

# DISCOVER ...

... Caravans & Motorhomes.

Photo: Le Voyageur (Groupe Pilote)



[www.hella.com/caravan](http://www.hella.com/caravan)

**FORVIA**  




# DISCOVER ...

... the World with  
Caravan Solutions by HELLA.



READY TO CONQUER THE ROAD?  
DISCOVER THE POSSIBILITIES OPEN TO YOU WITH FORVIA HELLA.

Welcome to the world of caravans and motorhomes! HELLA, the automotive supplier operating under the umbrella brand of FORVIA, offers an extensive product range with customised solutions that can open up new avenues for you. On the following pages, we will whisk you away into a world full of innovations, comfort and individual product solutions. With HELLA at your side you have the opportunity of equipping your motorhomes with advanced technology and individual design. So fasten your seatbelts and discover the future of the caravan and the motorhome.

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# DISCOVER ...

... a Strong Partnership.



WE PIONEER TECHNOLOGY FOR MOBILITY EXPERIENCES THAT MATTER TO PEOPLE.



## FLEXIBLE SOLUTIONS

Special applications for special vehicles  
– visionary design at the cutting edge of technology



## PASSION

A strong partner for commercial vehicles, construction machinery and the world of agriculture



## INNOVATIVE PRODUCTS

Technology, process and quality know-how from the automotive industry

HELLA, the automotive supplier operating under the umbrella brand of FORVIA, focuses on the commonly shared values of excellence, quality and customer satisfaction. The coming together of FORVIA and HELLA has created the world's seventh largest automotive supplier, whose products can be found in every second car. A partnership that can draw on many years of OE expertise and thus makes it possible to offer tailor-made solutions in OE quality. HELLA understands the unique challenges and individual requirements of the industry and uses its extensive experience to provide high-quality products and first-class service.

# DISCOVER ...

... the Road to Sustainability.



IN A WORLD WHERE SUSTAINABILITY IS BECOMING INCREASINGLY IMPORTANT, IT IS TIME TO TAKE ON RESPONSIBILITY.



## ENVIRONMENT

Now it is time as a company to take action and reverse the current trend. At HELLA, we have formulated clear goals leading to sustainable change:

- An ambitious target:  
By 2025 neutrality for our own CO<sub>2</sub> emissions (Scope 1 and 2)
- From 2045 net zero target for CO<sub>2</sub> emissions
- Focus on products with ecological design, sustainable materials, energy efficiency solutions and circular economy
- Zero-emission solutions with strong expertise in the fields of electric and hydrogen mobility



## CORPORATE CULTURE

As a responsible employer, HELLA promotes gender diversity and inclusion and works hard to attract talents.

As a learning organisation, HELLA promotes employee training and development.

HELLA is committed on the ground to education, mobility and the environment in a responsible and future-oriented way.



## CORPORATE GOVERNANCE

HELLA is committed to strong and sustainable corporate governance with a focus on compliance and ethical values.

A safe working environment for all employees is firmly anchored in the company's values.

HELLA paints a convincing picture with its responsible supply chains based on sustainable partners and suppliers.

CO<sub>2</sub> NEUTRALITY IS AT THE HEART OF OUR STRATEGY.



# DISCOVER ...

... High quality standards.



## QUALITY FIRST!

Prior to their market launch, all products undergo intensive testing so that they will be able to withstand the most demanding conditions. Our strict test procedures, which are in accordance with HELLA's own standard 67001, guarantee the high quality that you can rely on.



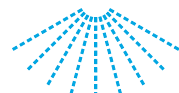
### IMMERSION AND PRESSURE TIGHTNESS TEST

HELLA LED products have a high level of tightness so that no water can penetrate the devices.



### DUST TEST

HELLA LED products are very dustproof so that sensitive components are protected from dust contamination.



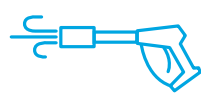
### SPLASHING WATER TEST

HELLA LED products are splashwater-proof.



### HEAT, MOISTURE AND COLD TESTS

HELLA LED products resist strong temperature fluctuations and changing levels of humidity.



### HIGH-PRESSURE CLEANER TEST

HELLA LED products can be easily cleaned using a high-pressure cleaner.



### VIBRATION TEST

HELLA LED products offer guaranteed high resistance to vibrations.

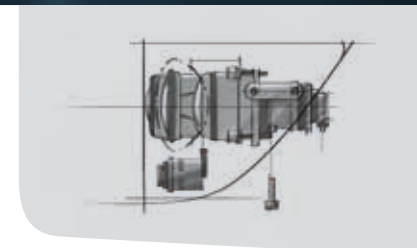
# DISCOVER ...

... Intelligent performance.



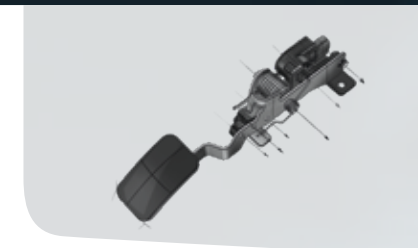
## THE FUTURE NEEDS SOLUTIONS – HELLA DEVELOPS THEM.

For decades we have been consistently bringing efficient and revolutionary features to the road. Not only do our technologies set standards but they also shape and influence them.



### STANDARD PRODUCTS

- Ready-to-use products
- Diverse and comprehensive product selection



### SEMI-CUSTOMISED PRODUCTS

- Specific concepts for design and functionality
- Integration of customised components
- Modular systems



### FULLY CUSTOMISED PRODUCTS

- Innovation in technology, styling and / or design
- Integration of pioneering trends
- Specific expertise
- Many years of experience



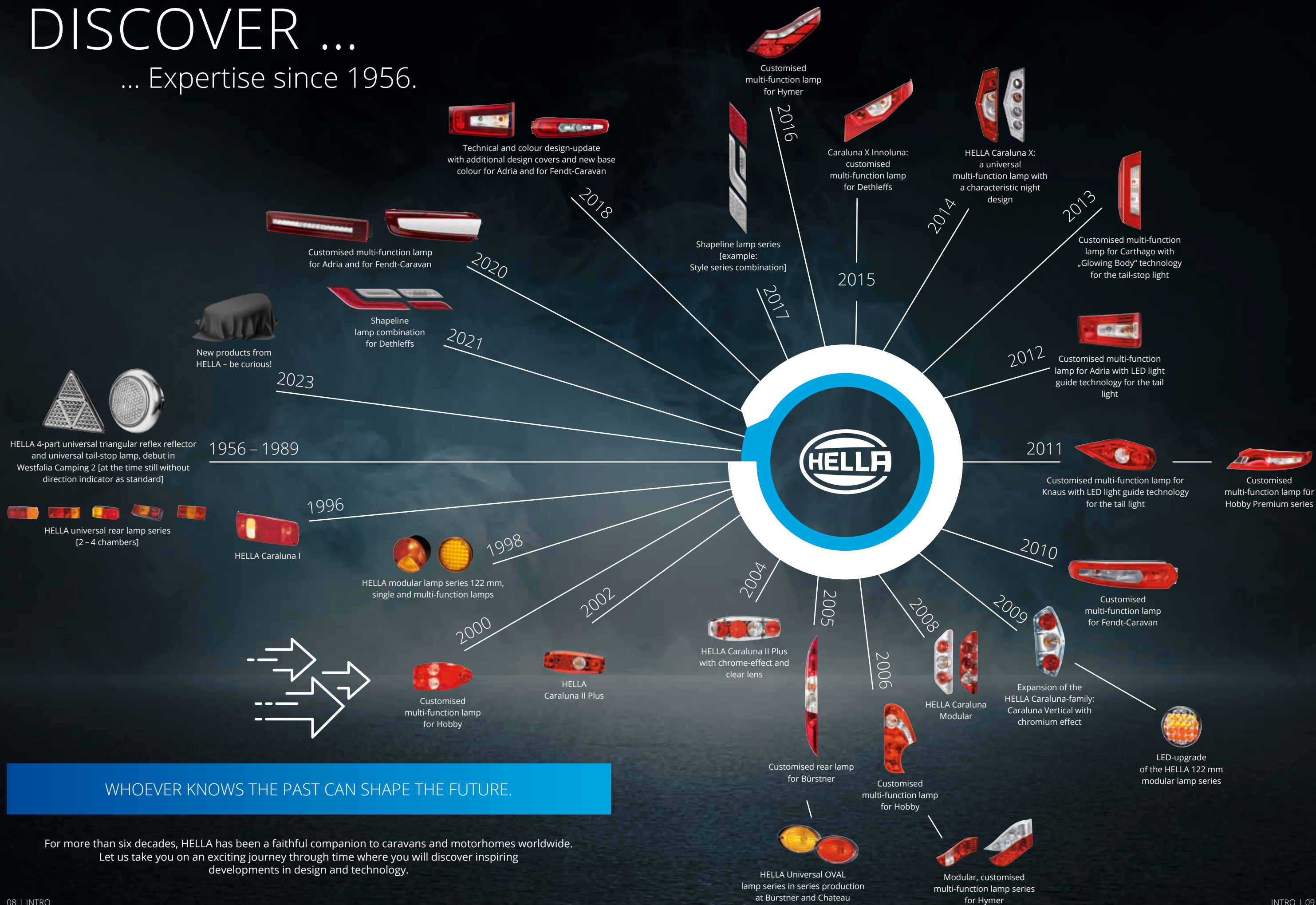
### HELLA LIGHT TUNNEL – UNIQUE IN EUROPE – 140 M LONG, 11 M WIDE

The HELLA Light Tunnel in Lippstadt/Germany is a place of innovation and technical mastery. With its impressive size, it enables the carrying out of detailed light tests that mirror real-life conditions. This is where diffusion, light colour, light distribution and homogeneity of the light are meticulously tested for customer projects and in-house developments. Discover the world of HELLA and experience the fascinating interaction of light and technology.



# DISCOVER ...

... Expertise since 1956.



WHOEVER KNOWS THE PAST CAN SHAPE THE FUTURE.

For more than six decades, HELLA has been a faithful companion to caravans and motorhomes worldwide. Let us take you on an exciting journey through time where you will discover inspiring developments in design and technology.



KEY TO ICONS



**ECE**

Product is approved according to the ECE guidelines.

More detailed information on the ECE test marks can be found with the relevant products.



**Asymmetrical light distribution**

The product complies with ECE regulation R149 Class B, which regulates asymmetrical low beam for passenger cars, buses, commercial vehicles and most larger vehicles.



**Symmetrical light distribution**

The product complies with ECE regulation R149 Class DS, which regulates the symmetrical low beam for many agricultural vehicles and lighter vehicles (2, 3 or 4-wheeled).



**SAE**

Product has SAE type approval.



**Vehicle electrical system voltage**

Defines the power supply of the lamp. This can be 12 V, 24 V or a more general voltage range for multi-voltage (e.g. 8 – 33 V).



**Operating temperature**

Thermal management and an optimised housing design ensure full functionality for all operating temperatures as a result of product testing from -40 °C to +60 °C, for example.



**IP protection class - dustproof and waterproof**

International Protection (IP) in accordance with ISO 20653. Specific definition for road vehicles:

**First digit:**

Protection against dust and dirt

5K = Dust protected

6K = Dustproof

**Second digit:**

Protection against water

4K = Protection against splashing water from any direction with increased pressure

7 = Protection against temporary immersion

9K = Protection against water during high-pressure / steamjet cleaning



Active



Passive



Active



Passive



**Electronic circuit**

Two different circuits are basically possible for LED lamps.

**Active (AE):**

LED current regulation via active electronics

**Passive (PT):**

Setting of a specific voltage range for the LED by means of a series resistor

**Thermal management**

**Active:**

Electronic power control of the LEDs when high ambient temperatures exceed permitted levels. This ensures that LEDs are protected against destruction caused by overheating.

**Passive:**

Optimal layout of components for even temperature distribution and temperature spread.

**Overvoltage protection**

Complement to electronics to protect LEDs against high voltage/current in the vehicle network as per ISO 7637-2.

The LEDs can become overloaded by increased voltage peaks in vehicles as a result of the following:

- Starting aid
- Defective control units
- Load dump pulses (faulty battery contact)

Such peaks stress/damage the LEDs, which can lead to function failure or to a reduction of lifetime. Complementing the circuit with appropriate components protects the circuit and can extend the lifetime or even prevent failure.

**Bipolarity of the lamp**

Even if the connecting cable is fitted the wrong way round, everything still functions fully.

The semiconductor in an LED must always be operated only with the specified polarity. Incorrect polarity will damage the LED so for that reason LED lamps are generally equipped with polarity reversal protection (diode). However, this function only works if "+" and "-" are connected correctly. If a lamp has a bipolar circuit, its functioning is independent of the contact connections. This then ensures that Poka Yoke (avoidance of faulty installations) is present in combination, for example, with indentation clamping technology. However, the additional components on the printed circuit board increase the cost outlay.



**Polarity reversal protection**

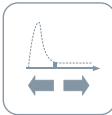
Even if the connecting cable is fitted the wrong way round, there is still no danger for the electronics.



