	<b>ZVP 340 950-021*</b>	1
with cable and 6.3 mm flat receptacles		
left, with 1,500 mm cable	<b>ZVP 340 950-031*</b>	1
right, with 2,500 mm cable	<b>ZVP 340 950-041*</b>	1

Type approval 2376



## Full LED multi-function combination rear light

PU

### Version for traction vehicles

Taillight / reflector / stoplight / indicator and reversing light, 1,500 mm cable with 6.3 mm flat receptacles, with pulse for indicator failure check, protection class IP 6K9K.

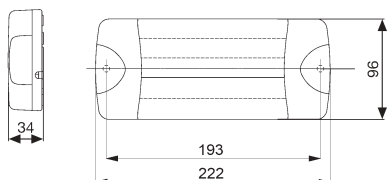
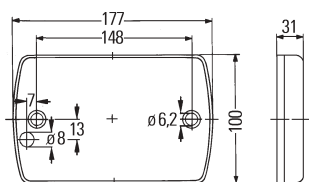
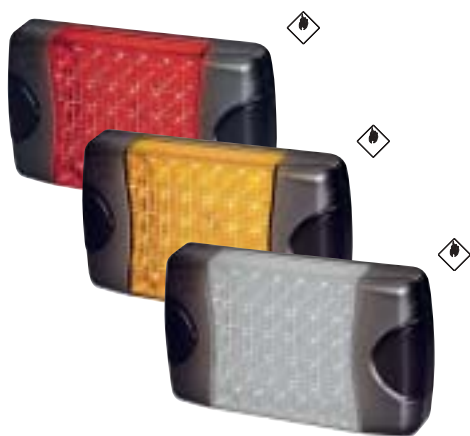
**ZVP 340 950-051\*** 1

Type approval 2520

= ADR / GGVS tested

\* Please see the note on pages 8 and 9 regarding LED indicators and LED indicator failure check.

# Combination rearlights



## Tail-, stop-, indicator-, and reverse light

PU

for horizontal and vertical surface mounting, clear lens, 2,500 mm cable with stripped ends. Protection class IP 6K6 and IP 6K7. Multi-voltage 3–33 V.

Taillight 12 / 24 V:  
2.5 W, current consumption = 0.21/0.109 A  
Stop light 12 / 24 V:  
6 W, current consumption = 0.5/0.25 A  
Indicator/reversing light  
4 W, current consumption = 0.33/0.16 A

### Tail-stop light, 24 red LEDs

horizontal	<b>2SB 980 606-201*</b>	1
vertical	<b>2SB 980 606-701*</b>	1

### Indicator, 24 amber LEDs With pulse for indicator failure check

horizontal	<b>2BA 980 607-201*</b>	1
vertical	<b>2BA 980 607-701*</b>	1

### Reversing light, 24 white LEDs

horizontal	<b>2ZR 980 605-201*</b>	1
vertical	<b>2ZR 980 605-701*</b>	1

Type approval 5850

## Combination rear light DuraLED Combi

PU

Taillight/stop light/indicator for horizontal and vertical surface mounting, clear lens, with 40 LEDs and potted 2,500 mm cable with pulse for indicator failure check, multi-voltage 8–28 V.

Taillight with 8 red LEDs  
Indicator with 16 amber LEDs  
Stop light with 24 red LEDs  
Of the 24 red stop light LEDs, 8 LEDs are used with reduced light output for the taillight.

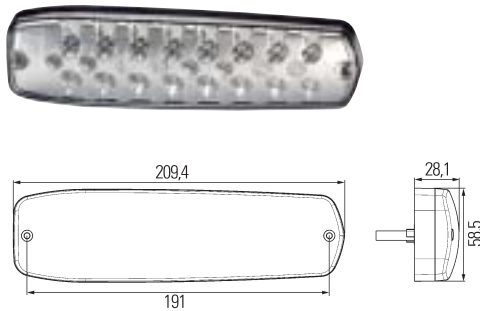
12 V/9.5 W, current consumption = approx. 0.8 A  
24 V/9.5 W, current consumption = approx. 0.4 A

**2SD 959 050-401\***

1

Type approval 10176

# Combination rearlights



## Combination rearlight Lean LED

PU

Taillight / stop light / indicator for horizontal or vertical surface-mounting, with 24 LEDs, clear lens, with pulse for indicator failure check, multi-voltage 9–32 V. Protection class IP 6K9K.

12 V/4.5 W, current consumption = 0.38 A,  
24 V/4.5 W, current consumption = 0.19 A

with 500 mm cable and open ends	<b>2SD 343 910-001*</b>	1
with 500 mm cable and open ends	<b>2SD 343 910-007*</b>	50
with 200 mm cable with 4-pin plug AMP 282 106-1	<b>2SD 343 910-017*</b>	50
with integrated 4-pin AMP plug 282 106-1	<b>2SD 343 910-027*</b>	50

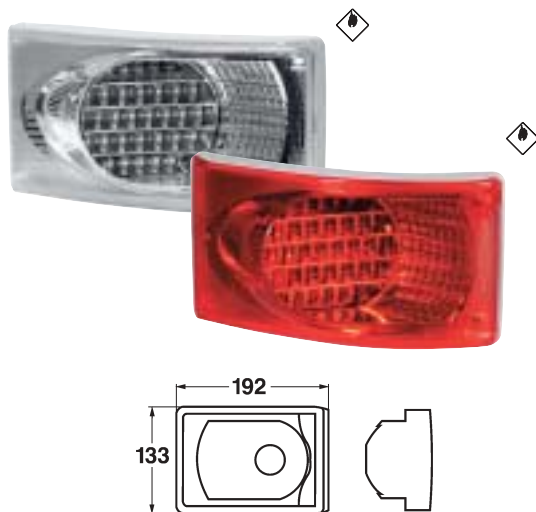
**Type approval** E 12393

**Without type approval and without pulse for indicator failure check**

with 500 mm cable and open ends	<b>2SD 343 910-037</b>	50
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**Possible uses**

12/24 V, LED flasher	<b>4JZ 177 846-007</b>	24
Receptacle housing	<b>8JA 003 526-001</b>	5



## LED tail-stoplight

PU

for rear flush-mounting, with 32 red LEDs, red or clear cover lens, grey housing and 500 mm cable.  
12 V/3 W, current consumption = approx. 0.25 A  
24 V/3 W, current consumption = approx. 0.13 A

12 V, red	<b>2SB 008 982-301*</b>	1
12 V, red	<b>2SB 008 982-307*</b>	36
12 V, clear	<b>2SB 008 982-367*</b>	36
24 V, red	<b>2SB 008 982-001*</b>	1
24 V, red	<b>2SB 008 982-007*</b>	36

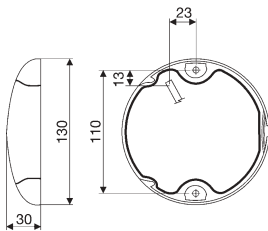
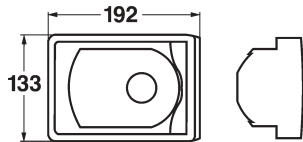
**Type approval** E 10880

= ADR / GGVS tested

\* Please see the note on pages 8 and 9 regarding LED indicators and LED indicator failure check.



# Combination rearlights



LED indicator		PU
for rear flush-mounting, with 32 amber LEDs, or clear cover lens, grey housing, with pulse for indicator failure check and 500 mm cable. 12 V/2 W, current consumption = approx. 0.17 A 24 V/2 W, current consumption = approx. 0.08 A		
12 V	<b>2BA 008 982-341*</b>	1
12 V	<b>2BA 008 982-347*</b>	36
24 V	<b>2BA 008 982-041*</b>	1
24 V	<b>2BA 008 982-047*</b>	36

Type approval 10880

Accessories		PU
self-adhesive seal, black		
	<b>9GD 159 740-007</b>	1

EuroLED combination rear light		PU
for horizontal surface-mounting, cast in one piece with the base plate, electrical connection through cable 2,500 mm long, multi-voltage 9–33 V.		

#### Tail-stoplight

Red lens, with 1 red LED  
12 V/2.5 W, current consumption = approx. 0.21 A  
24 V/2.5 W, current consumption = approx. 0.10 A

**2SB 959 821-601\*** 1

#### Rear fog light

Clear lens, with 1 red LED  
12 V/4 W, current consumption = approx. 0.33 A  
24 V/4 W, current consumption = approx. 0.17 A

**2NE 959 821-201\*** 1

#### Reversing light

White lens, with 1 white LED  
12 V/2.5 W, current consumption = approx. 0.21 A  
24 V/2.5 W, current consumption = approx. 0.10 A

**2ZR 959 820-601\*** 1

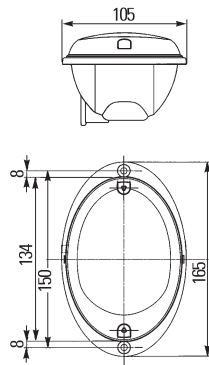
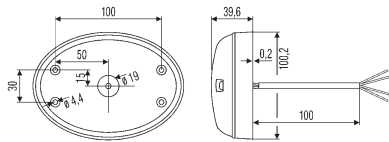
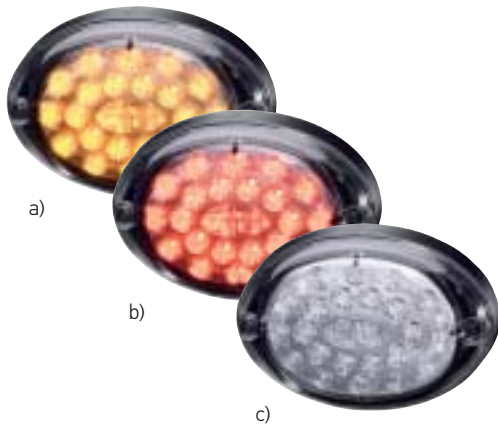
#### Indicator with pulse for indicator failure check

Amber lens, with 1 amber LED  
12 V/2.5 W, current consumption = approx. 0.21 A  
24 V/2.5 W, current consumption = approx. 0.10 A

**2BA 959 822-601\*** 1

Type approval 10208

# Combination rearlights



## "Oval" combination rear light

PU

for horizontal or vertical surface-mounting, can be inserted right or left, can be turned 180°, with clear lens, 24 LEDs, 2 bodywork fastening screws (diagonal arrangement) with 100 mm harness, with pulse for indicator failure check, multi-voltage 9–32 V, protection class IP 6K9K.

### a) Indicator

12 V/3 W, current consumption = approx. 0.25 A  
24 V/3.5 W, current consumption = approx. 0.15 A

2BA 343 390-071\*

1

### b) Tail-stoplight

Taillight:  
12 V/0.5 W, current consumption = approx. 0.04 A  
24 V/0.5 W, current consumption = approx. 0.02 A  
Stop light:  
12 V/2 W, current consumption = approx. 0.17 A  
24 V/2.5 W, current consumption = approx. 0.10 A

2SB 343 390-091\*

1

### c) Tail light/stop light/indicator

Taillight:  
12 V/0.5 W, current consumption = approx. 0.04 A  
24 V/1 W, current consumption = approx. 0.04 A  
Stop light:  
12 V/1 W, current consumption = approx. 0.08 A  
24 V/1.5 W, current consumption = approx. 0.06 A  
Indicator:  
12 V/1.5 W, current consumption = approx. 0.125 A  
24 V/2 W, current consumption = approx. 0.08 A

2SD 343 390-011\*

1

Type approval 11785

## "Oval" combination rear light

PU

Taillight/stop light/indicator for vertical flush mounting only, with pulse for indicator failure check and 4-pin Deutsch plug integrated in the housing.