**Electromagnetic compatibility**

Electromagnetic compatibility (EMC) tested and EU type approval issued.

If the lamp is not designed and constructed in accordance with EMC specifications, and is thus not certified, then interactions between it and other safety-relevant electronic systems may occur.



**Direction indicator failure control in accordance with ECE R48**

**Regulation in accordance with ECE R48:**

The driver is to be informed if the vehicle's direction indicator function fails. In order to remain legally compliant, this requirement must also be met for LED direction indicators. This requirement is met thanks to an integrated self-diagnosis system on the printed circuit board of the LEDs and an electrical pulse. Since the end of 2011, this HELLA failure control with pulse has been an ISO standard: ISO 13207.

If the direction indicator failure control cannot be guaranteed, the general certification of the vehicle expires. Therefore it is not permitted to operate vehicles without a direction indicator failure control in countries subject to ECE R48.



**Integrated short-circuit fuse**

Lamp is protected against short circuit.



**Approved for dangerous goods transport**

Lamp approved for dangerous goods transport in accordance with the European Agreement Concerning International Carriage of Dangerous Goods by Road (ADR; in German: GGVS).



**Automotive Electronic Council**

Components qualified in accordance with automotive standard. Electronic components (LEDs, diodes, etc.) governed by automotive specifications are more robust and safer than electronic components designed for industry.



**Tourist solution (passive)**

The lamp can be used without adjustments in countries with left-hand traffic for a short time.

IP PROTECTION CLASSES

**What is an IP protection class?**

IP stands for International Protection. The IP protection classes are determined in accordance with ISO 20653. The purpose of the standard is to specify precisely the resistance of electrical equipment components for vehicles against the penetration of solid foreign matter, dust and water. The varying degrees of protection important for signalling systems are explained in more detail below.

**Protection class IP 5K4K**

Dust may only penetrate to such an extent that the function and safety are not impaired. Water splashing against the housing from any direction at increased pressure must have no harmful effects: water pressure approx. 4 bar.

**Protection class IP 9K**

Water that is directed onto the housing during high-pressure / steamjet cleaning must not have any harmful effects: water pressure approx. 80 – 100 bar.

**Protection class IP 6K7**

Dust must not penetrate. Water must not penetrate even if the unit is temporarily submerged.

HELLA products meet the highest requirements and are optimally protected against the effects of all weather conditions.





DESIGN FREEDOM  
JUST A MOUSE CLICK AWAY

Use the Hella Shapeline online configurator and become a lighting designer yourself: with a few clicks, make your own vehicle light design for the front, side and rear – and see the results applied to a realistic car outline straight away.

[www.hella.com/shapeline](http://www.hella.com/shapeline)



HELLA SHAPELINE  
BROCHURE

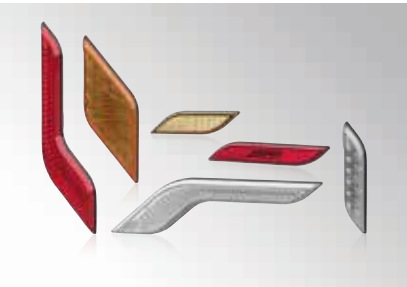
The complete product range in one brochure. Comprehensive product information covering all aspects of the Shapeline series will help you to select the right lamps for your purpose. You will also find the current brochure at:

[www.hella.com/shapeline](http://www.hella.com/shapeline)

DESIGN YOUR LIGHT – WITH HELLA SHAPELINE!

The variety and range of shapes and the various combination options paired with a technically optimised product design make the Shapeline lamp series a true innovation in the field of vehicle lighting!

STYLE DESIGN



TECH DESIGN



HELLA SHAPELINE  
VERSATILE MODULE COMBINATIONS

Our Shapeline range offers you countless mounting and combination options. Thanks to the modular product range, these lamps can be combined in virtually every conceivable constellation. Simply configure your individual lighting design.

9 – 32 V

–40 – +60°C

IP

Protection class: IP 6K7



FRONT VIEW EXAMPLE

Daytime running and position lamp, Slim, front		Direction indicator, Wing, front		Direction indicator, Category 6, on the side	
Homologation	ECE / SAE	Homologation	ECE / SAE	Homologation	ECE
Number of LEDs	6	Number of LEDs	12	Number of LEDs	2
Connectors & wiring	3-pin AMP SUPERSEAL integrated	Connectors & wiring	2-pin AMP SUPERSEAL integrated	Connectors & wiring	500 mm cable, open ends
2PT 014 627-021		2BA 013 334-021		2BM 013 339-021	





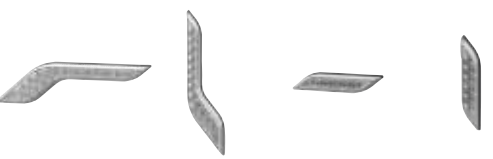










REAR VIEW EXAMPLE

Tail-stop lamp, Wing		Rear fog lamp	
Homologation	ECE	Homologation	ECE / SAE
Number of LEDs	30	Number of LEDs	12
Connectors & wiring	3-pin AMP SUPERSEAL integrated	Connectors & wiring	3-pin AMP SUPERSEAL integrated (with 2-pin function)
2SB 013 399-131	With MD12 (ECE) and PWM/AAG compatible	2NE 013 345-031	
Direction indicator, Wing, rear		Reverse lamp	
Homologation	ECE	Homologation	ECE / SAE
Number of LEDs	30	Number of LEDs	4
Connectors & wiring	2-pin AMP SUPERSEAL integrated	Connectors & wiring	3-pin AMP SUPERSEAL integrated (with 2-pin function)
2BA 013 333-031		2ZR 013 345-131	
Reflex reflector, rear		Side marker lamp, amber	
Homologation	ECE / SAE	Homologation	ECE / SAE
Number of LEDs	–	Number of LEDs	3
Connectors & wiring	–	Connectors & wiring	AMP SUPERSEAL, 250 mm cable, overmoulded
8RA 013 347-061		2PS 013 305-011	

















HELLA SHAPELINE MODULE OVERVIEW

The modular HELLA Shapeline product range offers a variety of diverse light functions that can be put together in individual combinations. All lamps are available in two different designs: in the classic straight-lined Shapeline Tech design and in the curved dynamic Shapeline Style design.

FRONT	Style	Tech
	POSITION LAMPS  2PF 013 324-... 2PF 013 325-... 2PF 013 325-... 2PF 013 326-... 2PF 013 326-...	 2PF 013 323-...
	REFLEX REFLECTORS  8RA 013 347-...	 8RA 013 403-...
	DIRECTION INDICATORS  2BA 013 334-... 2BA 013 334-... 2BA 013 335-... 2BA 013 335-...	 2BA 013 330-... 2BA 013 398-...
	DAYTIME RUNNING AND POSITION LAMPS  2PT 014 627-...	
SIDE	DIRECTION INDICATORS  2BM 013 338-... 2BM 013 339-...	 2BM 013 336-... 2BM 013 337-... 2BM 013 337-...
	REFLEX REFLECTORS  8RA 013 347-...	 8RA 013 403-...
	CLEARANCE LAMPS  	 2XS 013 327-...
	SIDE MARKER LAMPS  2PS 013 305/6-... 2PS 013 305-... 2PS 013 307-... 2PS 013 307-...	 2PS 013 300/2-... 2PS 013 300-... 2PS 013 303-... 2PS 013 303-... 2PS 013 301/2-... 2PS 013 301-... 2PS 013 304-... 2PS 013 304-...

HELLA SHAPELINE MODULE OVERVIEW

Style	Tech
POSITION LAMPS  2SA 013 324-...	 2SA 013 323-...
TAIL-STOP LAMPS  2SB 013 342-... 2SB 013 342-... 2SB 013 399-...* 2SB 013 399-...* 2SB 013 343-... 2SB 013 343-...	 2SB 013 341-...
DIRECTION INDICATORS  2BA 013 331-... 2BA 013 331-... 2BA 013 331-... 2BA 013 331-... 2BA 013 333-... 2BA 013 333-... 2BA 013 332-...* 2BA 013 332-...*	 2BA 013 330-... 2BA 013 330-...
TAIL-STOP-DIRECTION INDICATOR LAMPS  2SD 013 342-... 2SD 013 342-...	 2SD 013 341-...
REVERSE LAMPS  2ZR 013 345-... 2ZR 013 345-... 2ZR 013 401-... 2ZR 013 401-... 2ZR 013 401-...	 2ZR 013 344-...
REAR FOG LAMPS  2NE 013 345-... 2NE 013 345-... 2NR 013 345-... 2NR 013 345-... 2NE 013 343-... 2NE 013 343-... 2NE 013 343-...	 2NE 013 344-... 2NR 013 344-...
REFLEX REFLECTORS  8RA 013 402-... 8RA 013 347-...	 8RA 013 403-...

\* PWM/AAG compatible and with MD12 (ECE).





## Front lighting

Powerful headlamps are essential in order to achieve a high degree of safety on long journeys and in dark parking spaces. Headlamps are, so to speak, the eyes of the vehicle and ensure that you and your passengers are safe on the road. So as to meet this requirement, HELLA offers innovative front lighting solutions that give you a clear view on the road. HELLA has on offer 90 mm front lighting modules specially adapted for motorhomes with a variety of functions that can be used in almost any vehicle and any situation.

Despite their compact size, they are extremely powerful and offer a high degree of flexibility in the motorhome sector because of their modular concept.

It's also time to discover the new SlimLine Bi-LED module from HELLA! Slim design and maximum flexibility combine low beam and high beam in one module. With its sophisticated lighting and electronics, it sets new standards.

PREMIUM QUALITY  
RELIABILITY  
COST EFFICIENCY

## 90 MM MODULES PROGRAMME OVERVIEW

The heavy duty HELLA 90 mm front headlamps are used in many types of vehicles. Again because of the modular design, they offer maximum flexibility leading to a wide range of possible applications and also to a customised front design.

The 90 mm module headlamp range caters for both halogen and LED technology and offers a choice between them depending on requirements, thus enabling an easy switch from halogen to LED. All modules impress with their robust construction and can therefore also be used in demanding work environments.

The differences between the individual series of the 90 mm range lie in the detail. The L 4060 LED modules, for example, literally shine with their outstanding light output and supplementary light functions. The light colour of the LED modules, which is similar to daylight, considerably improves visibility and levels of concentration during night-time journeys and thus ramps up the safety factor. The Bi-LED modules combine low beam and high beam in a single headlamp module and, as such, are ideal for installation in situations where space is limited.



### MODULE SELECTOR

Find the right headlamp module in just a few clicks: simply use the filter to select the required criteria, such as the light function or homologation, and you will see suitable products right away.

[www.hella.com/headlamp-modules](http://www.hella.com/headlamp-modules)

Low beam    High beam    Low beam and high beam    Fog light

### PERFORMANCE



L 4060



L 4060



Bi-LED L 4565



L 4060

### ESSENTIAL



R 80



R 80



Bi-LED L 4565



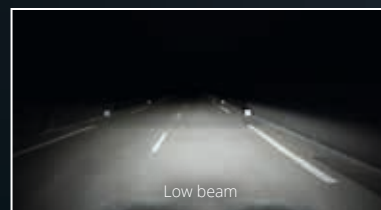
### UNIVERSAL HEADLAMP MODULES

Discover the complete range of HELLA front lighting modules in our comprehensive brochure! Here you will find all the important information about the innovative modules that are specially designed to meet the requirements of modern motorhomes.

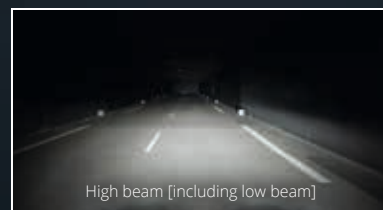


# DISCOVER ...

## ... the L 4565 Performance.



Low beam

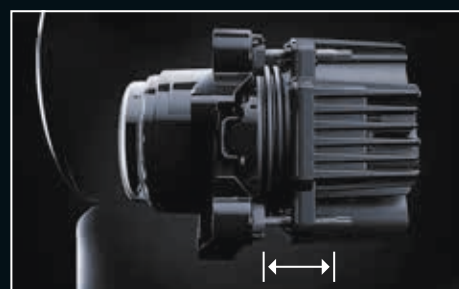


High beam [including low beam]

### 2 IN 1 – FREEDOM IN APPLICATION AND DESIGN

Excellent low beam and high beam  
light performance from one single headlamp module

## FREEDOM OF DESIGN



Basic setting and headlamp levelling

### NEW DESIGN FREEDOM – "ZERO TOLERANCE INTEGRATION"

The "Zero Tolerance Integration" has turned the L 4565 Performance Bi-LED low and high beam headlamp into a veritable highlight. Easy installation thanks to fixed integration in the vehicle apron. Basic setting and headlamp levelling are carried out via the invisible rear part. The flat cover lens thus blends seamlessly into the design of the vehicle.

### HEADLAMPS 90 MM MODULES / PERFORMANCE

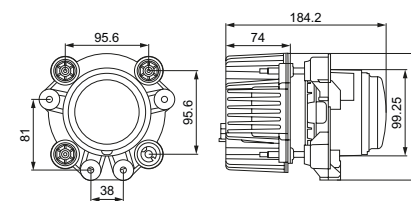


#### Bi-LED low beam and high beam headlamp L 4565 – Performance

Headlamp module with robust die-cast aluminium housing, flat cover lens and 4-pin DEUTSCH connector, with "Zero Tolerance Integration"

<b>Rated voltage</b>	12 V and 24 V
<b>Protection class</b>	IP 6K9K
<b>Type approval</b>	ECE R149.00 Table 8, Class B FMVSS 108

<b>1AL 015 318-031</b>	Right-hand traffic, ECE
<b>1LL 015 318-041</b>	Left-hand traffic, ECE
<b>1AL 015 318-051</b>	SAE



### HEADLAMPS 90 MM MODULES / ESSENTIAL

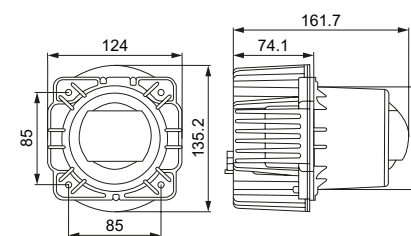


#### Bi-LED low beam and high beam headlamp L 4565 – Essential

Headlamp module with robust die-cast aluminium housing and 4-pin DEUTSCH connector

<b>Rated voltage</b>	12 V and 24 V
<b>Protection class</b>	IP 6K9K
<b>Type approval</b>	ECE R149.00 Table 8, Class B FMVSS 108

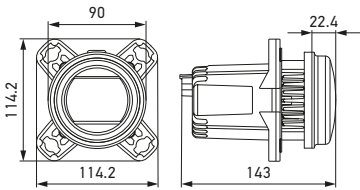
<b>1AL 015 318-001</b>	Right-hand traffic, ECE
<b>1AL 015 318-111</b>	Right-hand traffic, ECE, with pre-assembled mounting set
<b>1AL 015 318-211</b>	Right-hand traffic, ECE, with pre-assembled mounting set, carrier frame and levelling motor component*
<b>1LL 015 318-011</b>	Left-hand traffic, ECE
<b>1LL 015 318-131</b>	Left-hand traffic, ECE, with pre-assembled mounting set
<b>1AL 015 318-231</b>	Left-hand traffic, ECE, with pre-assembled mounting set, carrier frame and levelling motor component*
<b>1AL 015 318-021</b>	SAE
<b>1AL 015 318-151</b>	SAE, with pre-assembled mounting set
<b>1AL 015 318-251</b>	SAE, with pre-assembled mounting set, carrier frame and levelling motor component*



\* Levelling motor not included in scope of delivery



HEADLAMPS  
90 MM MODULES / PERFORMANCE

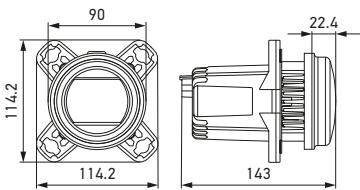


LED low beam headlamp L 4060

Headlamp module with 40 x 60 mm polycarbonate lens and robust die-cast aluminium housing

Rated voltage	12 V and 24 V
Protection class	IP X9K, IP X4K, IP 5KX
Type approval	ECE R149 Class B FMVSS 108

1BL 012 488-001	Right-hand traffic, ECE, SAE, FEP connector
1ML 012 488-011	Left-hand traffic, ECE, FEP connector
1BL 012 488-101	Right-hand traffic, ECE, SAE, DEUTSCH connector
1ML 012 488-111	Left-hand traffic, ECE, DEUTSCH connector



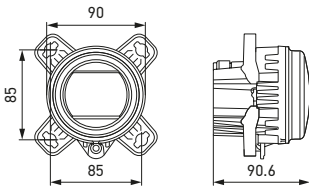
LED low beam headlamp L 4060 with daytime running / position light

Headlamp module with 40 x 60 mm polycarbonate lens and robust die-cast aluminium housing

Rated voltage	12 V and 24 V
Protection class	IP X9K, IP X4K, IP 5KX
Type approval	ECE R149 Class B FMVSS 108

1BL 012 488-021	Right-hand traffic, ECE, SAE, FEP connector
1ML 012 488-031	Left-hand traffic, ECE, FEP connector
1BL 012 488-121	Right-hand traffic, ECE, SAE, DEUTSCH connector
1ML 012 488-131	Left-hand traffic, ECE, DEUTSCH connector

HEADLAMPS  
90 MM MODULES / PERFORMANCE



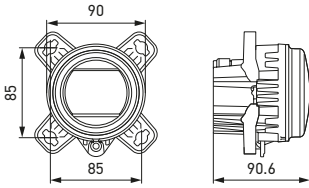
Without carrier frame

LED high beam headlamp L 4060

Headlamp module with 40 x 60 mm polycarbonate lens, robust die-cast aluminium housing and FEP connector

Rated voltage	12 V and 24 V
Protection class	IP X9K, IP X4K, IP 5KX
Type approval	ECE R149 Class B FMVSS 108

1F0 011 988-021	With pre-assembled carrier frame
1F0 011 988-121	Without carrier frame



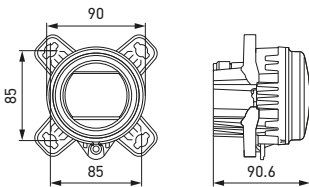
Without carrier frame

LED high beam headlamp L 4060 with daytime running / position light

Headlamp module with 40 x 60 mm polycarbonate lens, robust die-cast aluminium housing and FEP connector

Rated voltage	12 V and 24 V
Protection class	IP X9K, IP X4K, IP 5KX
Type approval	ECE R149 Class B FMVSS 108

1F0 011 988-031	With pre-assembled carrier frame
1F0 011 988-131	Without carrier frame



Without carrier frame

LED high beam headlamp L 4060 with direction indicator

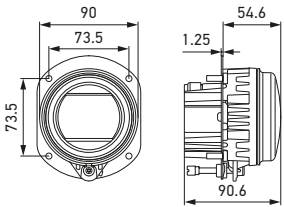
Headlamp module with 40 x 60 mm polycarbonate lens, robust die-cast aluminium housing and FEP connector

Rated voltage	12 V and 24 V
Protection class	IP X9K, IP X4K, IP 5KX
Type approval	ECE R149 Class B FMVSS 108

1F0 011 988-081	With pre-assembled carrier frame, with pulse generator
1F0 011 988-071	With pre-assembled carrier frame, without pulse generator
1F0 011 988-181	Without carrier frame, with pulse generator
1F0 011 988-171	Without carrier frame, without pulse generator



AUXILIARY HEADLAMPS  
90 MM MODULES / PERFORMANCE



LED fog lamp L 4060

Headlamp module with 40 x 60 mm polycarbonate lens, robust die-cast aluminium housing, pre-assembled carrier frame and FEP connector

Rated voltage

12 V and 24 V

Protection class

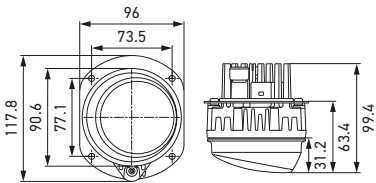
IP X9K, IP X4K, IP 5KX

Type approval

ECE R149 Class B  
FMVSS 108

- 1N0 011 988-001
- Without daytime running / position light

1N0 011 988-011



LED fog lamp L 4060 with cornering light

Headlamp module with 40 x 60 mm polycarbonate lens, robust die-cast aluminium housing, pre-assembled carrier frame and FEP connector

Rated voltage

12 V and 24 V

Protection class

IP X9K, IP X4K, IP 5KX

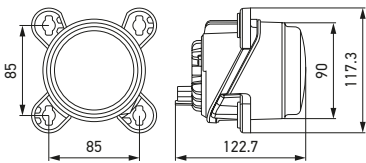
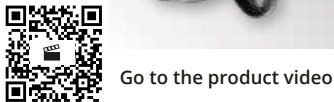
Type approval

ECE R149 Class B  
FMVSS 108

- 1N0 011 988-061
- Right headlamp

1N0 011 988-051

HEADLAMPS  
90 MM MODULES / ESSENTIAL



LED low beam headlamp R 80

Headlamp module with innovative reflector and robust plastic housing

Rated voltage

12 V and 24 V

Protection class

IP X9K, IP X4K, IP 5KX

Type approval

ECE R149 Class B  
FMVSS 108

- 1B0 015 050-001
- Right-hand traffic, ECE, DEUTSCH connector

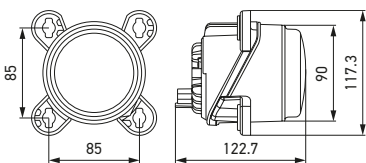
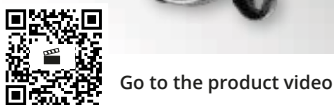
1M0 015 050-011

1B0 015 050-031

1B0 015 050-101

1M0 015 050-111

1B0 015 050-131



LED high beam headlamp R 80

Headlamp module with innovative reflector and robust plastic housing

Rated voltage

12 V and 24 V

Protection class

IP X9K, IP X4K, IP 5KX

Type approval

ECE R149 Class B  
FMVSS 108

- 1K0 015 050-021
- ECE, SAE, DEUTSCH connector

1K0 015 050-121

UNIVERSAL HEADLAMP MODULES

For more detailed information, take a look at our brochure. Discover the complete product range of HELLA front lighting modules together with all the important information including comprehensive details on accessories.

Alternatively you can also go direct and visit us at [www.hella.com/soe](http://www.hella.com/soe).



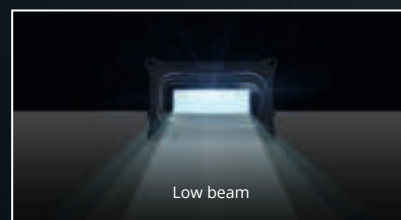
# DISCOVER ...

## ... the SlimLine.



### VISIONARY APPEARANCE – EDGY DESIGN!

The Bi-LED module with its sharp angles lends vehicles a modern and unusual appearance. The versatile Bi-LED module sets a strong focus on striking design while at the same time offering outstanding light output and power.



Low beam



High beam

### UNIQUE SHAPE – DUAL FUNCTION!

The SlimLine Bi-LED combines low beam and high beam functions in one single headlamp module. Resistant to vibrations, dirt and water, it easily copes with tougher demands – even in harsh environments.



## SHAPE OF POWER



Bezel in blue look

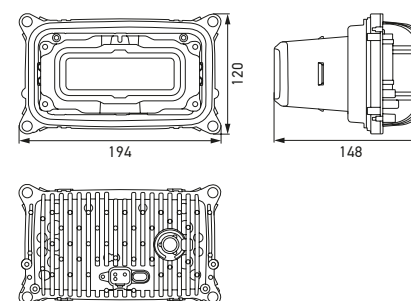


Bezel in carbon look

### WIDE RANGE OF OPTIONS – INDIVIDUAL CHARACTER!

The SlimLine Bi-LED module offers a whole host of customisation options. By adding a coloured and differently shaped bezel, the headlamp can be given a distinctive and completely individual appearance.

#### HEADLAMPS SLIMLINE



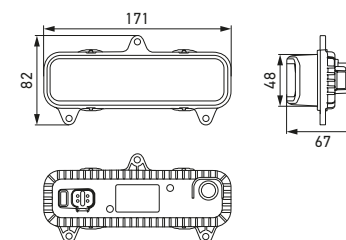
#### Bi-LED low beam and high beam headlamp SlimLine

Headlamp module made of ALGD (die-cast aluminium cooling element and 2K lens (black / transparent), with 4-pin DEUTSCH connector (3 pins fitted), horizontal mounting

<b>Rated voltage</b>	12 V and 24 V
<b>Protection class</b>	IP 6KX, IP X9K, IP X4K
<b>Type approval</b>	ECE R149 Class B ECE R10 06 FMVSS 108

<b>1AL 016 330-001</b>	Right-hand traffic, ECE
<b>1LL 016 330-011</b>	Left-hand traffic, ECE
<b>1AL 016 330-021</b>	SAE

#### DAYTIME RUNNING, POSITION AND DIRECTION INDICATOR LAMPS SLIMLINE



#### LED combination lamp SlimLine

Compact module with 3 functions (daytime running, position and direction indicator light) in one module, housing and lens made of polycarbonate, with 4 LEDs

<b>Rated voltage</b>	12 V and 24 V
<b>Protection class</b>	IP X9K, IP X4K, IP 5KX
<b>Type approval</b>	In progress

<b>2BE 016 545-001</b>	ECE, DEUTSCH connector
<b>2BE 016 545-101</b>	ECE, FEP connector
<b>2BE 016 545-011</b>	SAE, DEUTSCH connector
<b>2BE 016 545-811*</b>	SAE, DEUTSCH connector

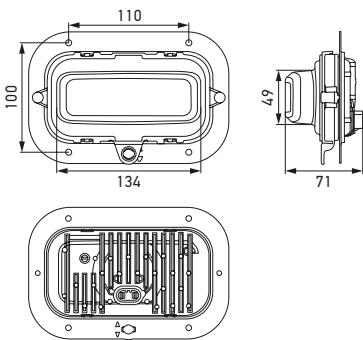
\*Double variant for vehicles with a width above 2,032 mm according FMVSS 108 and a DI size of > 75mm².