2SD 343 390-401\*

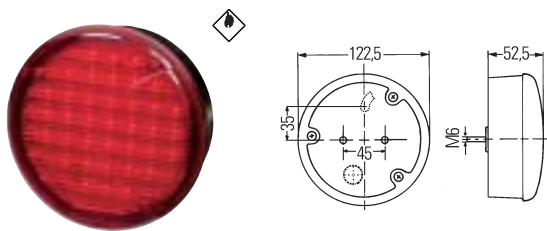
1

2SD 343 390-407\*

24

Type approval 11785

# Combination rearlights



## LED tail-stoplight

PU

for surface and flush mounting, with 37 red LEDs, red lens, 500 mm long cable, without plug, with passive thermal management.  
24 V/5.7 W, current consumption = approx. 0.24 A

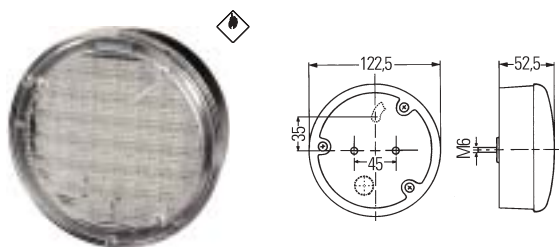
**2SB 964 169-301\***

1

**2SB 964 169-307\***

36

Type approval 814



## LED tail-stop-indicator light

PU

for surface and flush mounting, with 37 red/amber LEDs, clear lens, 500 mm long cable, without plug, without pulse for indicator failure check, with passive thermal management.  
12 V/10.3 W, current consumption = approx. 0.86 A  
24 V/10.3 W, current consumption = approx. 0.43 A

12 V, left

**2SD 964 169-411**

1

12 V, right

**2SD 964 169-401**

1

24 V, left

**2SD 964 169-331**

1

24 V, left

**2SD 964 169-337**

36

24 V, right

**2SD 964 169-421**

1

Type approval 9823

## Possible uses

12/24 V, LED flasher

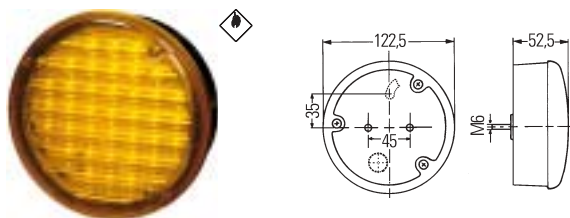
**4JZ 177 846-007**

24

Receptacle housing

**8JA 003 526-001**

5



## LED indicator

PU

for surface and flush mounting, with 37 amber LEDs, amber lens, 500 mm long cable, without plug, without pulse for indicator failure check, with passive thermal management.  
24 V/9 W, current consumption = approx. 0.38 A

**2BA 964 169-311**

1

**2BA 964 169-317**

36

Type approval 652

## Possible uses

12/24 V, LED flasher

**4JZ 177 846-007**

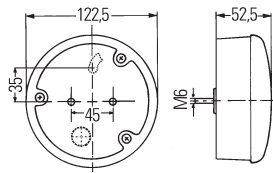
24

Receptacle housing

**8JA 003 526-001**

5

# Combination rearlights



## LED reverse light

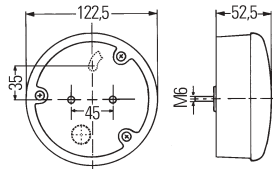
PU

for surface and flush mounting, with 37 white LEDs, clear lens, 500 mm long cable, without plug, with passive thermal management.

24 V/5 W, current consumption = approx. 0.21 A

left	<b>2ZR 964 169-351*</b>	1
right	<b>2ZR 964 169-361*</b>	1

Type approval 23254



## LED rear fog light

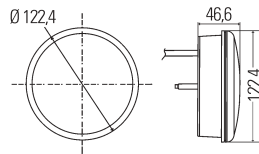
PU

for surface and flush mounting, with 37 red LEDs, red lens, 500 mm long cable, without plug, with passive thermal management.

24 V/4 W, current consumption = approx. 0.17 A

	<b>2NE 964 169-341*</b>	1
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Type approval 3810



## LED indicator

PU

for surface-mounting, redesign of series 964 169, 24 amber LEDs, multi-voltage 9–32 V, with 500 mm harness, protection class IP 6K9K

12 V/1.5 W, current consumption = approx. 0.125 A  
24 V/2 W, current consumption = approx. 0.08 A

### With pulse for indicator failure check and with active thermal management

Clear lens	<b>2BA 344 200-037*</b>	24
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### With pulse for indicator failure check and with passive thermal management

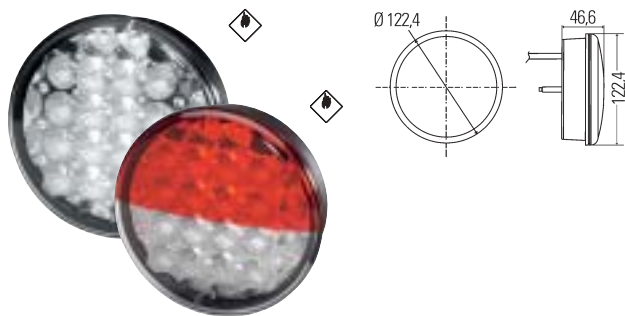
12 V, clear lens	<b>2BA 344 200-241</b>	1
12 V, clear lens	<b>2BA 344 200-247</b>	24
24 V, clear lens	<b>2BA 344 200-341</b>	1
24 V, clear lens	<b>2BA 344 200-347</b>	24

Type approval 12658

### Possible uses

12/24 V, LED flasher	<b>4JZ 177 846-007</b>	24
Receptacle housing	<b>8JA 003 526-001</b>	5

# Combination rearlights



## LED tail-stop-indicator light

PU

for surface-mounting, redesign of series 964 169, 24 LEDs, multi-voltage 9–32 V, with 500 mm harness, protection class IP 6K9K

### With pulse for indicator failure check and with active thermal management

12 V/5 W, current consumption = approx. 0.4 A  
24 V/5 W, current consumption = approx. 0.2 A

Clear lens	<b>2SD 344 200-001*</b>	1
Clear lens	<b>2SD 344 200-007*</b>	24
Red/clear lens	<b>2SD 344 200-071*</b>	1
Red/clear lens	<b>2SD 344 200-077*</b>	24

**Type approval** E4 12371 and E4 12658

### Without pulse for indicator failure check and with passive thermal management

12 V/5 W, current consumption = approx. 0.4 A  
24 V/5 W, current consumption = approx. 0.2 A

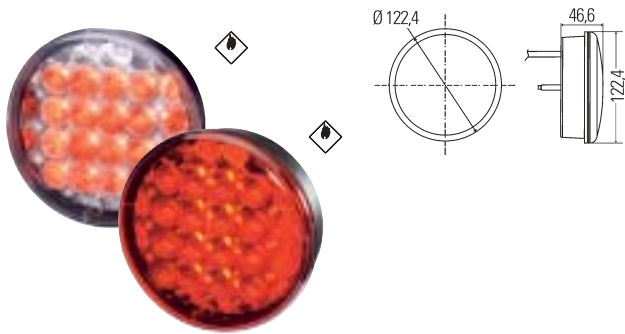
12 V, clear lens	<b>2SD 344 200-201</b>	1
12 V, clear lens	<b>2SD 344 200-207</b>	24
12 V, red/clear lens	<b>2SD 344 200-211</b>	1
12 V, red/clear lens	<b>2SD 344 200-217</b>	24
12 V, red/amber lens	<b>2SD 344 200-251</b>	1
12 V, red/amber lens	<b>2SD 344 200-257</b>	24
24 V, red/clear lens	<b>2SD 344 200-311</b>	1
24 V, red/clear lens	<b>2SD 344 200-317</b>	24

**Type approval** E4 12371 and E4 12658

### Possible uses

12/24 V, LED flasher	<b>4JZ 177 846-007</b>	24
Receptacle housing	<b>8JA 003 526-001</b>	5

# Combination rearlights



## LED tail-stoplight

PU

for surface-mounting, redesign of series 964 169, 24 red LEDs, multi-voltage 9–32 V, with 500 mm harness, protection class IP 6K9K

### With active thermal management

12 V/4 W, current consumption = approx. 0.33 A  
24 V/4 W, current consumption = approx. 0.16 A

Clear lens	<b>2SB 344 200-027*</b>	24
Red lens	<b>2SB 344 200-081*</b>	1
Red lens	<b>2SB 344 200-087*</b>	24

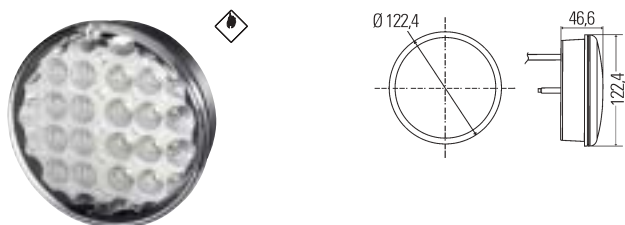
Type approval 12658

### With passive thermal management

12 V/6 W, current consumption = approx. 0.5 A  
24 V/6 W, current consumption = approx. 0.25 A

12 V, clear lens	<b>2SB 344 200-221</b>	1
12 V, clear lens	<b>2SB 344 200-227</b>	24
12 V, red lens	<b>2SB 344 200-231</b>	1
12 V, red lens	<b>2SB 344 200-237</b>	24
24 V, clear lens	<b>2SB 344 200-321</b>	1
24 V, clear lens	<b>2SB 344 200-327</b>	24
24 V, red lens	<b>2SB 344 200-331</b>	1
24 V, red lens	<b>2SB 344 200-337</b>	24

Type approval 12658



## LED reverse light

PU

for surface-mounting, redesign of series 964 169, 24 white LEDs, multi-voltage 9–32 V, with 500 mm harness, protection class IP 6K9K

12 V/2 W, current consumption = approx. 0.16 A  
24 V/2 W, current consumption = approx. 0.08 A

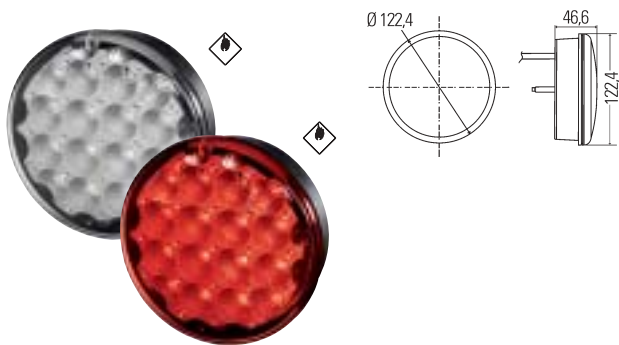
Clear lens	<b>ZZR 344 200-051*</b>	1
Clear lens	<b>ZZR 344 200-057*</b>	24

Type approval 14198

= ADR / GGVS tested

\* Please see the note on pages 8 and 9 regarding LED indicators and LED indicator failure check.

# Combination rearlights



## LED rear fog light

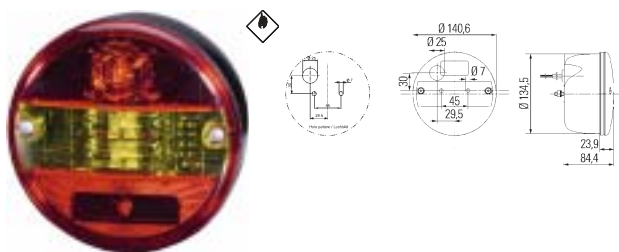
PU

for surface-mounting, redesign of series 964 169, 24 red LEDs, multi-voltage 9–32 V, with 500 mm harness, protection class IP 6K9K

12 V/2 W, current consumption = approx. 0.16 A  
24 V/2 W, current consumption = approx. 0.08 A

Clear lens	<b>2NE 344 200-061*</b>	1
Clear lens	<b>2NE 344 200-067*</b>	24
Red lens	<b>2NE 344 200-091*</b>	1
Red lens	<b>2NE 344 200-097*</b>	24

Type approval 14198



## LED tail-stop-indicator light

PU

for horizontal surface mounting, with red/amber/red lens and black housing, 2 LEDs for indicator, 1 LED for taillight, 1 LED for stop light, multi-voltage 9–32 V, with active thermal management, with pulse for indicator failure check, protection class: IP 6K9K.

12 V/9 W, current consumption = approx. 0.75 A  
24 V/9 W, current consumption = approx. 0.38 A

	<b>2SD 344 100-101*</b>	1
	<b>2SD 344 100-107*</b>	7

Type approval 13136



## LED tail-stop-indicator light

PU

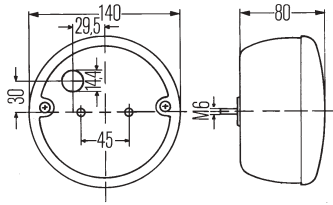
for horizontal flush mounting, slim design option as flush mount version, also insertable into bulb housing of variants 001 685-211, -231 and -301. With pulse for indicator failure check.

12 V/9 W, current consumption = approx. 0.75 A  
24 V/9 W, current consumption = approx. 0.38 A

	<b>2SD 344 100-001*</b>	1
	<b>2SD 344 100-007*</b>	7

Type approval 13136

# Combination rearlights



**LED tail-stop-indicator light** **PU**

for horizontal surface mounting, with red/amber/red lens and black housing, 42 LEDs and 500 mm cable, with passive thermal management, without pulse for indicator failure check, multi-voltage 9–32 V.

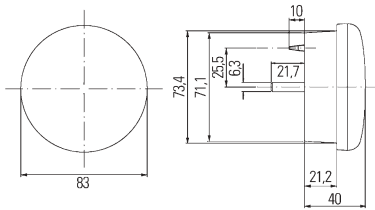
24 V/5 W, current consumption = 0.23 A

<b>2SD 001 685-341</b>	1
<b>2SD 001 685-347</b>	20

**Type approval** 0102

**Possible uses**

12/24 V, LED flasher	<b>4JZ 177 846-007</b>	24
Receptacle housing	<b>8JA 003 526-001</b>	5



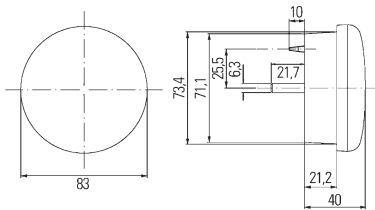
**LED tail-stop-indicator light** **PU**

for flush mounting, with clear cover lens, 24 V, 16 LEDs and 2.500 mm cable, with pulse for indicator failure check, protection class IP 6K6, IP 6K7.

24 V/5 W, current consumption = approx. 0.21 A

<b>2SD 959 010-401*</b>	1
<b>2SD 959 010-407*</b>	10

**Type approval** 1538



**LED tail-stoplight** **PU**

for flush mounting, with red lens, 24 V, 12 LEDs and 2.500 mm cable, protection class IP 6K6, IP 6K7.

24 V/4 W, current consumption = approx. 0.17 A

<b>2SB 959 010-301*</b>	1
<b>2SB 959 010-307*</b>	10

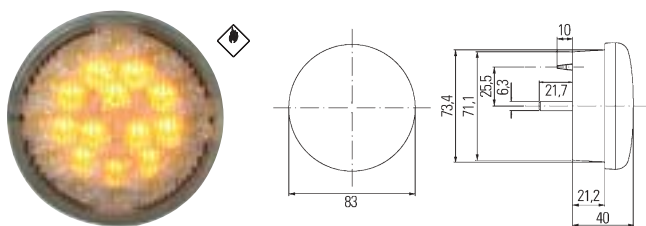
**Type approval** 12373

= ADR / GGVS tested

\* Please see the note on pages 8 and 9 regarding LED indicators and LED indicator failure check.



# Combination rearlights



## LED indicator

PU

for flush mounting, with amber lens, 24 V, 12 LEDs and 2.500 mm cable, with pulse for indicator failure check, protection class IP 6K6, IP 6K7.

24 V/3 W, current consumption = approx. 0.13 A

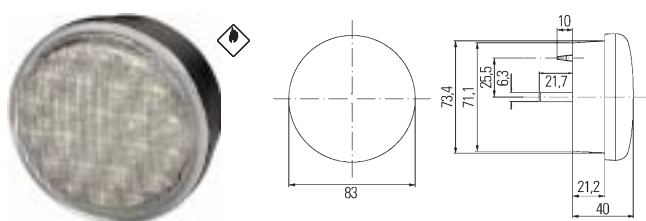
**2BA 959 011-301\***

1

**2BA 959 011-307\***

10

Type approval 12373



## LED reverse light

PU

for flush mounting, with clear lens, with 24 LEDs and 2.500 mm cable, multi-voltage 9–33 V, protection class IP 6K6, IP 6K7.

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

24 V/4 W, current consumption = approx. 0.17 A

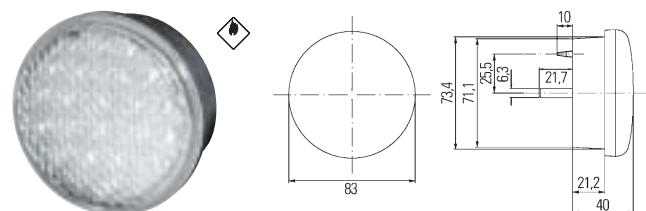
**2ZR 959 010-501\***

1

**2ZR 959 010-507\***

10

Type approval 11391



## LED rear fog light

PU

for flush mounting, with clear lens, with 24 LEDs and 2.500 mm cable, multi-voltage 9–33 V, protection class IP 6K6, IP 6K7.

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

24 V/3 W, current consumption = approx. 0.13 A

**2NE 959 011-501\***

1

**2NE 959 011-507\***

10

Type approval 11391



## Adapter ring 90 mm

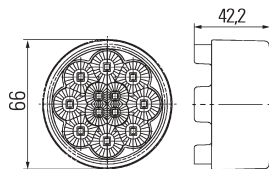
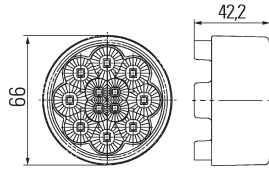
PU

The adapter ring is used to replace a 90 mm light with the 83 mm light. This means that vehicles that have come equipped with a HELLA 90 mm light can be easily converted to 83 mm lights.

**9GD 980 696-001**

1

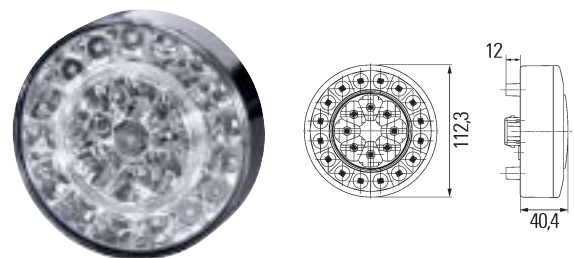
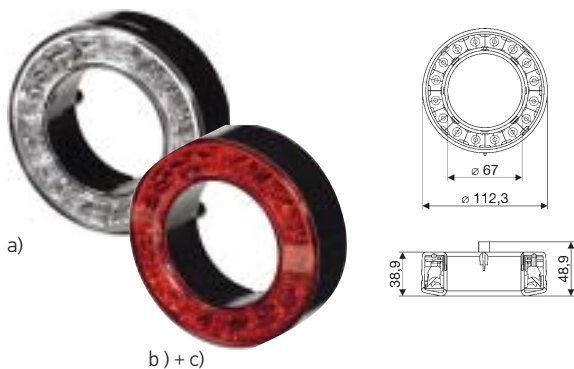
# Combination rearlights



LED indicator		PU
with 12 amber LEDs, clear lens, plastic housing, low weight, small installation depth, water-proof exterior plug connection. Fits lights series 009 362-...		
12 V/1.5 W, current consumption = approx. 0.125 A 24 V/1.5 W, current consumption = approx. 0.0625 A		
<b>With pulse for indicator failure check</b>		
12 V	<b>2BA 009 001-431*</b>	1
24 V	<b>2BA 009 001-531*</b>	1
<b>Without pulse for indicator failure check</b>		
12 V	<b>2BA 009 001-411</b>	1
24 V	<b>2BA 009 001-511</b>	1
<b>Type approval</b> 12390		
<b>Possible uses</b>		
12/24 V, LED flasher	<b>4JZ 177 846-007</b>	24
Receptacle housing	<b>8JA 003 526-001</b>	5

LED tail-stopligh		PU
with 12 red LEDs, clear lens.		
12 V/3 W, current consumption = approx. 0.25 A 24 V/3 W, current consumption = approx. 0.13 A		
12 V	<b>2SB 009 001-401*</b>	1
24 V	<b>2SB 009 001-501*</b>	1
<b>Type approval</b> 12390		

# Combination rearlights



LED tail-stoplight		PU
Ring module with 16 red LEDs, with 250 mm cable and 3-pin AMP plug. Fits lights series 009 001-...		
12 V/2.4 W, current consumption = approx. 0.2 A 24 V/4.8 W, current consumption = approx. 0.2 A		
a) 12 V, clear lens	<b>2SB 009 362-021*</b>	1
b) 12 V, red lens	<b>2SB 009 362-041*</b>	1
c) 24 V, red lens	<b>2SB 009 362-011*</b>	1
d) Reflector, red	<b>8RA 009 362-001</b>	1

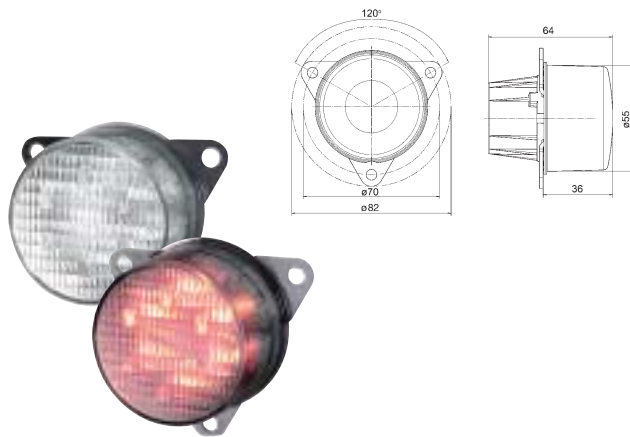
Type approval 7748 (a + b), 7747 (c) and 3302 (d)

LED tail-stop-indicator light		PU
for rear surface-mounting, with 24 red LEDs, clear lens, fits lights of series 009 362-..., 009 001-...		
For vehicles with SAE approval larger and smaller than 2,030 mm vehicle width.		
12 V/4.8 W, current consumption = approx. 0.4 A		
12 V	<b>2SD 009 362-201*</b>	1

Type approval SAE

Accessories		PU
1) Decorative trim, red	<b>8XU 009 362-101</b>	1
2) Decorative trim, clear	<b>8XU 009 362-111</b>	1
3) Design ring, silver for 009 362-...	<b>9HB 163 085-001</b>	1
4) Design ring, chrome-plated for 009 362-...	<b>9HB 163 085-012</b>	10
5) Adapter ring for taillight/stop lights and for installing the reflector	<b>9XD 161 119-017</b>	30

# Combination rearlights



## Modular LED light

PU

for flush installation, clear patterned lens, 500 mm long cable with open ends, protective class IP 6K9K.

### Taillight:

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

24 V/0.2 W, current consumption = approx. 0.01 A

### Stop light:

12 V/0.9 W, current consumption = approx. 0.08 A

24 V/0.9 W, current consumption = approx. 0.04 A

### Rear fog light:

12 V/1.8 W, current consumption = approx. 0.16 A

24 V/1.8 W, current consumption = approx. 0.08 A

### Reversing light:

12 V/2.1 W, current consumption = approx. 0.18 A

24 V/2.1 W, current consumption = approx. 0.09 A

## Tail light

12 V	<b>2SA 011 172-041*</b>	1
12 V	<b>2SA 011 172-047*</b>	20
24 V	<b>2SA 011 172-441*</b>	1
24 V	<b>2SA 011 172-447*</b>	20

## Stop light

12 V	<b>2DA 011 172-061*</b>	1
12 V	<b>2DA 011 172-067*</b>	20
24 V	<b>2DA 011 172-461*</b>	1
24 V	<b>2DA 011 172-467*</b>	20

## Rear fog light

12 V	<b>2NE 011 172-081*</b>	1
12 V	<b>2NE 011 172-087*</b>	20
24 V	<b>2NE 011 172-481*</b>	1
24 V	<b>2NE 011 172-487*</b>	20

## Reversing light

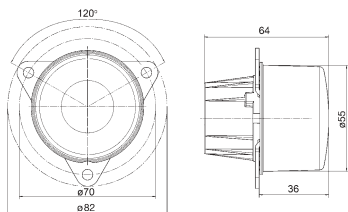
12 V	<b>2ZR 011 172-101*</b>	1
12 V	<b>2ZR 011 172-107*</b>	20
24 V	<b>2ZR 011 172-501*</b>	1
24 V	<b>2ZR 011 172-507*</b>	20

Type approval ECE, CCC

 = ADR / GGVS tested

\* Please see the note on pages 8 and 9 regarding LED indicators and LED indicator failure check.

# Combination rearlights



## Modular LED indicator

PU

for rear flush mounting, with 3 amber LEDs, clear patterned lens, 500 mm long cable with open ends, protective class IP 6K9K.