More details on all products and information on accessories can be found online at [www.hella.com/soe](http://www.hella.com/soe)





AUXILIARY HEADLAMPS  
SLIMLINE



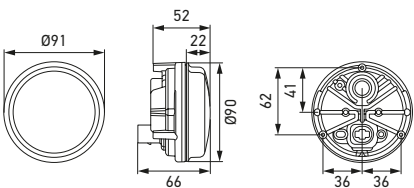
LED fog and cornering light SlimLine

Compact module with 2 functions (fog and cornering light) in one module, housing made of aluminium and lens made of polycarbonate

Rated voltage	12 V and 24 V
Protection class	IP X9K, IP X4K, IP 5KX
Type approval	In progress

1NL 016 340-001	With HB3 connector
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DAYTIME RUNNING, POSITION AND DIRECTION INDICATOR LAMPS



LED combination lamp CircLED 90

Three light functions in one: daytime running, position and direction indicator light, particularly light and compact module with modern and timeless design, housing and lens made of polycarbonate, mounting by means of screws with additional carrier frame from the rear or front

Rated voltage	12 V and 24 V
Protection class	IP X9K, IP X4K, IP 5K9K
Type approval	ECE FMVSS 108

2BE 016 540-001	Daytime running, position and direction indicator lamp, ECE, FEP connector
2BE 016 540-011	Daytime running, position and direction indicator lamp, ECE, DEUTSCH connector
2BE 016 540-031	Daytime running, position and direction indicator lamp, SAE, DEUTSCH connector
2PT 016 540-111	Daytime running and position lamp, ECE / SAE, DEUTSCH connector
2BE 016 540-211	Position and direction indicator lamp, ECE, DEUTSCH connector
2BE 016 540-231	Position and direction indicator lamp, SAE, DEUTSCH connector

DISCOVER ...  
... the CircLED 90.



HIGHLY EFFICIENT – WITH A MODERN, DISTINCT SHAPE

The stunning shape of the CircLED 90 combination lamp with its particularly light weight and minimal installation depth enables effortless mounting. Thanks to state-of-the-art technology, it makes the road shine in an impressively homogeneous light.

COMPACT AND CLEAN



THREE LIGHT FUNCTIONS – SIMPLY COMPACT

CircLED 90 – daytime running, position and direction indicator light in one module. In combination with a Bi-LED low beam and high beam headlamp, five light functions are operated with just two modules.



# DISCOVER ...

## ... the LEDayFlex III.



### FLEXIBLE MODULARITY – UNLIMITED STYLE!

The modular light system promises maximum design and technological freedom: it is possible to choose between three to five LEDayFlex III modules for each side of the vehicle. The highly personalised options for arranging the modules give every headlamp a distinctive look.



### UNLIMITED STYLE



### THIRD GENERATION – TRIPLE FUNCTION!

The lamp has three LED light functions: daytime running, position and direction indicator light [also with wiper function]. But the real highlight is that all three functions have impressive, innovative EdgeLight technology.



### STRIKING APPEARANCE – CUTTING EDGE DESIGN!

The outstanding LEDayFlex III modules are strongly compelling. Whether horizontal, vertical or diagonal, flexible alignment options give each headlamp a strong individual character.\*

\* Please observe the relevant country-specific legal requirements and guidelines for vehicles in the installation instructions.

### DAYTIME RUNNING, POSITION AND DIRECTION INDICATOR LAMPS

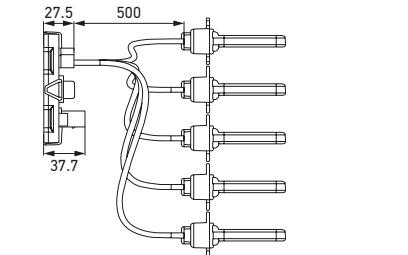
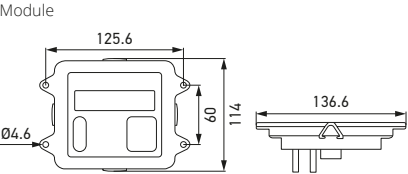
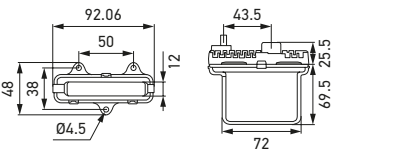
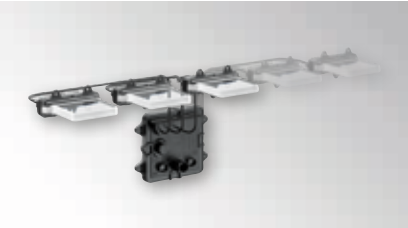


### LED combination lamp LEDayFlex III

LEDayFlex III combines 3 LED light functions (daytime running, position and direction indicator light) in one module, it has a particularly homogeneous appearance thanks to EdgeLight technology, its housing is made of polycarbonate and the lens of PMMA, scope of delivery: one module chain including control unit

Rated voltage	12 V and 24 V
Protection class	IP X9K, IP X4K, IP 5KX
Type approval	ECE R148

2BE 016 400-301	3 LED light modules, FEP connector
2BE 016 400-341	3 LED light modules, DEUTSCH connector
2BE 016 400-401	4 LED light modules, FEP connector
2BE 016 400-411	4 LED light modules, direction indicator with wiper function (left), FEP connector
2BE 016 400-421	4 LED light modules, direction indicator with wiper function (right), FEP connector
2BE 016 400-501	5 LED light modules, FEP connector

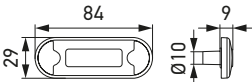


Control unit





DAYTIME RUNNING, POSITION AND DIRECTION INDICATOR LAMPS



LED position lamp DuraLED

Surface mounting variant, slimline design with 9 mm profile, horizontal or vertical installation, high vibration resistance, extremely low energy consumption, hermetically sealed against dirt and moisture

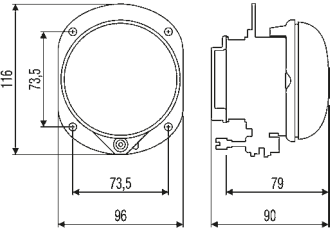
Light source	2 LEDs
Rated voltage	12 V and 24 V
Protection class	IP 6K7, IP 6K9K
ECE test mark	587

2PF 959 855-201	With 500 mm cable, black end cap
2PF 959 855-241	With 2,500 mm cable, black end cap
2PF 959 855-251	With 500 mm cable, white end cap

Spare parts / accessories

9GD 958 028-001	Contour seal
9GD 980 867-507	Flat, rectangular seal
9HD 980 858-008	Black end caps
9HD 980 858-018	White end caps

AUXILIARY HEADLAMPS  
90 MM MODULES / HALOGEN



Accessories



Fog lamp 90 mm

Minimum installation dimensions for an understated yet impressive light design, aluminium reflector with clear cover lens, ideal in combination with the matching 90 mm high beam and low beam headlamps

Light source	H7 bulb
Rated voltage	12 or 24 V
Type approval	-007/-017: ECE R149 B series-02 -151/-161: ECE R149 B series-03

1N0 008 582-007	12 V
1N0 008 582-017	24 V
1N0 008 582-151	12 V
1N0 008 582-161	24 V

Accessories

9GH 158 051-007	Rubber cap
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DISCOVER ...  
... the Illuminated Logos.



SHINING APPEARANCE – INSTANT RECOGNITION

Discover HELLA's brilliant diversity when it comes to innovative solutions for illuminated logos. As one of the leading suppliers for the motorhome and caravan sector, we can offer you high-quality and customisable logos that will turn your vehicle into a gleaming eye-catcher.

LIGHT UP YOUR BRAND



SURFACES OR CONTOURS – ELEGANT LIGHT DESIGN

Whether it's for surface lighting or contour illumination, we give your logo a smooth and intense luminosity. Give your motorhome a unique touch and become the focus of everyone's attention.



# DISCOVER ...

... Individuality.



HELLA GIVES YOUR VEHICLE THE PERFECT LOOK.

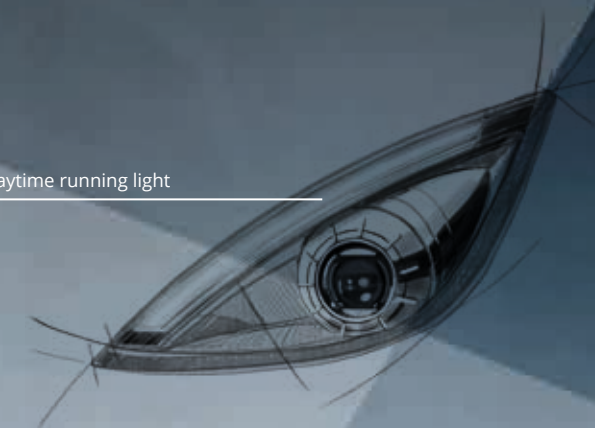
Because HELLA embodies leadership in technological performance and stunning design.



## FROM THE FIRST CONCEPT TO THE FINAL DESIGN

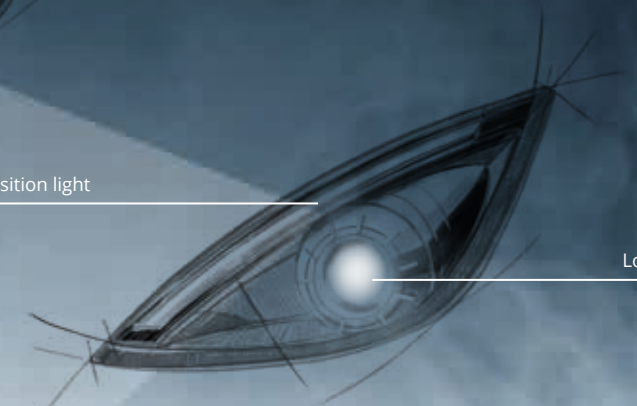
Are you interested in a customised lighting solution that is perfectly suited to your vehicle? Then we are the perfect partner for you. Please contact us.

Daytime running light



Specially developed by HELLA: the headlamp for Hymer motorhomes. And it is the three light functions – daytime running, direction indicator and position light – which are particularly noticeable and which are all emitted by a single LED-fed light guide.

Position light



Low beam

Direction indicator light

HELLA – quality, comfort and safety as standard features. As a leading supplier of vehicle-specific lighting, we offer an impressive product portfolio characterised by innovation and continuous further development, a portfolio which stands out in sharp relief because of its functional reliability, perfect fit and product durability. You, too, can benefit from our wide range of products in "HELLA Original Parts Quality" thanks to our large-scale production expertise. Discover how our products give the comfort and convenience of trouble-free use in everyone's vehicles.

Design by

  
**pro industria**  
 Büro für Industrial Design  
 Manfred Lang





## Side lighting

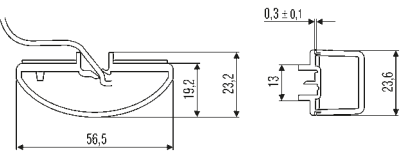
Discover our range of high-quality marker lamps that ensure vehicles can be clearly seen even in the dark and in poor visibility, whether you're on the road or at the campsite.

HELLA's marker lamps stand for first-class quality and the use of advanced technologies.

Thanks to their outstanding workmanship and exceptional stability, they are not only visually convincing, but they also shine with their longevity.

When it comes to your safety, you should never make any compromises. Put your trust in the leading brand of HELLA and choose our marker lamps.