12 V/0.9 W, current consumption = approx. 0.08 A  
24 V/0.9 W, current consumption = approx. 0.04 A

### Indicator, with pulse for indicator failure check

12 V	<b>2BA 011 172-031*</b>	1
12 V	<b>2BA 011 172-037*</b>	20
24 V	<b>2BA 011 172-431*</b>	1
24 V	<b>2BA 011 172-437*</b>	20

### Type approval ECE, CCC

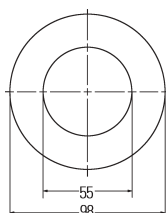
### Indicator, without pulse for indicator failure check

12 V	<b>2BA 011 172-021</b>	1
12 V	<b>2BA 011 172-027</b>	20
24 V	<b>2BA 011 172-421</b>	1
24 V	<b>2BA 011 172-427</b>	20

### Type approval ECE, CCC

### Possible uses

12/24 V, LED flasher	<b>4JZ 177 846-007</b>	24
Receptacle housing	<b>8JA 003 526-001</b>	5



## LED ring modules fit 2.. 011 172-...

PU

Chrome-plated trim	<b>8XU 008 405-031</b>	1
12 V, LED tail-stoplight	<b>2SB 008 405-101*</b>	1
24 V, LED tail-stoplight	<b>2SB 008 405-091*</b>	1
12 V, LED tail light	<b>2SA 008 405-021*</b>	1
12 V, LED tail light	<b>2SA 008 405-027*</b>	60
24 V, LED tail light	<b>2SA 008 405-011*</b>	1
24 V, LED tail light	<b>2SA 008 405-017*</b>	60
Reflector	<b>8RA 008 405-001</b>	1

Type approval ECE (E) 1197, (E) 1696, (E) 1892 and (E) 2295

# Combination rearlights



## LED indicator for lifting loading platforms

PU

for rear surface-mounting, with 12 amber LEDs, clear lens, zinc die cast housing, 2 mounting screws M6, with potted cables. Protection class IP 5K9K.

Without pulse for indicator failure check. For lifting loading platforms, an indicator failure check is not mandatory.

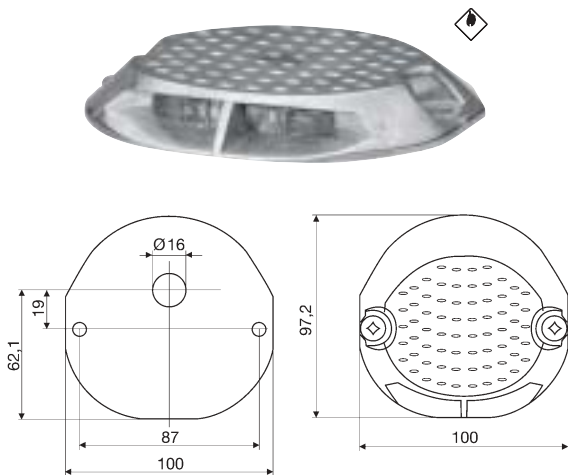
12 V/2.8 W, current consumption = approx. 0.23 A  
24 V/2.8 W, current consumption = approx. 0.12 A

12 V	<b>2BA 008 260-017</b>	20
24 V	<b>2BA 008 260-001</b>	1
24 V	<b>2BA 008 260-007</b>	20

Type approval 989

### Possible uses

12/24 V, LED flasher	<b>4JZ 177 846-007</b>	24
Receptacle housing	<b>8JA 003 526-001</b>	5



## LED indicator for lifting loading platforms

PU

for rear surface-mounting, with 2 amber LEDs, clear lens, zinc die cast housing and 190 mm long potted cable.

Without pulse for indicator failure check. For lifting loading platforms, an indicator failure check is not mandatory.

12 V/4 W, current consumption = approx. 0.33 A  
24 V/8 W, current consumption = approx. 0.33 A

12 V	<b>2BA 009 204-041</b>	1
24 V	<b>2BA 009 204-051</b>	1
24 V	<b>2BA 009 204-057</b>	20

Type approval 6551

### Possible uses

12/24 V, LED flasher	<b>4JZ 177 846-007</b>	24
Receptacle housing	<b>8JA 003 526-001</b>	5

# Combination rearlights



## LED clearance light

PU

with integrated side marker light in long rubber arm, for side upright installation on vertical surfaces, clear lens, on side with interior amber cover lens, 2 white LEDs for position light, 1 red LED for clearance light and 2 amber LEDs for side marker light.

24 V/1.5 W, current consumption = approx. 0.05 A

### With 500 mm cable and quick link coupling

right	2XS 340 418-121*	1
left	2XS 340 418-131*	1

### With 500 mm cable and 2-pin EasyConn receptacle housing

right	2XS 340 418-021*	1
left	2XS 340 418-031*	1

### With 3,000 mm cable and flat receptacles

right	2XS 340 418-081*	1
left	2XS 340 418-091*	1

Type approval 10211 and 11392



## LED clearance light

PU

with integrated side marker light in long rubber arm, for side upright installation on horizontal surfaces, clear lens, on side with interior amber cover lens, 2 white LEDs for position light, 1 red LED for clearance light and 2 amber LEDs for side marker light. 24 V/1.5 W, current consumption = approx. 0.05 A

### With 500 mm cable and quick link coupling

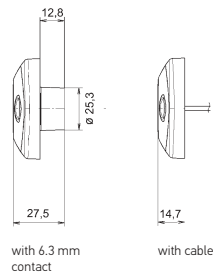
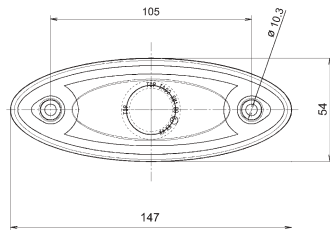
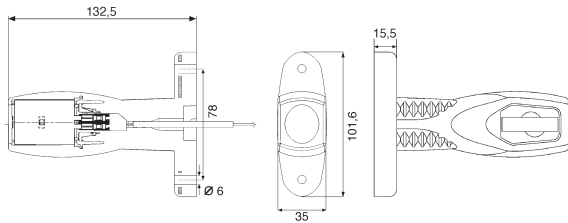
right	2XS 340 448-021*	1
left	2XS 340 448-031*	1

### With 500 mm cable and 2-pin EasyConn receptacle housing

right	2XS 340 448-001*	1
left	2XS 340 448-011*	1

Type approval 10211 and 11392

# Combination rearlights



## LED clearance light

PU

with integrated side marker light in short rubber arm, usable on left and right side, for side surface-mounting on vertical surfaces, clear lens, on side with interior amber cover lens, 2 white LEDs for position light, 1 red LED for clearance light and 2 amber LEDs for side marker light.

24 V/1.5 W, current consumption = approx. 0.05 A

### With 500 mm cable and quick link coupling

right/left	<b>2XS 340 447-001*</b>	1
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### With 500 mm cable and 2-pin EasyConn receptacle housing

right/left	<b>2XS 340 447-021*</b>	1
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Type approval 10211 and 11392

## LED clearance light

PU

for horizontal and vertical surface mounting, red lens, red housing, mounting by screw attachment with 2 screws diameter 6 mm.

12 V/0.5 W, current consumption = approx. 0.04 A  
24 V/1.0 W, current consumption = approx. 0.04 A

### with 6.3 mm flat plug

12 V, only horizontal	<b>2TM 343 690-157</b>	96
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12 V, only vertical	<b>2TM 343 690-167</b>	96
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### with 500 mm cable

12 V, only horizontal	<b>2TM 343 690-351</b>	1
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12 V, only horizontal	<b>2TM 343 690-357</b>	96
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12 V, only vertical	<b>2TM 343 690-367</b>	96
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Type approval 7597

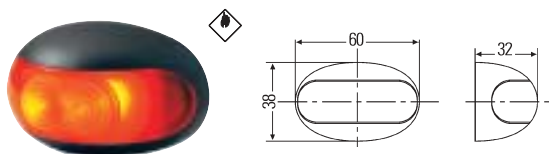


= ADR / GGVS tested

\* Please see the note on pages 8 and 9 regarding LED indicators and LED indicator failure check.



# Combination rearlights



## LED clearance light

PU

for horizontal surface-mounting, with 2 red LEDs, clear lens, black housing, multi-voltage 8–28 V.

12 V/0.5 W, current consumption = approx. 0.04 A  
24 V/0.5 W, current consumption = approx. 0.02 A

with 500 mm cable	<b>2XA 959 560-401*</b>	2
with 5,000 mm cable	<b>2XA 959 560-411*</b>	2

Type approval 7574



## LED signal light

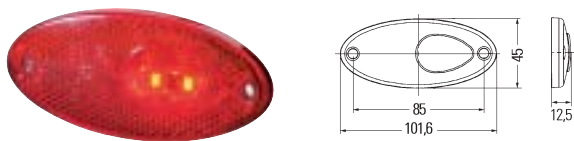
PU

for horizontal and vertical flush-mounting, can be used as taillight or clearance light, clear lens with 2 red LEDs, with seal, multi-voltage 8–28 V

12 V/0.5 W, current consumption = approx. 0.04 A  
24 V/0.5 W, current consumption = approx. 0.02 A

with 500 mm cable and caps	<b>2XA 959 790-401*</b>	2
with 500 mm cable and caps	<b>2XA 959 790-407*</b>	30
with 5,000 mm cable and caps	<b>2XA 959 790-411*</b>	2

Type approval 7597



## LED Taillight with reflector

PU

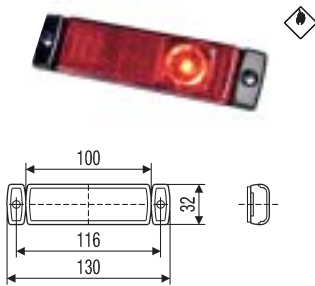
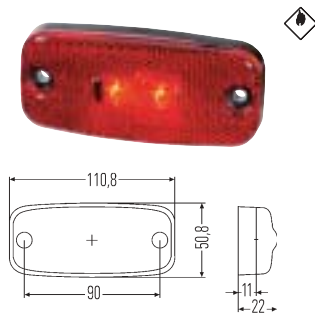
for horizontal surface-mounting, with 2 red LEDs, red lens, with seal and 5,000 mm cable.

12 V/0.5 W, current consumption = approx. 0.04 A  
24 V/1.0 W, current consumption = approx. 0.04 A

12 V	<b>2TM 964 295-101*</b>	1
12 V	<b>2TM 964 295-107*</b>	20
24 V	<b>2TM 964 295-091*</b>	1
24 V	<b>2TM 964 295-097*</b>	20

Type approval 0302

# Combination rearlights



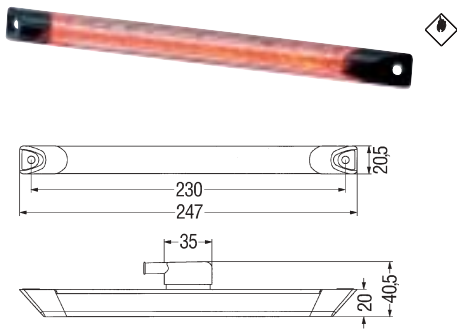
LED Taillight with reflector		PU
for horizontal surface-mounting, with 2 red LEDs, red lens, black base plate, without bracket, with 5,000 mm cable. 12 V/0.5 W, current consumption = approx. 0.04 A 24 V/1.0 W, current consumption = approx. 0.04 A		
12 V	<b>2TM 963 639-307</b>	20
24 V	<b>2TM 963 639-317</b>	20

Type approval 9808

LED Taillight with reflector		PU
can also be used as a clearance light with reflector, for horizontal or vertical surface-mounting, with 1 red LED, red light, black housing and 2 holes for mounting screws B4,2. 12 V/0.6 W, current consumption = approx. 0.05 A 24 V/1.2 W, current consumption = approx. 0.05 A		
For horizontal surface-mounting, the LED field must point to the outer vehicle edge. For vertical surface-mounting, the LED field may point upwards or downwards.		
12 V, with 500 mm cable	<b>2TM 008 645-931*</b>	1
12 V, with 500 mm cable	<b>2TM 008 645-937*</b>	50
12 V, with 5,000 mm cable	<b>2TM 008 645-921*</b>	1
24 V, with 500 mm cable	<b>2TM 008 645-951*</b>	1
24 V, with 500 mm cable	<b>2TM 008 645-957*</b>	50
24 V, with 5,000 mm cable	<b>2TM 008 645-941*</b>	1
24 V, with 5,000 mm cable	<b>2TM 008 645-947*</b>	50
24 V, with 5,000 mm cable and 2-pin EasyConn plug housing	<b>2TM 008 645-351*</b>	1
24 V, with 300 mm cable, with quick link coupling including clamping piece for contacting a 2-wire flat cable	<b>2TM 008 645-651*</b>	1
24 V, with 5,000 mm cable, with quick link coupling including clamping piece for contacting a 2-wire flat cable	<b>2TM 008 645-661*</b>	1

Type approval 1395 and 1398

# Combination rearlights



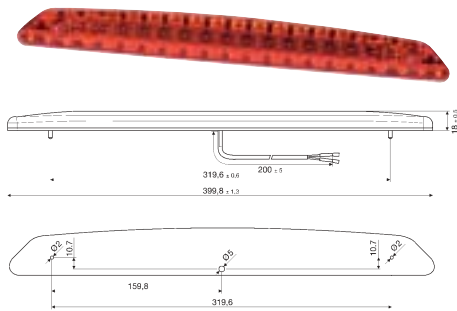
## LED taillight/clearance light

PU

for horizontal or vertical surface-mounting on trailers and articulated lorries, with 2 red LEDs, clear lens, with grommet, base plate and caps of grey plastic, with prism rod as a light aperture body. 2 holes, Ø 5.4 mm, for fastening screws.  
12 V/0.7 W, current consumption = approx. 0.06 A  
24 V/1.4 W, current consumption = approx. 0.06 A

12 V	<b>2XS 008 078-011*</b>	1
24 V	<b>2XS 008 078-001*</b>	1
24 V	<b>2XS 008 078-007*</b>	60

Type approval 0515



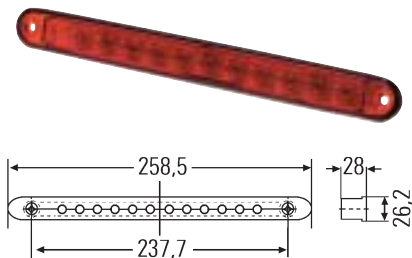
## LED auxiliary stop light

PU

for horizontal surface-mounting, red lens, with 12 red LEDs, in brilliant finish, with 3D effect thanks to each LED being embedded in a separate reflector, with 200 mm cable.  
12 V/1.8 W, current consumption = approx. 0.15 A  
24 V/1.8 W, current consumption = approx. 0.08 A

12 V	<b>2DA 343 800-001*</b>	1
12 V	<b>2DA 343 800-007*</b>	48
12 V, with rubber base	<b>2DA 343 800-057*</b>	48
24 V, screw version	<b>2DA 343 800-047*</b>	48

Type approval 7715



## LED auxiliary stop light<sup>1)</sup>

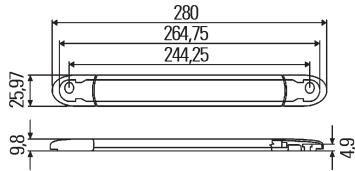
PU

for horizontal flush-mounting, with 12 red LEDs, red or clear lens and 2,500 mm cable with open cable ends.  
12 V/2 W, current consumption = approx. 0.17 A  
24 V/2 W, current consumption = approx. 0.08 A

12 V, red lens	<b>2DA 959 071-537*</b>	10
12 V, clear lens	<b>2DA 959 071-037*</b>	10
24 V, red lens	<b>2DA 959 071-737*</b>	10
24 V, clear lens	<b>2DA 959 071-237*</b>	10

Type approval 7547

# Combination rearlights



## LED auxiliary stop light

PU

for horizontal or vertical surface-mounting, with 10 red LEDs and 3,000 mm cable, 2 holes, Ø 3 mm, for mounting screws.

### Lens and caps red, for mounting screws

12 V	2DA 343 106-001*	1
12 V	2DA 343 106-007*	30
24 V	2DA 343 106-011*	1
24 V	2DA 343 106-017*	30

### Lens and caps smoke-coloured, for mounting screws

12 V	2DA 343 106-021*	1
12 V	2DA 343 106-027*	30
24 V	2DA 343 106-031*	1
24 V	2DA 343 106-037*	30

### Lens and caps red, for mounting screws self-adhesive, for mounting openings

12 V	2DA 343 106-201*	1
12 V	2DA 343 106-207*	30
24 V	2DA 343 106-211*	1
24 V	2DA 343 106-217*	30

### Lens and caps smoke-coloured, for mounting screws self-adhesive.

12 V	2DA 343 106-221*	1
12 V	2DA 343 106-227*	30
24 V	2DA 343 106-231*	1
24 V	2DA 343 106-237*	30

### Lens blue and caps grey, for mounting screws With ECE type approval

12 V	2DA 343 106-307*	1
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### Lens red, without cover caps and socket self-adhesive.

12 V	2DA 343 106-407*	1
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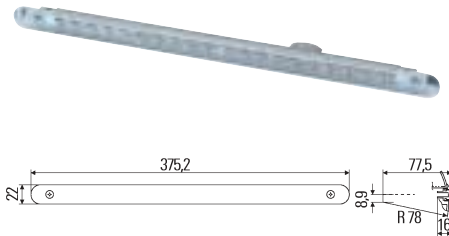
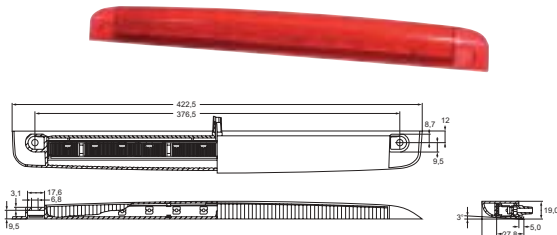
Type approval 7696

= ADR / GGVS tested

\* Please see the note on pages 8 and 9 regarding LED indicators and LED indicator failure check.

<sup>1)</sup> The light can be surface-mounted behind the rear window. For rear window angles to the horizontal between 75° and 90°. A grade of transmission between 80% and 90% is permissible for the rear window.

# Combination rearlights



## LED auxiliary stop light

PU

for horizontal flush mounting in the spoiler, with 12 LEDs, 3,500 mm cable with open ends and cover caps, PMMA lens approved according to SAE and ECE.

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

Red lens	<b>2DA 959 580-151</b>	1
Clear lens	<b>2DA 959 580-551</b>	1

Type approval 7587

## LED auxiliary stop light

PU

for flush mounting, for instance, in a rear spoiler, with 20 red LEDs, PMMA clear lens and included mounting screws, attachment from the outside.

Permissible tolerance for the light:  
+5° and -5° parallel to road.

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

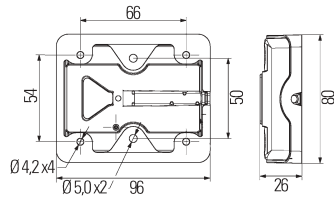
12 V	<b>2DA 007 858-037*</b>	32
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Type approval 1224

## Accessories

Cable with grommet	<b>8KA 146 751-007</b>	56
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# Combination rearlights



## Tail light, brake light, indicator with reflector

PU

for 12 and 24 V, for horizontal or vertical surface-mounting, with 8 LEDs, clear lens, 500 mm cable with stripped ends and firmly glued-on red reflector. Detachable black retaining frame with 4 holes  $\varnothing 4.2$  mm and 2 holes  $\varnothing 5.0$  mm for mounting screws. Without a pulse for indicator failure check, protection class IP 6K9K, IP 6K7.

12 V/5 W, current consumption = approx. 0.42 A  
24 V/5 W, current consumption = approx. 0.21 A

12 / 24 V	<b>2VA 980 720-001</b>	1
12 / 24 V	<b>2VA 980 720-007</b>	20

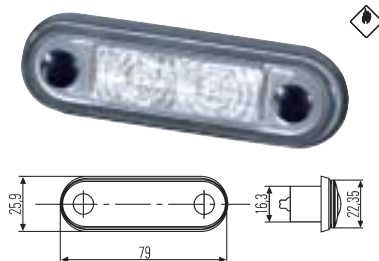
**Can be surface-mounted and can be turned by 180°, with licence plate lighting for plates 370 mm x 120 mm and 520 mm x 120 mm. For illuminating a licence plate from right and left, the lamps 2VB 980 720-401 and -501 must be used.**

12 / 24 V	<b>2VB 980 720-401</b>	1
12 / 24 V	<b>2VB 980 720-407</b>	20
12 / 24 V	<b>2VB 980 720-501</b>	1
12 / 24 V	<b>2VB 980 720-507</b>	20

Type approval 5860

### Possible uses

12/24 V, LED flasher	<b>4JZ 177 846-007</b>	24
Receptacle housing	<b>8JA 003 526-001</b>	5



## LED licence plate light

PU

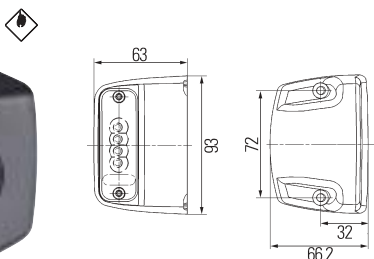
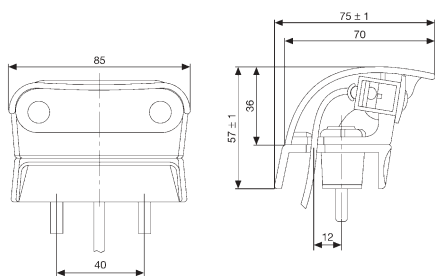
for surface-mounting above the licence plate, 3 licence plate lights required for illuminating a licence plate 520 x 120 mm, with 2 white LEDs, 2,500 mm cable and multi-voltage 10–33 V.

12 V/0.5 W, current consumption = approx. 0.04 A  
24 V/0.5 W, current consumption = approx. 0.02 A

<b>2KA 959 640-102*</b>	3
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Type approval 4068

# Combination rearlights



## LED licence plate light

PU

for surface-mounting left and right next to the licence plate (520 x 120 mm), with 2 white LEDs, clear lens, housing and base made of black plastic, bulb holder with vibration dampening, with 2 caulked screws, multi-voltage 10–33 V.

12 V/0.5 W, current consumption = approx. 0.04 A  
24 V/0.5 W, current consumption = approx. 0.02 A

with 500 mm cable and 2-pin EasyConn receptacle housing	<b>2KA 959 640-661*</b>	1
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with 2,500 mm cable	<b>2KA 959 640-607*</b>	8
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Type approval 4068

## LED licence plate light

PU

for surface-mounting on the right or left next to the licence plate, only 1 lamp needed for illumination. Clear lens, with 4 LEDs, black plastic housing.

12 V/1 W, current consumption = approx. 0.08 A  
24 V/1 W, current consumption = approx. 0.04 A

### Licence plate 520 x 120 mm

12 V, with flat plug 6.3 x 0.8	<b>2KA 010 278-321*</b>	1
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12 V, with flat plug 6.3 x 0.8	<b>2KA 010 278-327*</b>	84
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24 V, with flat plug 6.3 x 0.8	<b>2KA 010 278-021*</b>	1
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24 V, with flat plug 6.3 x 0.8	<b>2KA 010 278-027*</b>	84
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24 V, with 500 mm cable and 2-pin EasyConn plug	<b>2KA 010 278-051*</b>	1
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24 V, With 500 mm cable and quick link coupling	<b>2KA 010 278-041*</b>	1
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24 V, with 2,000 mm cable and flat plug 6.3 x 0.8	<b>2KA 010 278-031*</b>	1
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### Licence plate 340 x 240 mm or 280 x 200 mm

12 V, with flat plug 6.3 x 0.8	<b>2KA 010 278-421*</b>	1
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24 V, with flat plug 6.3 x 0.8	<b>2KA 010 278-121*</b>	1
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Type approval 2609

# Combination rearlights



## LED licence plate light

PU

for flush-mounting above the licence plate  
2 lights required for illuminating the licence plate.  
Protection class: IP 6K9K.