### DIRECTION INDICATORS

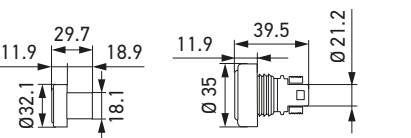


#### LED auxiliary direction indicator, Cat. 5

For horizontal flush mounting, clear lens, simple gluing into prepared mirror, can also be used as a universal auxiliary direction indicator, SAE type approval for vehicles: < 12 m total length

Light source	3 amber LEDs
Rated voltage	12 V
Protection class	IP 5K9K
ECE test mark	01 1423

2BM 008 771-001	12 V
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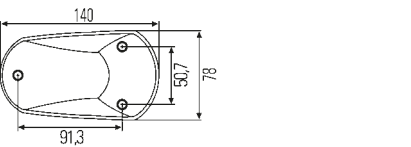


#### LED auxiliary direction indicator, Cat. 5

For flush mounting, lens without reflex reflector, clear or amber, screw fitting

Light source	2 LEDs
Rated voltage	12 V
Protection class	IP 6K6X
ECE test mark	01 0066

2BM 340 825-211	Amber lens, with 2 pin AMP SUPERSEAL, rubber housing
2BM 340 825-311	Amber lens, 2 pin AMP SUPERSEAL, plastic housing
2BM 340 825-321	Clear lens, 2 pin AMP SUPERSEAL, plastic housing



#### Auxiliary direction indicator, Cat. 6

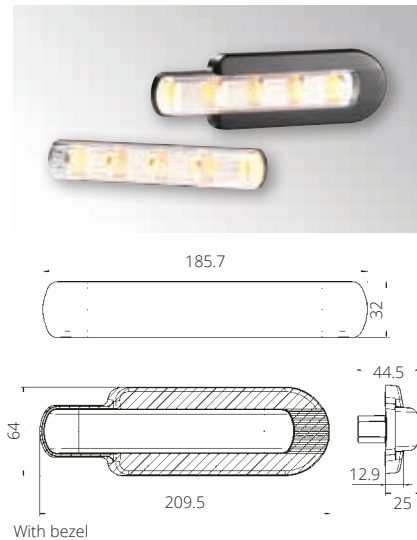
For ultra-flat, side surface mounting, without bulb

Light source	P21W bulb
Rated voltage	24 V
Protection class	IP 5KX, IP X9K
ECE test mark	Amber lens: 1059 Clear lens: 1848

2BM 008 355-001	With amber lens
2BM 008 355-017	With clear lens


**Please note**  
Category 5: mandatory for M1 vehicles and N1, M2, M3 vehicles ≤ 6 m in length.  
Category 6: mandatory for N2, N3 vehicles and N1, M2, M3 vehicles > 6 m in length.

## DIRECTION INDICATORS



## LED auxiliary direction indicator, Cat. 6

Flat-mounted auxiliary direction indicator with brilliant optics, for horizontal surface mounting, clear lens, can be used with or without bezel

Light source	5 amber LEDs
Rated voltage	12 or 24 V
Protection class	IP 6K9
ECE test mark	 7506

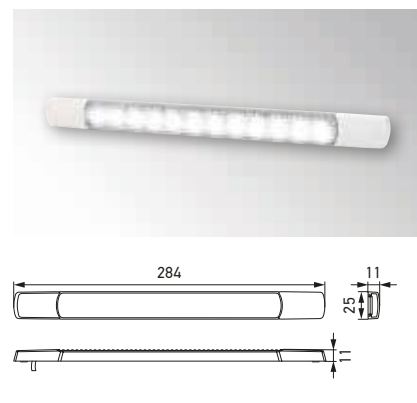
With black bezel, direct screw connection

<b>2BM 011 788-011</b>	12 V, with 2-pin AMP SUPERSEAL
<b>2BM 011 788-001</b>	24 V, with 2-pin AMP SUPERSEAL
<b>2BM 011 788-021</b>	24 V, with 500 mm cable

## Self-adhesive

<b>2BM 011 788-051</b>	12 V, with 2-pin AMP SUPERSEAL
<b>2BM 011 788-041</b>	24 V, with 2-pin AMP SUPERSEAL
<b>2BM 011 788-061</b>	24 V, with 500 mm cable

## CANOPY LAMPS



## Accessories



LED canopy lamp

With white screw caps (end pieces right and left), for horizontal or vertical surface mounting, connection via 2,500 mm cable, lens clear

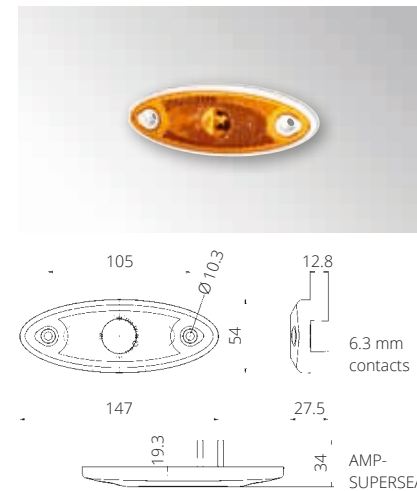
<b>Light source</b>	12 LEDs
<b>Rated voltage</b>	12 or 24 V
<b>Protection class</b>	IP 6K7, IP 6K9K

<b>2JA 980 879-011</b>	12 V, white
<b>2JA 980 879-111</b>	24 V, white
<b>2JA 980 879-201</b>	12 V, warm white
<b>2JA 980 879-301</b>	24 V, warm white

Spare parts / accessories


8HG 958 000-011	Bracket 45°, white
8HG 958 000-021	Bracket 45°, dark grey

## SIDE MARKER LAMPS



## LED side marker lamp OneLED

High level of safety thanks to maximum illuminating surface, modern night design, for horizontal and vertical mounting, lens with reflex reflector, amber


Light source	1 LED
Rated voltage	12 or 24 V
Protection class	IP 5KX, IP X9K
ECE test mark	 5853

<b>2PS 344 690-007</b>	12 V, housing white, with 6.3 mm contacts
<b>2PS 344 690-617</b>	12 V, housing black, with 2-pin AMP SUPERSEAL
<b>2PS 344 690-627</b>	24 V, housing black, with 2-pin AMP SUPERSEAL

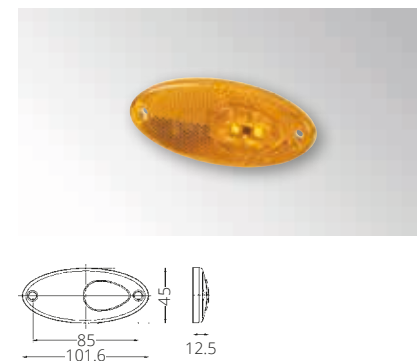


LED side marker lamp

For horizontal surface mounting, lens with reflex reflector, amber, with rubber seal and two 500 mm long cables


Light source	2 LEDs
Rated voltage	12 V
Protection class	IP 5XK, IP X9K
ECE test mark	 0202

<b>2PS 964 295-067</b>	With fastening screws
<b>2PS 964 295-081</b>	Self-adhesive, without seal, with caps for screw holes

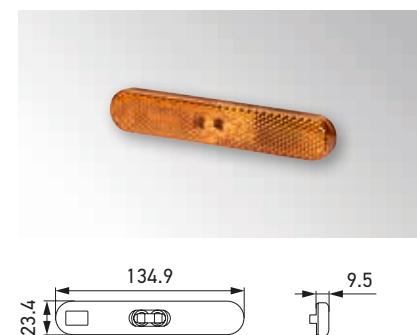


LED side marker lamp

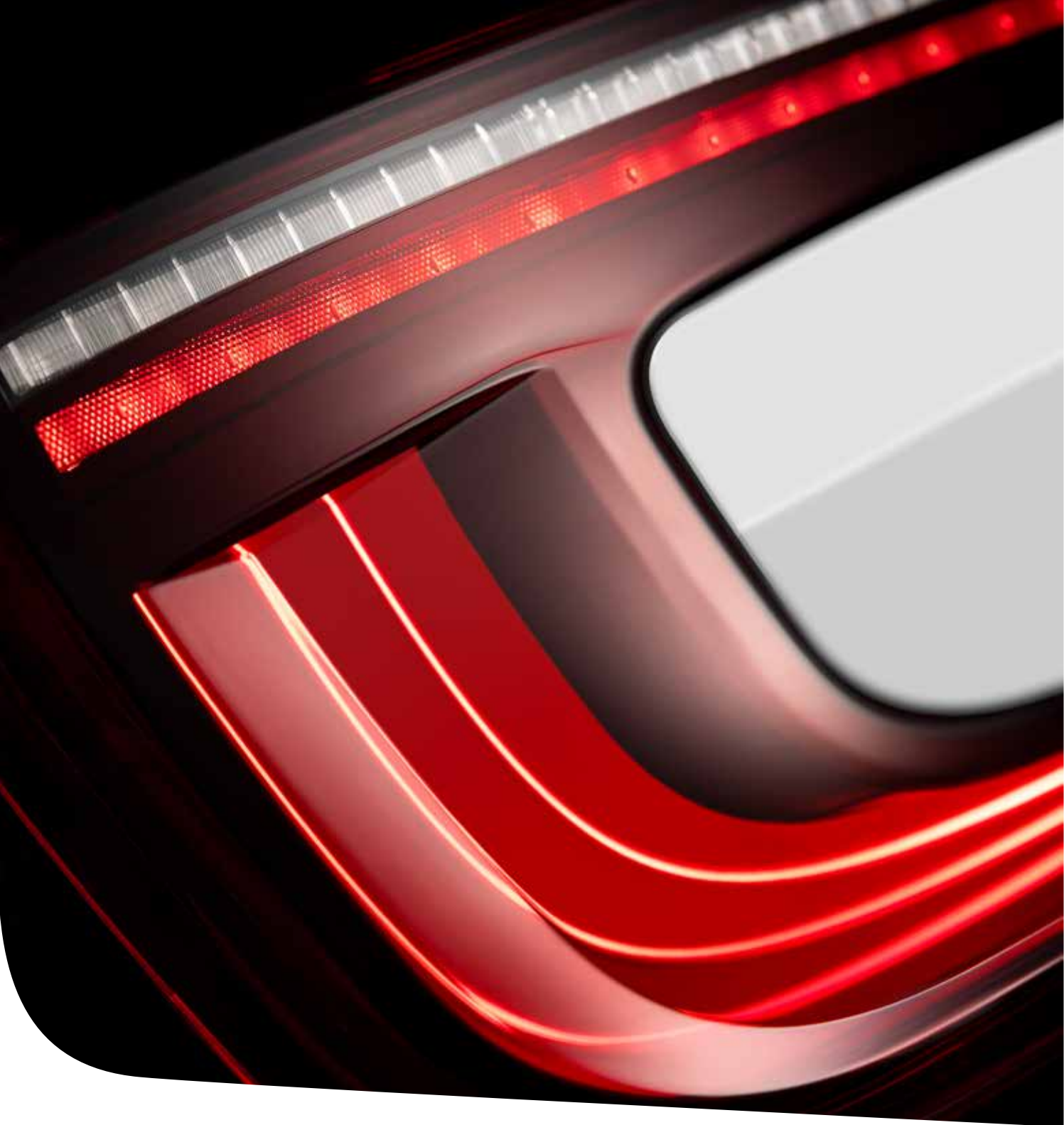
For surface mounting, lens with reflex reflector, amber, self-adhesive

Light source	2 amber LEDs
Rated voltage	12 or 24 V
Protection class	IP 5K9K
ECE test mark	 10236

<b>2PS 009 226-007</b>	24 V, horizontal, with 250 mm cable
<b>2PS 009 226-037</b>	24 V, horizontal, with 250 mm cable
<b>2PS 009 226-077</b>	12 V, vertical, with 250 mm cable
<b>2PS 009 226-067</b>	12 V, horizontal, with 6.3 mm contacts and mating connector grommet







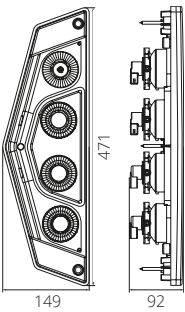
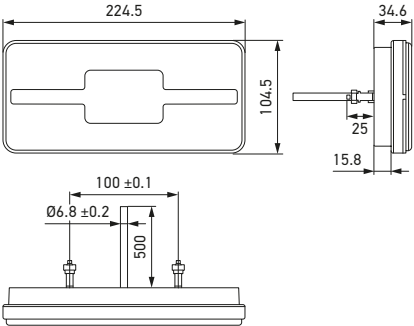
## Rear lighting

Experience the impressive world of LED rear lighting from HELLA and be inspired by its safety, style and functionality. Our innovative lighting concepts not only offer you significantly improved visibility and recognisability, but also a distinctive and brand-typical appearance that makes your vehicle a veritable eye-catcher.

Thanks to the combination of powerful light-emitting diodes and advanced optical systems, we are setting new standards in the world of lighting technology.

At HELLA, we place great emphasis on quality and workmanship so that we can guarantee you a long service life and reliable functioning of our LED rear lighting. You can rely on us, as your trusted partner, to use our premium LED lighting technology to make your vehicle shine as never before.

### MULTI-FUNCTION LAMPS



#### Compact full-LED rear lamp 328 630

Rear lamp with 5 light functions in 100% LED technology, tail light in "Glowing Body" technology and dynamic direction indicator

<b>Light source</b>	Tail light: 30 LEDs, stop light: 6 LEDs, direction indicator: 12 LEDs, reverse light: 8 LEDs, rear fog light: 6 LEDs
<b>Rated voltage</b>	12 V and 24 V
<b>Protection class</b>	IP 6K9K
<b>Type approval</b>	ECE R148

<b>2VP 328 630-011</b>	Horizontal, surface mounting on right or left side*, with wiping direction indicator, open ends
<b>2VP 328 630-021</b>	Vertical, surface mounting on right or left side, with flashing direction indicator, open ends
<b>2VP 328 630-031</b>	Horizontal, surface mounting on right or left side*, with wiping direction indicator, AMP SUPERSEAL connector
<b>2VP 328 630-041</b>	Horizontal, surface mounting on right or left side*, with wiping direction indicator, DEUTSCH connector

\* The lamp can be rotated 180°, making it suitable for left or right surface mounting.