12 V/1 W, current consumption = approx. 0.08 A  
24 V/1 W, current consumption = approx. 0.04 A

### Licence plate 520 x 120 mm, with flat plug 6.3 x 0.8

12 V	2KA 010 278-311*	1
12 V	2KA 010 278-317*	196
24 V	2KA 010 278-011*	1
24 V	2KA 010 278-017*	196

### Licence plate 520 x 120 mm Lamp contacts firmly bonded, with 1000 mm cable with open cable ends

12 V	2KA 010 278-617*	30
24 V	2KA 010 278-607*	30

### Licence plate 340 x 240 mm or 280 x 200 mm, with flat plug 6.3 x 0.8

1 light required for illuminating the licence plate.

12 V	2KA 010 278-411*	1
24 V	2KA 010 278-111*	1

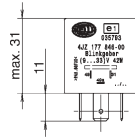
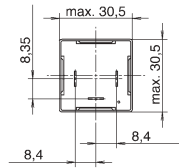
Type approval 2609

= ADR / GGVS tested

\* Please see the note on pages 8 and 9 regarding LED indicators and LED indicator failure check.



# Combination rearlights



## LED flasher unit

PU

For LED indicators 12 V and 24 V, black plastic housing with flat plugs, voltage 9 – 33 V, max. load 42 W

Universal connection of LED indicator lights that do not contain an electronic pulse:

- 2BA 008 260-...
- 2BA 009 001-411/-511
- 2BA 009 204-...
- 2BA 011 172-021/-027/-421/-427
- 2BA 344 200-241/-247/-341/-347
- 2BA 964 169-311
- 2SD 001 685-347
- 2SD 009 362-201 (SAE)
- 2SD 964 169-331/-337/-401/-411/-421
- 2SK 343 910-037
- 2VA 980 720-001/-007
- 2VB 980 720-401/-407/-501/-507

Protection class IP 54 for upright surface mounting/downward clamping; IP 53 for hanging or sideways surface mounting

**4JZ 177 846-007**

24

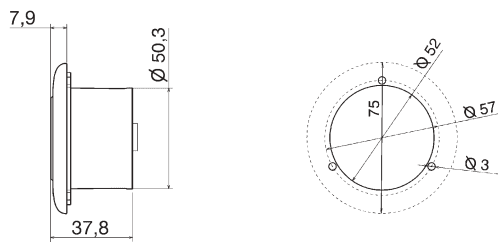
**Type approval**  035793

Mounting of flasher unit on receptacle housing

**8JA 003 526-001**

5

# Ceiling lights



## Standard LED spotlight, fixed

Number of Power LEDs	1 white
Illumination angle	40° or 20°
Illuminance in 1 m	156 lux (20°), 65 lux (40°)
IP protection class	3 x
Power consumption	2 W (0.16 A at 12 V)
Lens	glass-clear
Installation	choice between screw or spring-assisted mounting
Voltage	Multi-voltage 10-31 V
Spot power consumption	12 V/2.5 W, = approx. 0.20 A

## Flush-mounting, fixed, wide illumination (40°)

Finisher colour\*:

white	2JA 344 040-701
black	2JA 344 040-711
silver	2JA 344 040-721

## Flush-mounting, fixed, spot-type illumination (20°)

Finisher colour\*:

white	2JA 344 040-741
black	2JA 344 040-751
silver	2JA 344 040-761

## Accessories

### Round finisher with angled edges

black	9AB 344 057-001
white	9AB 344 057-011
silver	9AB 344 057-021
chrome	9AB 344 057-061
gold	9AB 344 057-071

### Round finisher with rounded edges

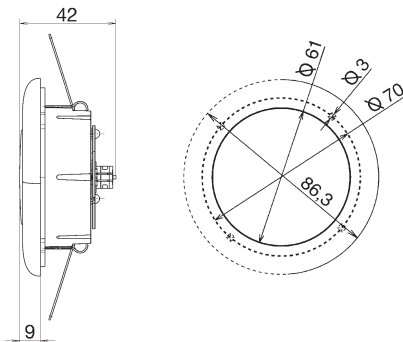
chrome	9AB 344 045-061
gold	9AB 344 045-071
Stainless metal frame polished	9AB 959 505-501
Metal frame stainless and satined	9AB 959 505-561

### Square finisher with angled edges

black	9AB 344 058-001
white	9AB 344 058-011
silver	9AB 344 058-021
chrome	9AB 344 058-061
gold	9AB 344 058-071

\* further finisher colours (e.g. real-wood look) or ambient CELIS®  
light guide ring (e.g. blue, red) on request

# Ceiling lights



## Standard LED spotlight, adjustable

Number of Power LEDs	1 white
Illumination angle: 40° or 20°	40° or 20°
Illuminance in 1 m	156 lux (20°), 65 lux (40°), 3 x
IP protection class	3 x
Power consumption	2 W (0.16 A at 12 V)
Lens	glass-clear
Installation	choice between screw or spring-assisted mounting
Voltage	Multi-voltage 10-31 V
Spot power consumption	12 V/2.5 W, = approx. 0.20 A

## Flush-mounting, adjustable, wide illumination (40°)

Finisher colour*:	
white	<b>2JA 343 790-301</b>
black	<b>2JA 343 790-311</b>
silver	<b>2JA 343 790-341</b>

## Flush-mounting, adjustable, spot-type illumination (20°)

Finisher colour*:	
white	<b>2JA 343 790-401</b>
black	<b>2JA 343 790-411</b>
silver	<b>2JA 343 790-441</b>

additional with white, ambient Celis® light guide ring, current consumption Celis® light guide ring at 12 V / 0.5 W = approx. 0.04 A

## Flush-mounting, adjustable, wide illumination (40°)

Finisher colour*:	
white	<b>2JA 343 790-701</b>
black	<b>2JA 343 790-711</b>
silver	<b>2JA 343 790-741</b>

## Flush-mounting, adjustable, spot-type illumination (20°)

Finisher colour*:	
white	<b>2JA 343 790-601</b>
black	<b>2JA 343 790-611</b>
silver	<b>2JA 343 790-641</b>

\* further finisher colours (e.g. real-wood look) or ambient CELIS® light guide ring (e.g. blue, red) on request

## Accessories

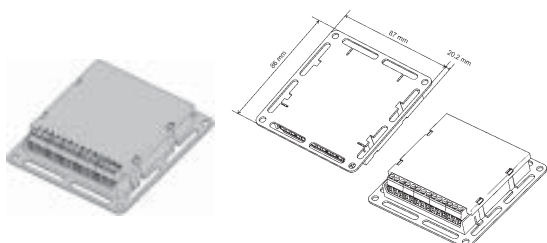
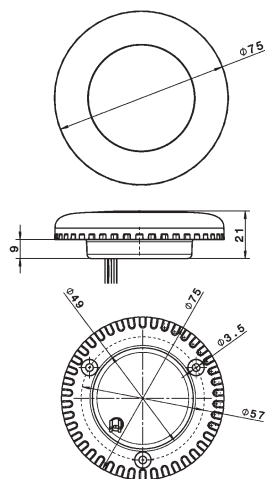
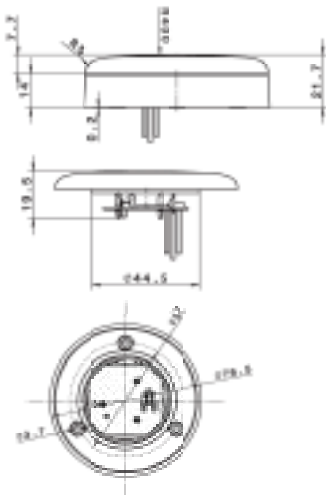
Finisher chrome	<b>9AB 343 792-061</b>
Finisher gold	<b>9AB 343 792-071</b>

# Ceiling lights



Standard LED spot

High-power LED spot



## LED spots round, flat flush-mounting/surface-mounting

Illumination angle	35°
Illuminance in 1 m	45 lux (Standard), 105 lux (high power)
IP protection class:	20
Power consumption	Standard 1.5 W (0.12 A at 12 V) High power 2.6 W (0.21 A at 12 V)
Dimensions	Flush-mounting variant only 14 mm Surface-mounting variant only 22 mm
Voltage	5 VDC (connection possible only with control unit)

### Individual packaging

consisting of 1 Spot LED, 1 colour light frame, 1 coloured installation frame, 1 seal ring for flush-mounting

Flush-mounting, fixed Finisher colour*:	Standard LED spot 1.5 W	High-Power LED spot 2.6 W (double light power with cooling element)
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### without Celis®

white	2JA 344 199-001	2JA 344 599-001
black	2JA 344 199-011	2JA 344 599-011
silver	2JA 344 199-021	2JA 344 599-021

### with Celis® warm-white ambient

white	2JA 344 199-101	2JA 344 599-101
black	2JA 344 199-111	2JA 344 599-111
silver	2JA 344 199-121	2JA 344 599-121

### with Celis® blue ambient

white	2JA 344 199-201	2JA 344 599-201
black	2JA 344 199-211	2JA 344 599-211
silver	2JA 344 199-221	2JA 344 599-221

### with Celis® red ambient

white	2JA 344 199-301	2JA 344 599-301
black	2JA 344 199-311	2JA 344 599-311
silver	2JA 344 199-321	2JA 344 599-321

### with Celis® orange ambient

white	2JA 344 199-351	2JA 344 599-351
black	2JA 344 199-361	2JA 344 599-361
silver	2JA 344 199-371	2JA 344 599-371

### Accessories

Installation frame, the overall height with frame is 22 mm

chrome	9AB 344 192-061
gold	9AB 344 192-071

A control unit is required for the use of more than one spot

Number of circuits:	max. 8 SpotLEDs in 1 or 2 dimming circuits
IP protection class:	30
Power output:	1–16 W
Voltage:	Multi-voltage (9 – 32 VDC)

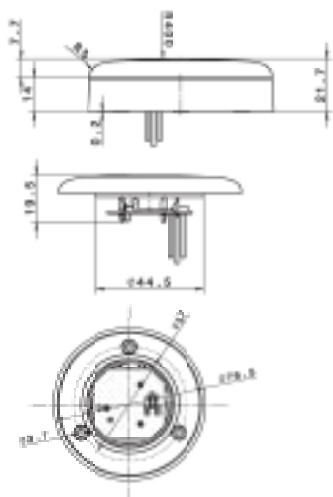
for 4 Standard or High-Power spots please use ...	5XA 344 150-001
for 8 Standard or 5 high power spots please use ...	5XA 344 150-011

\* further finisher colours (e.g. real-wood look) available on request

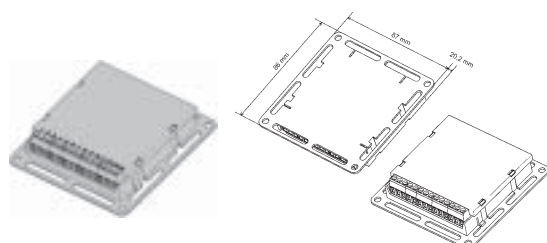
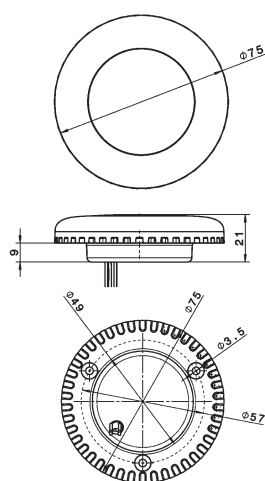
# Ceiling lights



Standard LED spot



High-power LED spot



## LED spots round, flat flush-mounting/surface-mounting

Illumination angle	35°
Illuminance in 1 m	45 lux (Standard), 105 lux (high power)
IP protection class	20
Power consumption	Standard 1.5 W (0.12 A at 12 V) High power 2.6 W (0.21 A at 12 V)
Dimensions	Flush-mounting variant only 14 mm Surface-mounting variant only 22 mm
Voltage	5 VDC (connection possible only with control unit)

### Set packaging

comprising 4 LED spots, 4 coloured light frames, 4 coloured installation frames, 4 seal rings for installation, 1 central control unit (5 XA 344 150-001)

Surface-mounting, fixed Finisher colour*:	Standard LED spot 1.5 W	High-Power LED spot 2.6 W (double light power with cooling element)
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### without Celis®

white	2JA 344 190-001	2JA 344 590-001
black	2JA 344 190-011	2JA 344 590-011
silver	2JA 344 190-021	2JA 344 590-021

### with Celis® warm-white ambient

white	2JA 344 190-101	2JA 344 590-101
black	2JA 344 190-111	2JA 344 590-111
silver	2JA 344 190-121	2JA 344 590-121

### with Celis® blue ambient

white	2JA 344 190-201	
black	2JA 344 190-211	
silver	2JA 344 190-221	

### with Celis® red ambient

white	2JA 344 190-301	
black	2JA 344 190-311	
silver	2JA 344 190-321	

### with Celis® orange ambient

white	2JA 344 190-351	
black	2JA 344 190-361	
silver	2JA 344 190-371	

### Accessories

Installation frame, the overall height with frame is 22 mm

chrome	9AB 344 192-061
gold	9AB 344 192-071

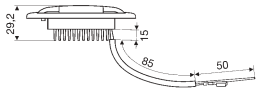
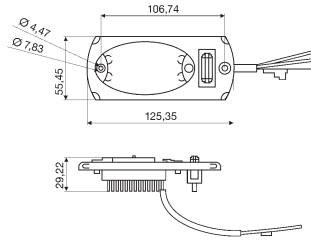
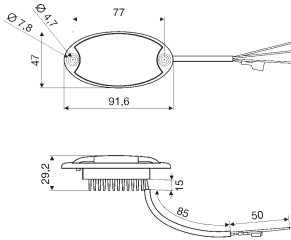
A control unit is required for the use of more than one spot

Number of circuits:	max. 8 SpotLEDs in 1 or 2 dimming circuits
IP protection class:	30
Power output:	1–16 W
Voltage:	Multi-voltage (9 – 32 VDC)

for 4 Standard or High-Power spots please use ...	5XA 344 150-001
for 8 Standard or 5 high power spots please use ...	5XA 344 150-011

\* further finisher colours (e.g. real-wood look) available on request

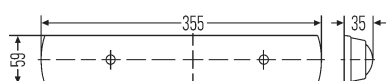
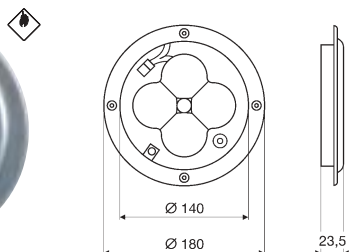
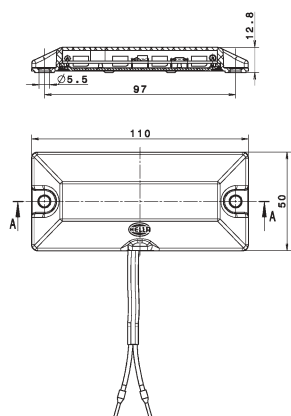
# Ceiling lights



Mini OvalLED		PU
Number of LEDs	4 white LEDs, 1 ambient LED	
Illumination angle	50°	
Illumination	side driver or instrument range	
Illuminance in 1 m	Standard 14.5 lux, Power 54 lux	
Function	ambient lighting can be switched on	
IP protection class	6K9K (without frame/switch), 40 (with frame/switch)	
Power consumption	Standard = 1.7 Watt (0.14 A at 12 V) Power = 3.6 Watt (0.30 A at 12 V)	
Lens	brilliant and clear	
Installation	Flush-mounting	
Voltage	12 or 24 V	
Current consumption	12 V/3.6 W, = approx. 0.30 A	
Temperature range	-40 °C to +60 °C	
<b>Without bracket and switch</b>		
4 white power LEDs, 12 V, red	<b>2JA 343 570-011</b>	1
4 white power LEDs, 24 V, red	<b>2JA 343 570-001</b>	1
4 white power LEDs, 12 V, blue	<b>2JA 343 570-117</b>	48
4 white standard LEDs, 12 V, red	<b>2JA 343 570-031</b>	1
4 white standard LEDs, 24 V, red	<b>2JA 343 570-021</b>	1
<b>With bracket and switch</b>		
4 white power LEDs, 12 V, red	<b>2JA 343 570-051</b>	1
4 white power LEDs, 24 V, red	<b>2JA 343 570-041</b>	1
4 white power LEDs, 12 V, blue	<b>2JA 343 570-157</b>	48
4 white power LEDs, 24 V, blue	<b>2JA 343 570-141</b>	1
4 white standard LEDs, 12 V, red	<b>2JA 343 570-071</b>	1
4 white standard LEDs, 24 V, red	<b>2JA 343 570-061</b>	1

Other versions are available on request.

# Ceiling lights

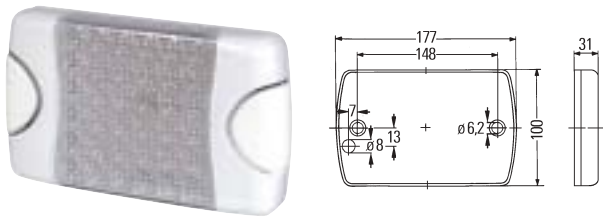


LED light		PU
LED angle of radiation	40°	
Illuminance in 2.5 m	8 lux (average value/ measuring points: ground level)	
IP protection class	6K9K	
Power consumption	1.5 W (0.06 A at 24 V)	
Voltage	24 V	
<b>2JA 010 838-017</b>		20

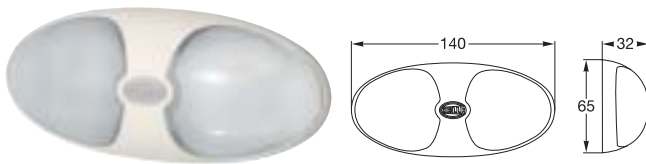
CargoLED		PU
Number of LEDs	4 white power LEDs	
Connection	electrical, using a cable 310 mm long	
Illumination angle	44° (wide illumination at close range)	
Illuminance in 1 m	180 lux	
IP protection class	6K9K	
Power consumption	6 W (0.5 A at 12 V)	
Lens	glass-clear	
Installation	Flush-mounting (aluminium installation frame)	
Voltage	Multi-voltage (9–31 VDC)	
Temperature range	-40 °C to +60 °C	
cold white	<b>2JB 343 227-001</b>	1
warm white	<b>2JB 343 227-041</b>	1
warm white	<b>2JB 343 227-047</b>	12
Accessories		
Installation frame, grey	<b>9XD 344 118-101</b>	1

LED lights with switch			PU
Number of LEDs	12 LEDs	24 LEDs	
Illuminance in 1 m	approx. 100 lux	approx. 200 lux	
Length	355 mm	355 mm	
Light colour	4000 K (neutral white)	4000 K (neutral white)	
Material description	Lens and frame made of impact- resistant material	Lens and frame made of impact- resistant material	
Installation	Surface- mounting	Surface- mounting	
Nominal output	3.5 W	7 W	
Voltage	Multi-voltage 10–30 V	Multi-voltage 10–30 V	
Current consumption	approx. 0.30 A at 12 V, approx. 0.15 A at 24 V,	approx. 0.58 A at 12 V, approx. 0.29 A at 24 V,	
12 LEDs	<b>2JA 007 373-151</b>		1
24 LEDs	<b>2JA 007 373-161</b>		1

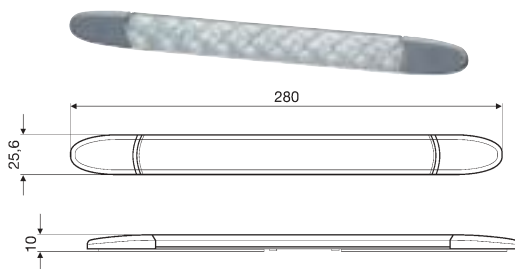
# Ceiling and orientation lights



DuraLED		PU
Number of LEDs	36 white LEDs	
Connection	electrical, using a cable 2,500 mm long	
Illumination angle	70°, wide horizontal and narrow vertical illumination	
Illuminance	720 lux	
IP protection class	6K6, 6K7	
Power consumption	9 W (0.75 A at 12 V)	
Lens	glass-clear	
Material description	Impact-resistant plastic, UV-resistant	
Installation	Surface-mounting, permanently bonded with white base plate	
Voltage	Multi-voltage (9 – 33 VDC)	
<b>2JA 959 037-511</b>		1



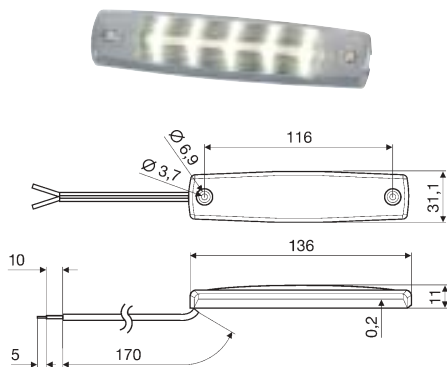
DuraLED, oval		PU
Number of LEDs	12	
LED angle of radiation	120°	
Orientation of light source	fixed	
Illuminance in 1 m	60 lux	
Electrical connection	via cables (2 x 0.75 m <sup>2</sup> ; length 180 mm)	
Housing	white	
IP protection class	6K6, 6K7	
Power consumption	3 W (0.25 A at 12 V)	
Light source	cold white power LEDs	
Lens	white	
Voltage	Dual-voltage 12 and 24 V	
<b>2JA 959 700-102</b>		1



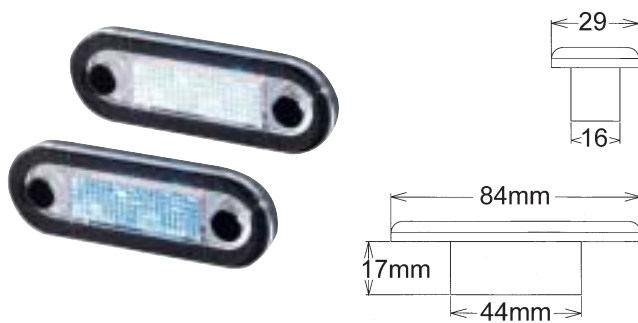
Flat LED surface-mounted light		PU
Number of LEDs	10 white LEDs	
Connection	electrical, using a cable 500 mm long	
Illumination angle	38°	
Illuminance in 1 m	32 lux	
IP protection class	6K9K	
Power consumption	1.8 W (0.15 A at 12 V) 1.8 W (0.07 A at 24 V)	
Lens	clear	
Installation	Surface-mounting, permanently bonded with grey base plate	
Voltage	12 / 24 V	
Temperature range	- 40 °C to + 60 °C	
12 V, white	<b>2JA 343 606-001</b>	1
12 V, white	<b>2JA 343 606-007</b>	30
12 V, blue	<b>2JA 343 606-201</b>	1
24 V, white	<b>2JA 343 606-011</b>	1
24 V, white	<b>2JA 343 606-017</b>	30
24 V, blue	<b>2JA 343 606-217</b>	30



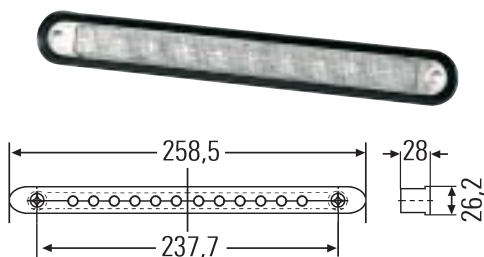
# Orientation and step lights



Mini ThinLED		PU
Illumination angle	34°	
Illuminance in 1 m	7.2 lux	
IP protection class	6K9K	
Power consumption	2.8 W (0.23 A at 12 V) 2.8 W (0.11 A at 24 V)	
Voltage	12 / 24 V	
12 V, 3 blue LEDs	<b>2JA 343 660-021</b>	1
12 V, 5 white LEDs	<b>2JA 343 660-101</b>	1
12 V, 5 white LEDs	<b>2JA 343 660-107</b>	30
24 V, 5 white LEDs	<b>2JA 343 660-117</b>	30



LED step light		PU
Waterproof, shockproof, long-life and energy-efficient		
Illumination angle	30°	
Illuminance in 1 m	15 lux	
IP protection class	6K6, 6K7	
Power consumption	0.5 W (0.04 A at 12 V)	
Voltage	Multi-voltage 10–33 V	
<b>With 2 white LEDs</b>		
120 mm long cable	<b>2XT 959 510-427</b>	36
150 mm long cable and 2-pin Packard plug	<b>2XT 959 510-467</b>	24
<b>With 2 blue LEDs</b>		
120 mm long cable	<b>2XT 959 510-657</b>	36
<b>Additionally with polished steel frame:</b>		
LED light colour, white	<b>2XT 959 680-812</b>	1
LED light colour, blue	<b>2XT 959 680-612</b>	1