#### Caraluna X

Surface mounting, vertical, horizontal or at a 13° angle possible, electrical connection: all light functions each via 2-pin AMP connector. Mounting: from the front using 3 screws (ST 4.8 mm)

<b>Rated voltage</b>	12 V
<b>Protection class</b>	IP 5K4K
<b>ECE test mark</b>	5885, 5886

#### Hybrid version

<b>2VP 012 570-171</b>	13° horizontal, left (light guide below)
<b>2VP 012 570-181</b>	13° horizontal, right (light guide below)

#### Bulb version

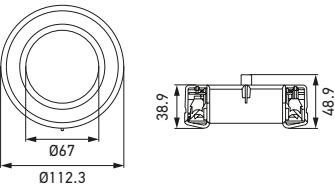
<b>2VP 012 570-071</b>	13° horizontal, left (light guide below)
<b>2VP 012 570-081</b>	13° horizontal, right (light guide below)

#### Spare parts / accessories

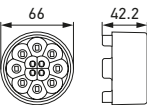
<b>8JD 156 150-807</b>	Mating connector set (2-pin)
<b>8JD 162 581-802</b>	Mating connector set (3-pin) (for hybrid)
<b>8GD 002 078-121</b>	12 V, tail-stop light (P21/5W)
<b>8GA 006 841-121</b>	12 V, direction indicator (PY21W)
<b>8GA 002 073-121</b>	12 V, reverse light (P21W)
<b>8GH 008 417-001</b>	12 V, rear fog light (H21W)

Other variants on request.

REAR LAMP MODULES



Accessories



LED rear lamp ring module, 112 mm

Tail-stop lamp in innovative LED EdgeLight technology, ideal for combination with lamp series 009 001 (diameter 66 mm), optionally available with clear or red cover lens; 250 mm cable with 3-pin AMP SUPERSEAL connector

**Light source** 30 red LEDs  
**Rated voltage** 12 or 24 V  
**Protection class** IP 6K9K  
**ECE test mark** E 7R-025889

**2SB 009 362-301** 12 V, red lens  
**2SB 009 362-321** 24 V, red lens  
**2SB 009 362-311** 12 V, clear lens  
**2SB 009 362-331** 24 V, clear lens

Accessories

Design rings, diameter 118 mm, perfect high sheen finish, in just one "click"  
**9HB 163 085-012** High gloss chromium-plated  
**9HB 163 085-001** Silver-coloured



LED rear lamps, 66 mm

With clear lens, AMP connector

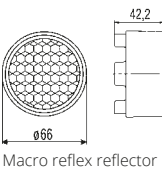
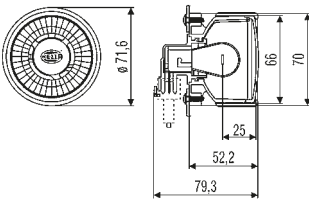
**Light source** 12 LEDs  
**Rated voltage** 12 V  
**ECE test mark** E 12390

**2SB 009 001-401** Tail-stop lamp, ECE, SAE  
**2BA 009 001-411** Direction indicator, without pulse, ECE  
**2BA 009 001-431** Direction indicator, with pulse, ECE

Accessories

**8JD 156 150-807** Mating connector, 2-pin  
**8JD 162 581-802** Mating connector, 3-pin  
**9XD 161 119-017** Adapter ring, for mounting LED lamps, black

REAR LAMP MODULES



Accessories



Rear lamps, 66 mm

With mounted bulbs, including design ring

**Rated voltage** 12 V  
**ECE test mark** E 3917, E 6546, E 7613, E 23255, reflex reflector: E 3189

**2DA 009 001-057\*** Stop lamp, red lens  
**2SB 009 001-067\*** Tail-stop lamp, red lens  
**2NE 009 001-027\*\*** Rear fog lamp, red lens  
**8RA 009 001-037\*\*** Macro reflex reflector, red lens  
**2BA 009 001-007\*** Direction indicator, grey lens  
**2ZR 009 001-017\*\*** Reverse lamp, grey lens  
**2BA 009 001-191\*** Direction indicator, with Silver Vision bulb

Accessories

**8JD 156 150-807** Mating connector, 2-pin  
**8JD 162 581-802** Mating connector, 3-pin  
**9XD 161 119-007** Adapter ring screw connection, frontal, direct mounting and also ring module mounting, black

Design rings, diameter 66 mm, perfect high sheen finish, in just one "click"  
**9HB 161 122-012** High gloss chromium-plated  
**9HB 161 122-007** Silver-coloured  
**8HG 162 530-002** Locking ring, comet silver

\* With ECE approval for double lamps  
\*\*With SAE type approval for vehicles < 2,032 mm and > 2,031 mm wide

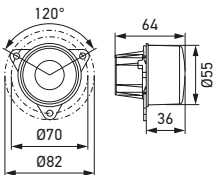


LED rear lamps, 55 mm

For flush mounting, clear lens with pattern and 500 mm connecting cable

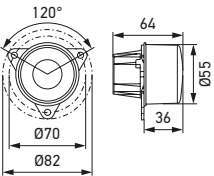
**Rated voltage** 12 V  
**Protection class** IP 6K9K  
**ECE test mark** E 3283, E 10R-036317

**2SA 011 172-041** Tail lamp  
**2DA 011 172-061** Stop lamp  
**2BA 011 172-021** Direction indicator, without pulse for direction indicator failure control  
**2BA 011 172-031** Direction indicator, with pulse for direction indicator failure control





REAR LAMP MODULES

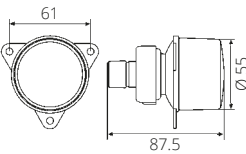


LED rear fog lamp and reverse lamp, 55 mm

For flush mounting, clear lens with pattern and 500 mm connecting cable

Rated voltage	12 V
Protection class	IP 6K9K
ECE test mark	Rear fog lamp: E 3286, E 10R-036317 Reverse lamp: E 3285, E 10R-036317

2NE 011 172-081	Rear fog lamp
2ZR 011 172-101	Reverse lamp



Rear lamps, 55 mm

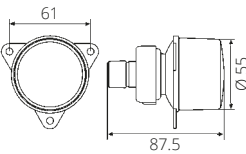
For flush mounting, with red lens

Rated voltage	12 or 24 V
ECE test mark	Tail lamp / stop lamp: E 1048, E 1049 Rear fog lamp: E 1050

2SA 008 221-127	Tail lamp with mounted 12 V / 5 W bulb
2DA 008 221-167	Stop lamp with mounted 12 V / 21 W bulb
2NE 008 221-137	Rear fog lamp with mounted 12 V / 21 W bulb

Accessories

8KA 152 134-007	Wiring harness with grommet
9GT 137 236-007	Grommet separate



Direction indicator and reverse lamp, 55 mm

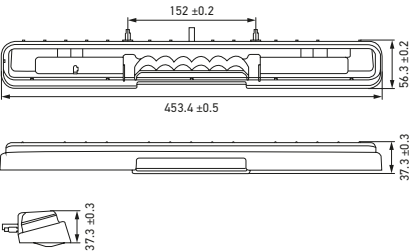
For flush mounting with grey lens

Rated voltage	12 or 24 V
ECE test mark	Direction indicator: E 1051 Reverse lamp: E 1052

2BA 008 221-147	Direction indicator with mounted amber 12 V / 21 W bulb
2ZR 008 221-157*	Reverse lamp with mounted 12 V / 21 W bulb

\* With SAE type approval for vehicles < 2,032 mm and > 2,031 mm wide

REAR FOG LAMPS

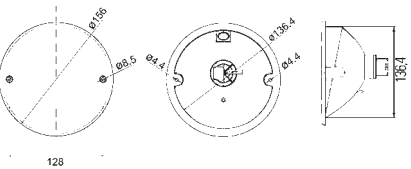
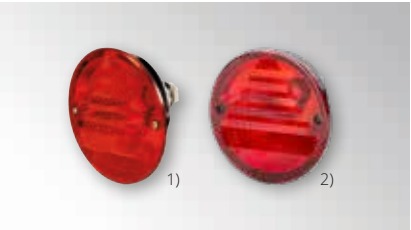


LED licence plate module with rear fog light 340 980

Licence plate lamp and rear fog lamp integrated into a compact central module, intended for central positioning at rear of vehicle, with 3-pin AMP SUPERSEAL

Rated voltage	12 or 24 V
Protection class	IP X9K, IP 6K7
ECE test mark	24 V variant: ECE R10 (2832), ECE R148 (5927)

2NE 340 980-017	12 V, white housing
2NE 340 980-007	24 V, black housing

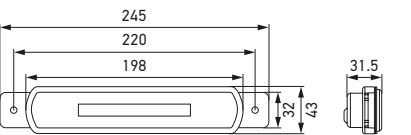


Rear fog lamp

With integrated reflex reflector

Rated voltage	12 V
ECE test mark	E 5857

2NE 344 610-007 <sup>1)</sup>	Rear fog lamp, including 12 V bulb
2NE 344 610-107 <sup>2)</sup>	Rear fog lamp, dark look, including 12 V bulb
8RA 344 610-017	Reflex reflector, red



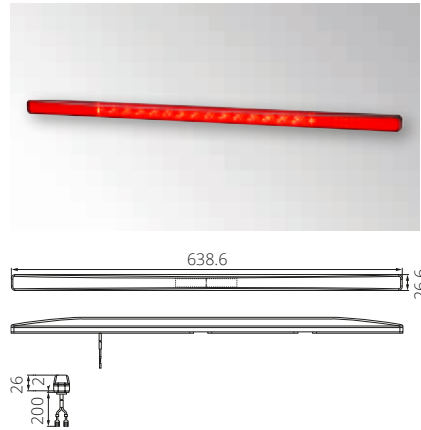
Rear fog and reverse lamp with reflex reflector

Ultra compact design, for screw mounting with stud bolt or screw holes

Rated voltage	12 and 24 V
Protection class	IP 6K9K
Type approval	UNR 148.00 / 150.00 SAE J1319 FMVSS 108


2NE 350 000-017	Rear fog and reverse lamp with reflex reflector
2NE 350 000-027	Reverse lamp with reflex reflector
2NE 350 000-037	Rear fog lamp with reflex reflector

## AUXILIARY STOP LAMPS

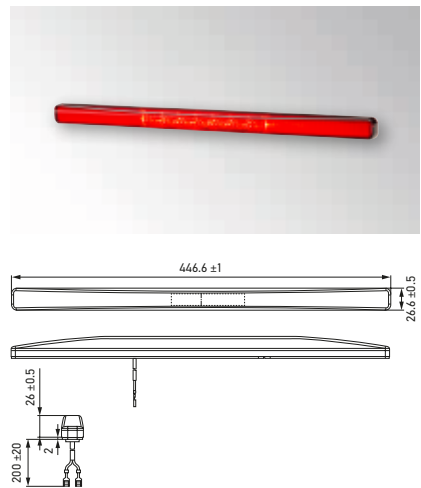


## LED auxiliary stop lamp LongLED 64

For horizontal surface mounting, 637 mm long, extremely slimline design with a profile height of just 11 mm, highly efficient electronic design, fully sealed housing, high vibration resistance, with 200 mm cable and 6.3 mm flat receptacles

Light source	16 LEDs
Rated voltage	12 or 24 V
Protection class	IP 67
ECE test mark	 4127

2DA 012 596-041	12 V
2DA 012 596-051	24 V

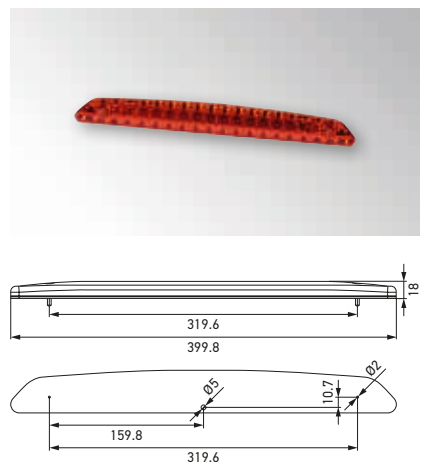


## LED auxiliary stop lamp LongLED 45

For horizontal surface mounting, 445 mm long, extremely slimline design with a profile height of just 11 mm, highly efficient electronic design, fully sealed housing, high vibration resistance, with 200 mm cable and 6.3 mm flat receptacles

Light source	8 LEDs
Rated voltage	12 or 24 V
Protection class	IP 67
ECE test mark	Ⓔ 024128

2DA 012 596-061	12 V
2DA 012 596-077	24 V



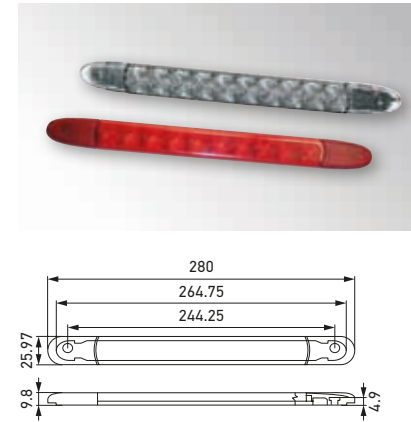
## LED auxiliary stop lamp

For horizontal surface mounting, in a brilliant finish, with 3D depth effect by the embedding of each LED in a separate reflector, with 200 mm cable

Light source	12 red LEDs
Rated voltage	12 or 24 V
Protection class	IP 5XK, IP X9K
ECE test mark	Ⓔ 7715


2DA 343 800-001	12 V, red lens and housing
2DA 343 800-057	12 V, red lens and housing, seal fixed with double-sided adhesive tape

## AUXILIARY STOP LAMPS



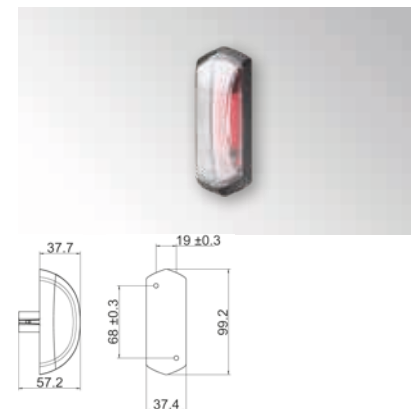
### LED auxiliary stop lamp

For horizontal or vertical surface mounting, with 3,000 mm cable, 9.5 mm mounting height (installed position)

Light source	10 red LEDs
Rated voltage	12 V
Protection class	IP 5KX, IP X9K
ECE test mark	 7696


2DA 343 106-001	Lens red, for screw attachment
2DA 343 106-201	Lens red, self-adhesive
2DA 343 106-021	Lens smoked glass, for screw attachment
2DA 343 106-221	Lens smoked glass, self-adhesive

## CLEARANCE LAMPS



## LED clearance lamp

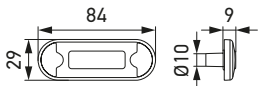
Red / clear lens, with direct screw connection, black bezel for direct screw connection, for side-rear surface mounting

Light source	4 LEDs
Rated voltage	12 or 24 V
Protection class	IP 6K9K
ECE test mark	 3011

<b>2XS 205 020-001</b>	12 V, with 2-pin AMP SUPERSEAL
<b>2XS 205 020-011</b>	24 V, with 2-pin AMP SUPERSEAL
<b>2XS 205 020-041</b>	12 V, with 500 mm cable
<b>2XS 205 020-051</b>	24 V, with 500 mm cable



CLEARANCE LAMPS



DuraLED clearance lamp

Surface mounting variant, slimline design with 9 mm profile, horizontal or vertical installation, high vibration resistance, extremely low energy consumption, hermetically sealed against dirt and moisture

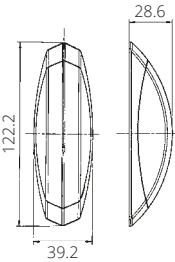
**Light source** 2 red LEDs  
**Rated voltage** 12 V and 24 V  
**Protection class** IP 6K7, IP 6K9K  
**ECE test mark** E 5878

**2XS 959 855-401** With 500 mm cable and black end caps  
**2XS 959 855-441** With 2,500 mm cable and black end caps  
**2XS 959 855-451** With 500 mm cable and white end caps

Spare parts / accessories

**9GD 958 028-001** Contour seal  
**9GD 980 867-507** Flat, rectangular seal  
**9HD 980 858-008** Black end caps  
**9HD 980 858-018** White end caps

CLEARANCE LAMPS



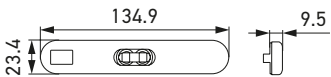
Clearance lamp

For vertical surface mounting

**Rated voltage** 12 V  
**ECE test mark** E 3011

**2XS 008 479-001** Red / white with grey base plate, left, with 12 V bulb  
**2XS 008 479-011** Red / white with grey base plate, right, with 12 V bulb  
**2XS 008 479-061** Red / white with grey base plate, left, without bulb  
**2XS 008 479-071** Red / white with grey base plate, right, without bulb  
**2XS 008 479-081** Red / white with white base plate, left  
**2XS 008 479-091** Red / white with white base plate, right  
**2XS 008 479-107** Red with grey base plate, PO function silver-coloured, opaque, left  
**2XS 008 479-117** Red with grey base plate, PO function silver-coloured, opaque, right

REFLEX REFLECTORS



LED clearance lamp

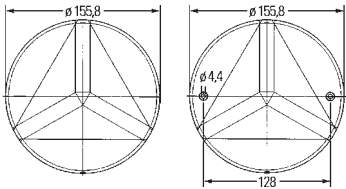
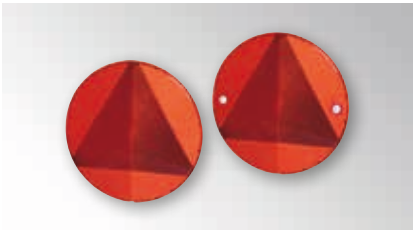
For horizontal surface mounting, self-adhesive, with 6.3 mm flat plug connections, red lens

**Light source** 2 red LEDs  
**Rated voltage** 12 V  
**Protection class** IP 5K9K  
**ECE test mark** E 3017

**2XS 009 226-107** 12 V

Accessories

**9GT 186 597-007** Mating connector grommet



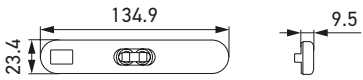
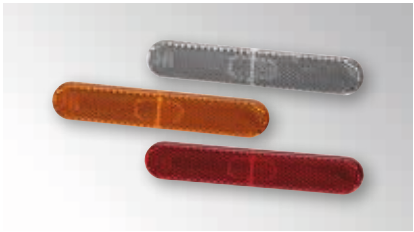
Reflex reflector

Red, effective reflex reflector surface, 95 cm²

**ECE test mark** E 023191

**8RA 343 220-007** Self-adhesive  
**8RA 343 220-017** With 2 holes for fastening screws

REFLEX REFLECTORS



Reflex reflector

For horizontal or vertical surface mounting, self-adhesive, suitable for combination with lamp series 009 226

ECE test mark

020668

8RA 009 226-137

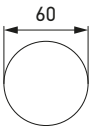
Red

8RA 009 226-127

Amber

8RA 009 226-117

White



Reflex reflector

Self-adhesive, effective reflex reflector surface 22 cm², with plastic base plate

ECE test mark

3535

8RA 002 014-281

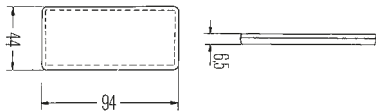
Red

8RA 002 014-301

Amber

8RA 002 014-291

White



Reflex reflector

For horizontal or vertical surface mounting, self-adhesive

ECE test mark

0292031

8RA 003 326-031

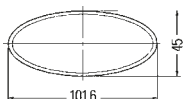
Red

8RA 003 326-041

Amber

8RA 003 326-051

White



Reflex reflector

For horizontal or vertical surface mounting, self-adhesive, suitable for combination with lamp series 964 295

ECE test mark

3190

8RA 343 160-007

Red

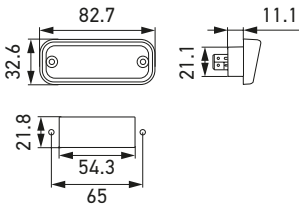
8RA 343 160-027

Amber

8RA 343 160-017

White

LICENCE PLATE LAMPS



LED licence plate lamp

For flush mounting above or below the licence plate, 2 lamps required for licence plate lighting

Light source

4 LEDs

Rated voltage

12 or 24 V

Protection class

IP 6K9K

ECE test mark

2609

2KA 010 278-311

Licence plate 520 x 120 mm  
12 V, with 6.3 x 0.8 mm flat connector

2KA 010 278-011

Licence plate 520 x 120 mm  
24 V, with 6.3 x 0.8 mm flat connector

2KA 010 278-617

Licence plate 520 x 120 mm  
12 V, with 1,000 mm cable

2KA 010 278-607

Licence plate 520 x 120 mm  
24 V, with 1,000 mm cable

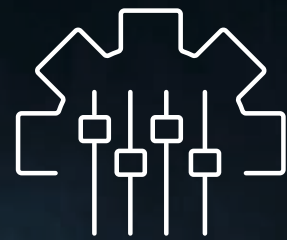
2KA 010 278-411

Licence plate 340 x 240 mm  
12 V, with 6.3 x 0.8 mm flat receptacles, 1 lamp required for licence plate lighting



# DISCOVER ...

... Customised Excellence.



INNOVATIVE STYLING PAIRED WITH OUTSTANDING PERFORMANCE.

Exclusive solutions from HELLA for caravans and motorhomes.  
Our rear lamps never fail to impress with their extraordinary design and innovative technology.



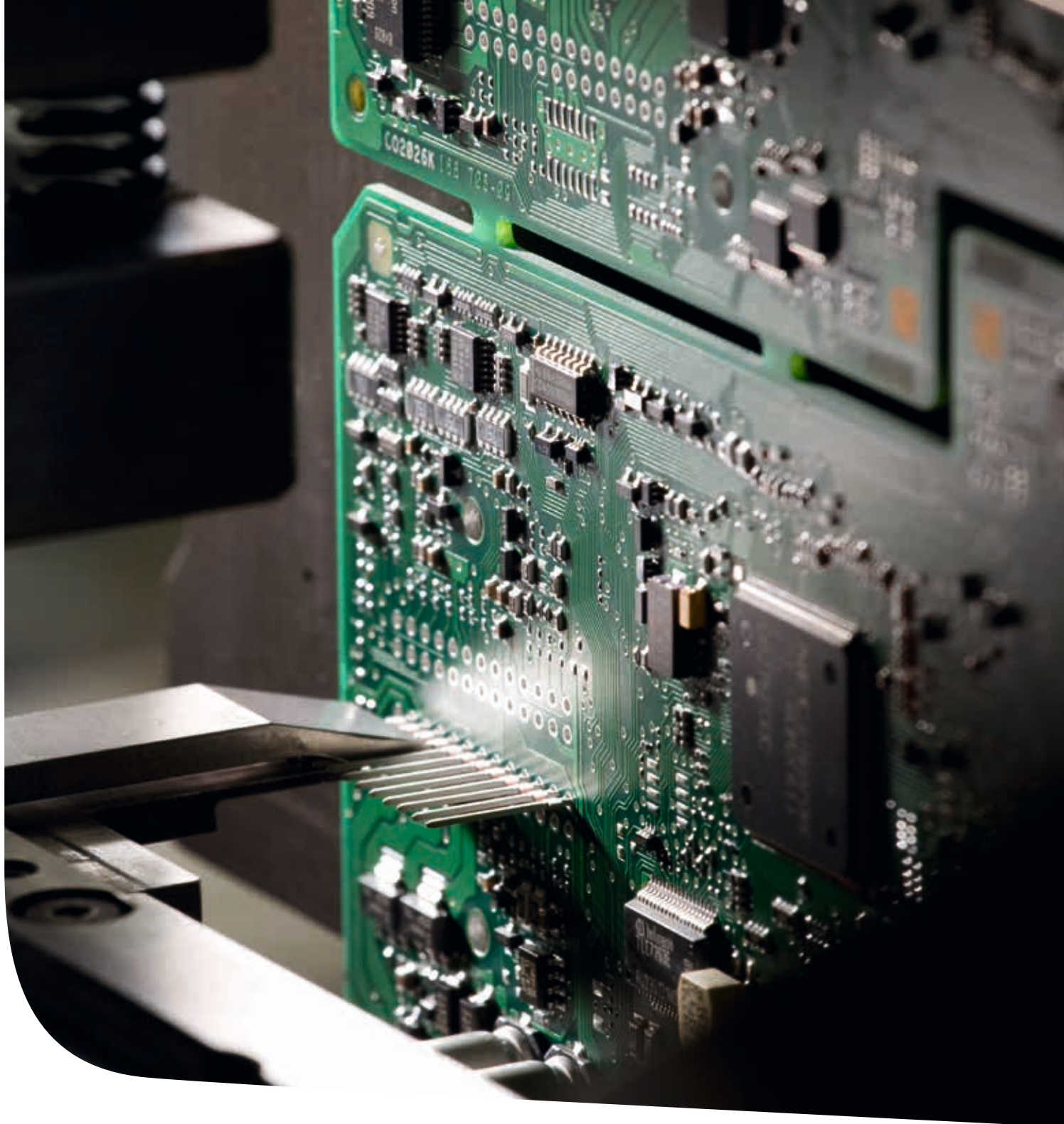
## FENDT-CARAVAN: UNIQUE DESIGN – ELEGANT AND DISTINCTIVE

- Integrated light curtain technology for homogeneous light and striking tail light line
- Elegant, automotive appearance created by dark lamp styling
- Slim and distinctive signature rear thanks to LED EdgeLight technology



Individualised rear lighting to meet the highest demands. We develop customised solutions that are tailored to suit your individual requirements. Put your trust in our know-how and let your rear lighting requirements, too. Benefit from the synergies that HELLA generates through its many years of international experience in the development of original automotive equipment.