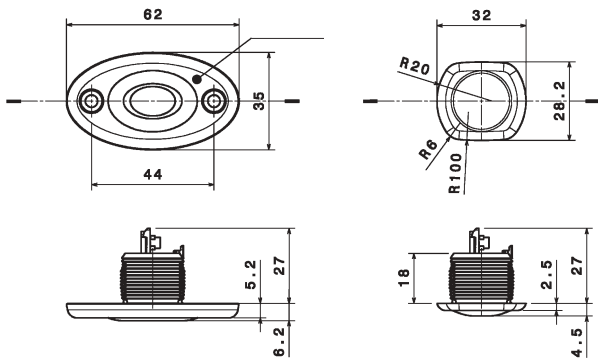
LED step light		PU
Waterproof, shockproof, long-life and energy-efficient		
Number of LEDs	10	
Illumination angle	24°	
Illuminance in 1 m	130 lux	
IP protection class	6K7, 6K9K	
Power consumption	2 W (0.16 A at 12 V) 2 W (0.08 A at 24 V)	
Voltage	12 / 24 V	
12 V	<b>2JA 959 073-001</b>	1
24 V	<b>2JA 959 073-201</b>	1

# Reading Lights



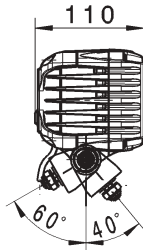
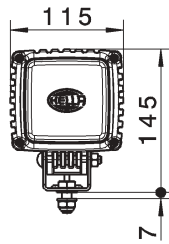
LED reading lamp		PU
Number of LEDs	1 white power LED	
Connection	electrical, using a cable 150 mm long	
Illumination	optimal for map-reading	
Illumination angle	38°	
Illuminance in 0.7 m	110 lux	
IP protection class	53	
Power consumption	2.5 W (0.20 A at 12 V)	
Lens	patterned	
Installation	Surface-mounting	
Voltage	Multi-voltage (9–31 VDC)	
<b>Cap white, LED white</b>		
150 mm arm	<b>2JA 343 720-011</b>	1
400 mm arm	<b>2JA 343 720-111</b>	1
<b>Cap black, LED white</b>		
150 mm arm	<b>2JA 343 720-021</b>	1
400 mm arm	<b>2JA 343 720-121</b>	1
<b>Cap silver, LED white</b>		
150 mm arm	<b>2JA 343 720-291</b>	1
400 mm arm	<b>2JA 343 720-191</b>	1
<b>Cap black, LED red</b>		
400 mm arm	<b>2JA 343 720-157</b>	12
<b>Cap white, LED white/red</b>		
150 mm arm	<b>2JA 343 720-511</b>	1
400 mm arm	<b>2JA 343 720-611</b>	1
<b>Cap black, LED white/red</b>		
150 mm arm	<b>2JA 343 720-521</b>	1
400 mm arm	<b>2JA 343 720-621</b>	1
<b>Cap silver, LED white/red</b>		
150 mm arm	<b>2JA 343 720-531</b>	1
400 mm arm	<b>2JA 343 720-631</b>	1
<b>150 mm arm, with plug for cigarette lighter</b>		
white cap	<b>2JA 343 720-071</b>	1
black cap	<b>2JA 343 720-081</b>	1
silver cap	<b>2JA 343 720-091</b>	1

# Ambient lighting



LED reading lamp		PU
Number of LEDs	1 LED	
Illuminance in 1 m	5 lux	
IP protection class	20	
Power consumption	0.3 W (0.02 A at 12 V)	
Lens	clear	
Delivery scope	3 frames (white, grey and black)	
Installation	Surface-mounting via attachment element	
Voltage	12 V	
12 V, LED red	<b>2JA 344 170-001</b>	1
24 V, LED red	<b>2JA 344 170-101</b>	1
12 V, LED blue	<b>2JA 344 170-011</b>	1
24 V, LED blue	<b>2JA 344 170-111</b>	1
12 V, LED white	<b>2JA 344 170-021</b>	1
24 V, LED white	<b>2JA 344 170-121</b>	1
12 V, LED amber	<b>2JA 344 170-031</b>	1
24 V, LED amber	<b>2JA 344 170-131</b>	1
12 V, LED white, frame silver	<b>2JA 344 170-201</b>	1

# Worklight

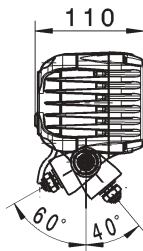
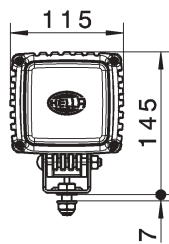


**Power Beam 3000** PU

with 16 high-power LEDs, enormous light output of 3,000 Lumen, better visibility than with Xenon because of daylight-like colour, at the same low power consumption as Xenon (43 Watts), especially resistant to mechanical forces because of shatterproof nylon lens, aluminium die cast housing, bracket made of stainless steel, service life up to 60,000 hours, no interference with electronic devices, such as radio, inverse polarity protection, overvoltage protection, overheating protection through integrated thermal sensor, electrical connection via harness, multi-voltage 9–33 V.

Close-range illumination, cable	<b>1GA 996 192-001</b>	1
Long-range illumination, cable	<b>1GA 996 192-011</b>	1
Close-range illumination, surrounding bracket, cable	<b>1GA 996 192-021</b>	1
Close-range illumination, suspended version (180°)	<b>1GA 996 192-041</b>	1
Close-range illumination, mounting foot according to DIN EN ISO 4165, handle	<b>1GA 996 192-051</b>	1

**IP protection class** IP 6K9K and IP 67



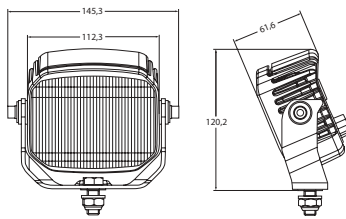
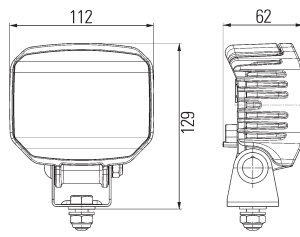
**Power Beam 2000** PU

with 16 high-power LEDs, light output of 2,200 Lumen, comparable to Xenon because of daylight-like colour, at the same low power consumption as Xenon (43 Watts), especially resistant to mechanical forces because of shatterproof nylon lens, aluminium die cast housing, bracket made of stainless steel, service life up to 60,000 hours, no interference with electronic devices, such as radio, inverse polarity protection, overvoltage protection, overheating protection through integrated thermal sensor, electrical connection via harness, multi-voltage 9–33 V.

Close-range illumination, cable	<b>1GA 996 189-001</b>	1
Close-range illumination, DT connector integrated	<b>1GA 996 189-011</b>	1
Close-range illumination, cable, suspended mounting	<b>1GA 996 189-031</b>	1
Long-range illumination, cable	<b>1GA 996 189-051</b>	1

**IP protection class** IP 6K9K and IP 67

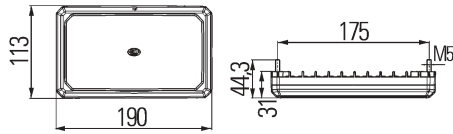
# Worklight



<b>Power Beam 1000</b>		<b>PU</b>
with 6 high-power LEDs, light output of 850 Lumen comparable to an H3 bulb, using only 18 Watts, optional glass or nylon lens, aluminium die cast housing, bracket made of stainless steel, can be mounted upright or suspended, service life up to 60,000 hours, no interference with electronic devices, such as radio, inverse polarity protection, overvoltage protection, overheating protection through integrated thermal sensor, multi-voltage 9–33 V.		
Close-range illumination, glass lens, DT connector	<b>1GA 996 188-001</b>	1
Close-range illumination, glass lens, DT connector, HD surrounding bracket	<b>1GA 996 188-011</b>	1
Close-range illumination, plastic lens, DT connector, UL conformity	<b>1GA 996 188-021</b>	1
Close-range illumination, AMP connector	<b>1GA 996 188-031</b>	1
<b>IP protection class IP 6K9K and IP 67</b>		
<b>Accessories</b>		
Connection cable with AMP connector	<b>8KB 990 299-011</b>	1

<b>Power Beam 1000 reversing spotlight</b>		<b>PU</b>
with 6 high-power LEDs, approval according to ECE-R23, E1 and GGVSE, light output of 850 Lumen comparable to an H3 bulb, using only 18 Watts, optional glass or nylon lens, aluminium die cast housing, heavy duty bracket made of stainless steel, can be mounted upright or suspended, service life up to 60,000 hours, no interference with electronic devices, such as radio, inverse polarity protection, overvoltage protection, overheating protection through integrated thermal sensor, multi-voltage 9–33 V.		
ECE Regulation 23, GGVSE /ADR, DT connector	<b>2ZR 996 188-061</b>	1
ECE Regulation 23, GGVSE /ADR, AMP connector	<b>2ZR 996 188-091</b>	1
<b>IP protection class IP 6K9K and IP 67</b>		

# Worklight

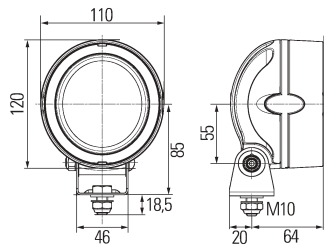


**Flat Beam** PU

Highly efficient worklight with 60 LEDs, 1000 Lumen light output, using only 11 Watts. To achieve the same amount of light with Halogen headlights, 70 Watts are needed (e.g. H3), especially resistant to mechanical forces because of shatterproof nylon lens, low weight due to plastic housing, no interference with electronic devices, such as radio, inverse polarity protection, overvoltage protection, overheating protection through integrated thermal sensor, electrical connection via harness, multi-voltage 9–33 V.

Close-range illumination, surface-mounted, cable	<b>1GD 996 193-001</b>	1
Close-range illumination, bracket, cable (towards rear)	<b>1GD 996 193-011</b>	1
Close-range illumination, bracket, cable (towards front)	<b>1GD 996 193-021</b>	1

IP protection class IP 6K9K and IP 67



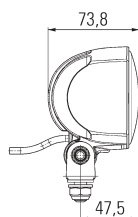
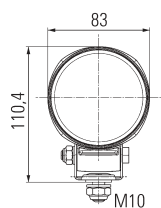
**Mega Beam LED Generation II** PU

with 4 high-power LEDs, 600 Lumen light output, only 12 Watt, aluminium die cast housing, bracket made of stainless steel, service life up to 60,000 hours, no interference with electronic devices, such as radio, inverse polarity protection, overvoltage protection, overheating protection through integrated thermal sensor, electrical connection via harness, multi-voltage 9–33 V.

Close-range illumination, upright surface-mounting, cable	<b>1GM 996 136-191</b>	1
Conversion starting spring 2012 to Generation III	<b>1GM 996 136-311</b>	1
Close-range illumination, suspended surface-mounting, cable	<b>1GM 996 136-241</b>	1
Conversion starting spring 2012 to Generation III	<b>1GM 996 136-361</b>	1

IP protection class IP 6K9K and IP 67

# Worklight



## Module 70 LED Generation II

PU

with 4 high-power LEDs, 600 Lumen light output, only 12 Watt, aluminium die cast housing, bracket made of stainless steel, service life up to 60,000 hours, no interference with electronic devices, such as radio, inverse polarity protection, overvoltage protection, overheating protection through integrated thermal sensor, electrical connection via harness, multi-voltage 9–33 V (also available as 10–100 V solution).

Close-range illumination, upright surface-mounting	<b>1G0 996 176-721</b>	1
Conversion starting spring 2012 to Generation III	<b>1G0 996 276-451</b>	1
Close-range illumination, suspended surface-mounting	<b>1G0 996 176-741</b>	1
Conversion starting spring 2012 to Generation III	<b>1G0 996 276-461</b>	1
Extra-wide close-range illumination, surface-mounted version, cable with DT connector	<b>1G0 996 176-757</b>	30
Conversion starting spring 2012 to Generation III	<b>1G0 996 276-487</b>	30
Close-range illumination, flush-mounted version, cable	<b>1G0 996 276-261</b>	1
Conversion starting spring 2012 to Generation III	<b>1G0 996 276-431</b>	1
Close-range illumination, cable with AMP connector, 10–100 V, for forklift trucks	<b>1G0 996 276-077</b>	30

**IP protection class** IP 6K9K and IP 67

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