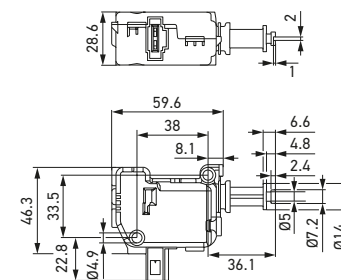


## Electronics

HELLA's electronic components have proven themselves millions of times over in numerous challenging situations. No wonder they are the first choice for caravans and motorhomes when it comes to reliable and cost-efficient operation. Our customised and high-quality solutions are designed to increase energy efficiency, to minimise CO<sub>2</sub> emissions and to maximise safety

and comfort. Discover our versatile electronics programme: from sensors through actuators right up to all other kinds of components, we offer a wide range of products for diverse areas of application. Our expertise and the many years of experience we have gained make us the ideal partner to meet your individual requirements.

## ACTUATORS



### Linear actuators

Electrical locking/unlocking and closing of all doors (locking systems), flaps, sunroofs, seats, covers, bonnets, glove compartments

<b>Voltage range</b>	9 – 15 V
<b>Mainspring reset</b>	None
<b>Functional stroke</b>	≤ 18 mm
<b>Operating temperature</b>	-40 °C to +80 °C

### Electrical retraction and extension

**6NW 009 203-417** Actuating force 30 – 140 N, IP 5K0

**6NW 009 203-637** Actuating force 30 – 160 N, IP 5K4

### Electrical retraction, extension with mainspring

**6NW 009 203-467** Actuating force 30 – 170 N, IP 5K0

**6NW 009 203-477** Actuating force 30 – 170 N, IP 5K4

### Electrical extension, retraction with mainspring

**6NW 009 203-497** Actuating force 30 – 170 N, IP 5K0

**6NW 009 203-501** Actuating force 30 – 170 N, IP 5K4

The actuating force depends on the operating voltage and ambient temperature.

## LIGHTING AND BODY COMPONENTS



### Vehicle electrical system adapter / PWM module

The control unit is used in vehicles which have pulse width modulation (PWM) on their supply lines for headlamps. Normally automotive manufacturers use PWM to achieve a constant voltage of almost 13.2 V at the bulbs, even if the battery voltage is, for example, 15 V.

<b>Operating voltage</b>	9 – 16 V
<b>Rated voltage</b>	12 V
<b>Dimensions (L/W/H)</b>	approx. 155 / 67 / 38 mm
<b>Operating temperature</b>	-40 °C to +80 °C

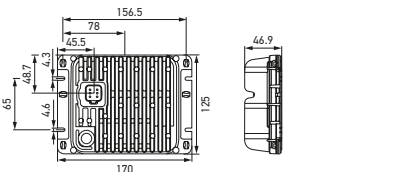
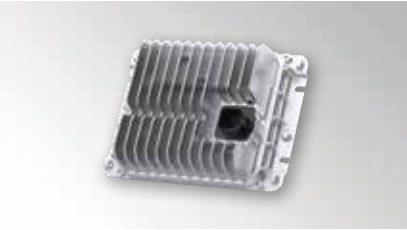
**5DS 167 819-807** 12 V, with wiring harness

### ELECTRICS & ELECTRONICS

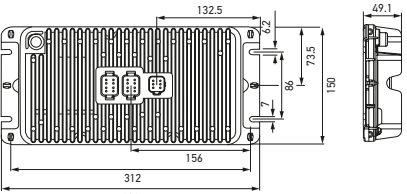
For more detailed information, take a look at our electronics brochure. There you will find comprehensive insights into our range and also detailed technical specifications.







Basic control unit



Premium control unit

#### LED lamp control unit

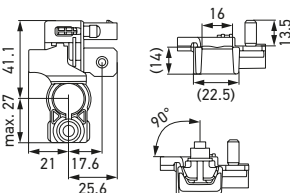
Basic control unit: control unit is **only** responsible for monitoring the direction indicators.

Premium control unit: control unit is responsible for monitoring **the whole** rear lighting (tail light, stop light, direction indicator light, reverse light and rear fog light).

Operating voltage	9 – 16 V (12 V), 18 – 32 V (24 V)
Operating temperature	-40° C to +50° C
Protection class	IP 6K9K

	<b>Basic control unit</b>
5DS 227 488-001	12 V, with 6-pin socket housing
5DS 227 488-101	24 V, with 6-pin socket housing
	<b>Premium control unit</b>
5DS 227 489-101	24 V, with 8-pin socket housing, 1 stop light channel

#### ENERGY MANAGEMENT



#### Intelligent battery sensor (IBS), Generation II

Accurate measurement of battery condition parameters: voltage, current and temperature

Voltage range	6 – 18 V
Operating temperature	-40 °C to +105 °C
Max. Battery capacity	500 Ah
Protection class	IP 6K9K
Mating connector*	Hirschmann 872-857-565

6PK 013 824-001	IBS 12 V, Gen. II
9MK 230 836-007	Battery pole adapter for IBS 12 V, Gen. II

\* This accessory is not included in the scope of delivery. Available from Hirschmann Automotive.

# DISCOVER ...

## ... the Intelligent Battery Sensor.



### INTELLIGENT ENERGY MANAGEMENT – ALWAYS SAFE ON THE ROAD

The IBS monitors the battery and delivers input for the central energy management of the vehicle. It can be easily integrated into the vehicle electrical system electronics of motorhomes via the CI bus interface and enables direct communication with LCD control panels or with smartphone applications.

## EFFICIENCY MEETS RELIABILITY

### SMALL SENSOR– HUGE EFFECT

- Space-saving and compact sensor
- Accurate measurement of battery condition parameters: voltage, current and temperature
- Determining of battery condition parameters: state of charge [SOC], state of health [SOH] and state of function [SOF]
- Simple electrical and mechanical integration







## Electrics

Experience perfection in the cockpit of your motorhome with the HELLA rocker switches. Our team of development engineers has worked intensively to create a switch solution that sets new standards when it comes to design, feel and functionality. Timeless aesthetics, precisely lasered symbols and reliable backlighting provided by up to four LEDs make HELLA's rocker switches unique.

With their self-cleaning contacts, they enable the switching of even the smallest currents. In addition, such modules can be configured in a very flexible way so as to meet individual requirements. Design your motorhome cockpit in just the way you want it and enjoy full control there.

Discover the quality and the features of HELLA rocker switches and experience a cockpit that brings together perfectly comfort and ease of use.

### SWITCH SERIES 3100



The waterproof rocker switch series for electrical systems meets the requirements of protection class IP 68. The lasered symbols are illuminated by integrated LEDs.

**The strengths of the product range:**

- IP 68 in accordance with test standard IEC EN 60529
- Highly reliable in extreme conditions
- The most diverse switch functions in 12 / 24 V:
  - Normally open contact / changeover contact, buttons / grid
  - Locking functions, warning light switch
- Wide range of standard and customised lasered symbols
- Up to 2 LED light sources enable direct symbol illumination
- Easy to install, either directly in the mounting hole or using modular mounting frames
- Warning lamp in the same design for safety-relevant feedback

Technical data		Accessories	
Mounting hole	21.1 mm x 37.0 mm		<b>Modular</b>
Rocker material	PC transparent, lacquer finish	9AR 169 209-102/7	End piece left, right
Housing material	PBT	9AR 169 208-102/7	Centre piece
Flat connector	6.3 x 0.8 mm		
Coating of switch contacts	CuZn, silver-coated		
Light source	Max. 2 LEDs 1 x orientation lighting, green 1 x function light, red Warning lamps available in amber and green	9HB 172 229-101/7	<b>Cover plate</b>
Symbol type	Lasered		<b>Female connector housing</b>
Protection class	IP 68, connector side: IP 66	8JD 010 076-102/7	Type I
Operating temperature	-40 °C to +85 °C	8JD 010 076-112/7	Type II
Dashboard thickness	For direct installation: 1.6 mm to 6.3 mm	8JD 010 076-122/7	Type III
On request	12 V		<b>Flat receptacle 6.3 mm</b>
On request	24 V	8KW 744 882-003	0.5 mm² – 1 mm²
		8KW 744 825-003	1.5 mm² – 2.5 mm²
		8PE 197 631-001	<b>Dismantling tool</b>



### HELLA ROCKER SWITCH CONFIGURATOR

Configure your very own switches yourself! You can select any switch function, the operating voltage, combinations of symbols and also the matching accessories with only a few clicks. Your choices can easily be transferred to a favourites list, printed out or sent as an online request. Your request is then processed individually on a project-specific basis. The required symbol configuration is provided and a customer-specific article number given.

[www.hella.com/switch](http://www.hella.com/switch)



SWITCH SERIES  
4100



The rocker switch series with self-cleaning contacts is suitable for modern electrical and electronic systems. This means that reliable switching even of small currents is guaranteed. The series stands out from the crowd with its timeless design and with lasered symbols illuminated by integrated LEDs.

**The strengths of the product range:**

- Modular design of the switch
- Achievement of the most diverse 12 / 24 V switch functions:
  - Normally open contact / changeover contact, buttons / grid
  - Locking function, warning light switch
- Wide range of standard and customised symbols
- Selective, reliable and durable illumination of the symbols thanks to up to 4 LED light sources
- Easy to install, either directly in the mounting hole or using modular mounting frames
- Warning lamps in the same design for safety-related feedback

Technical data	
Mounting hole	19.8 mm x 41.8 mm
Rocker material	PC transparent, lacquer finish
Base plate material	PA white, housing PA black
Coating of switch contacts	AgNi
Light source	Max. 4 LEDs 2 x orientation lighting, green 2 x function light, red Warning lamps also available in blue and amber
Symbol type	Lasered
Protection class	IP 54
Operating temperature	-40 °C to +85 °C
Dashboard thickness	For directly installed switches, 2 mm
<hr/>	
On request	12 V
On request	24 V

Accessories	
	<b>Mounting frame</b>
9AR 168 396-002/7	Simple
<hr/>	
	<b>Modular</b>
9AR 169 209-002/7	End piece, left
9AR 169 210-002/7	End piece, right
9AR 169 208-002/7	Centre piece
<hr/>	
9HB 172 229-002/7	<b>Cover plate</b>
<hr/>	
8JD 010 076-002/7	<b>Female connector housing, 10-pin</b>
<hr/>	
	<b>Flat receptacle 2.8 mm</b>
8KW 863 934-003	Junior Power Timer 0.5 mm² – 1 mm²
8KW 863 934-023/4	Junior Power Timer 1.0 mm² – 2.5 mm²

BATTERY ISOLATOR SWITCH



Battery isolator switch	
Optional switching for plus or minus cable, switch key can be removed in off-position, fastening with 2 screw connections; load capacity: max. 1,000 A for 12 sec. (-002), for 10 sec. (-071); protection class: IP 56	
6EK 002 843-002	With key, standard version, 50 A continuous load
6EK 002 843-071	With knob, seawater resistant
6EK 002 843-057	With key, similar -00, additionally with silver-plated contacts
6EK 002 843-131	With key, sealed BTS (IP 69K), 250 A continuous load

BREAKDOWN ACCESSORIES

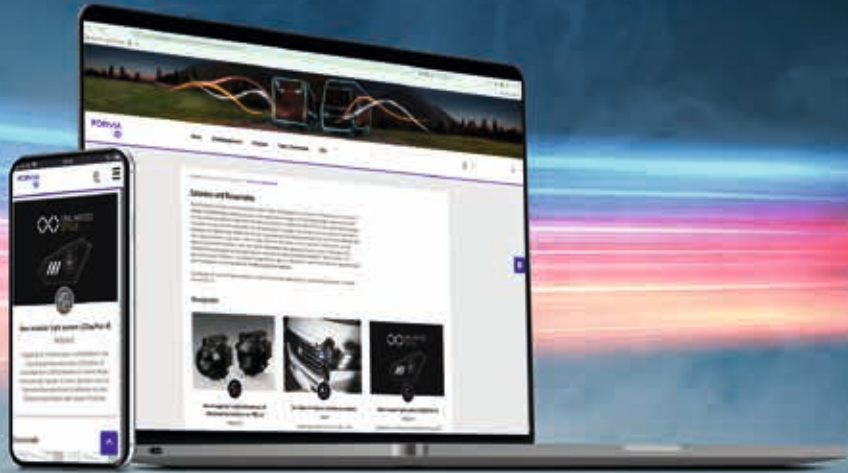


Hazard warning lamp Model 3003 / 3003 ACCU	
Type-approved; with fastening bracket (for battery operation via 5 mono cells, not included in scope of delivery). <b>ACCU variant:</b> Type-approved, automatic battery charging while engine is running; automatic changeover 12 / 24 V, operating time in flashing mode 40 h or 7 h as per working light; charging cradle and lead-gel battery included in scope of delivery	
2XW 007 146-001	Modell 3003
2XW 007 146-011	Modell 3003 ACCU

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Photo: Dethleffs GmbH & Co. KG

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