



PRODUCT OVERVIEW
CARAVANS AND
MOTORHOMES



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FENDT
COROLLAN

DON FC 2020

HAMANT

560



OFF TO THE NEXT ADVENTURE!

Do you know the feeling when you have locked the front door behind you, take the wheel and then turn onto the road with your caravan or motorhome? Camping has always been about this joy of discovery, this exciting feeling of freedom and independence. But thanks to the constant development of technology and design, today's vehicles have reached a level of perfection that makes being on the move more comfortable than ever before.

And this is not least thanks to HELLA. We transfer our competence from large series production to small series and develop modular designs and customer-specific solutions that enable a high degree of flexibility. The popular Shapeline light series, for example, is designed as a modular system with a variety of light functions that give your vehicles an individual yet consistent light signature.

As adventure travel and ecological camping are becoming increasingly important, we have also compiled a selection of our auxiliary headlamps for you in this brochure. With these and other innovative lighting and electronic solutions, your caravans and motorhomes are ready for any eventuality, even away from the classic camping site. We recommend that you drop by and see for yourself.

HISTORY

A look in the rear-view mirror | When a caravan or motorhome sets off somewhere in the world, HELLA is regularly on board as well. A tradition going back more than 60 years. Hop in - we'll take you on a little time travel full of inspiring advances in design and technology!



1956

HELLA 4-part universal triangle reflex reflector and universal tail stop light, debut in the Westfalia camper van 2 (at the time still without indicators as standard)



1973

HELLA universal rear combination light series 2844



1986

HELLA universal 4-chamber rear combination light series 4460



1996

HELLA Caraluna I



2000

Customised multifunction light for Hobby



2004

HELLA Caraluna II Plus with chrome effect and clear lens



2005

HELLA universal light series OVAL for Bürstner and Chateau



2006

Customised multifunction light for Hobby

1965

HELLA universal 2-chamber rear combination light series 1305



1978

HELLA universal 3-chamber rear combination light series 3409



1989

HELLA universal 3-chamber rear combination light series 6459 with patterned lens



1998

HELLA modular light series 122 mm, single and multi-function lights



2002

HELLA Caraluna II Plus



2005

Customer-specific rear combination light for Bürstner



2006

Modular, customised multi-function light series for Hymer





2008

HELLA Caraluna Modular



2009

A new addition to the HELLA Caraluna family: Caraluna vertical with chrome effect

2009

LED upgrade of the HELLA modular light series 122 mm



2010

Customer-specific multifunction light for Fendt



2011

Customised multifunction light for Knaus with LED light guide technology for the tail light

2011

Customised multifunction light for the Hobby Premium series



2012

Customised multifunction light for Adria with LED light guide technology for the tail light

2013

Customised multifunction light for Carthago with "Glowing Body" technology for the tail light and stop light



2014

HELLA Caraluna X: a universal multi-function light with characteristic night design

2015

Caraluna X Innoluna: customised multifunction light for Dethleffs



2016

Customer-specific multifunction light for Hymer

2017

Shapeline light series (example: Style series combination)



2018

Technical and colour design update with additional design covers and new base colour for Fendt

2018

Technical and colour design update with additional design covers and new base colour for Adria



2020

New products from HELLA - look forward in anticipation to the innovations HELLA has in store for you in the future



KEY OF ICONS



ECE

This product is tested in line with ECE guidelines.

Further information about the ECE certification mark can be found on the relevant products.



Asymmetrical light distribution

The product complies with ECE regulation R112, which regulates asymmetrical low beam for passenger cars, buses, commercial vehicles and most larger vehicles.



Symmetrical light distribution

The product complies with ECE regulation R113, which regulates symmetrical low beam for many agricultural vehicles and lighter vehicles (2, 3 or 4 wheels).



SAE

Product has SAE type approval.



Vehicle electrical system voltage

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



Operating temperature

Thermal management and an optimised housing design guarantee full functionality for all operating temperatures through product testing e.g. from -40°C to 60°C



Dust and water protection class IP

International Protection (IP) according to DIN 40050 Part 9. Specific definition for road vehicles:

First digit:

Dust and dirt protection

5K = Dust-protected

6K = Dust protection

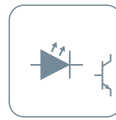
Second digit:

Protection against water

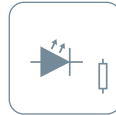
4K = protection against splashing water from any direction with increased pressure

7 = protection against temporary immersion

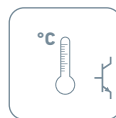
9K = protection against water during high-pressure/steam-jet cleaning



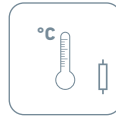
Active



Passive



Active



Passive



Electronic circuit

Basically, two different circuits are possible for LED lights.

Active (AE):

LED current regulation through active electronics

Passive (PT):

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

Thermal Management

Active:

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

Passive:

Optimised layout of the components for even temperature distribution and spread.

Overvoltage protection

Supplement to the electronics for protecting the LED against high voltage / current in the vehicle's electric system as per ISO 7637-2.

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

- Jump-starting
- Faulty control units
- Load Dump Impulse (incorrect battery contact)

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



Bipolarity of the lamps

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

The semiconductor in an LED must always be operated with the specified polarity. Incorrect polarity will damage the LED so LED lights are generally equipped with reverse polarity protection (diode). However, this function only works if "+" and "-" are correctly connected. If a light 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 connection with, for example, indentation clamping technology. However, the additional components on the printed circuit board also increase the costs.



Polarity reversal protection

Even if the connecting cable is connected 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 light is not constructed according to EMC specifications, and thus is not certified, then interaction between it and other safety-relevant electronic systems may occur.



Indicator failure control according to ECE R48

Regulation according to ECE-R48:

The driver must be informed if the direction indicator function on the vehicle fails. To remain legally compliant, this requirement must also be fulfilled for LED lights. Such a requirement is fulfilled by means of an integrated self-diagnostic unit on the printed circuit board of the LEDs and an electrical pulse. Since the end of 2011, this HELLA failure monitor/control with pulse has been ISO standard: ISO 13207.

If the indicator failure check is not guaranteed, the General Certification for a vehicle expires. Therefore it is not permitted to operate vehicles without an indicator failure control in countries subject to ECE R48.



Integrated short-circuit fuse

Protected against short circuit by means of an amp fuse.



Approved for dangerous goods transports

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



Automotive Electronic Council

Components qualified according to automotive standard. Electronic components (LEDs, diodes, ...) governed by automotive specifications are more rugged and reliable than electronic components designed for industry.



Automotive Safety Integrity Level

Product electronics are developed according to the most up-to-date methods and the ISO 26262 safety guidelines.



Tourist solution (passive)

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

IP PROTECTION CLASSES

What is an IP protection class?

IP stands for International Protection. The IP protection classes are defined in DIN 40050 Part 9. The purpose of the norm is to specify precisely the resistance of electrical equipment components for motor vehicles against the penetration of solid foreign matter, dust and water. The different degrees of protection important for signalling systems are explained below.

Protection category IP 5K4K

Dust may only penetrate to the extent that function and safety are not impaired. Water that is sprayed from every direction at increased pressure against the housing must not have any damaging effect: water pressure approx. 4 bar.

Protection class IP 9K

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

Protection class: IP 6K7

Dust must not penetrate. Even during temporary submersion, no water is to penetrate.

HELLA products meet the highest requirements and are ideally protected against all kinds of weather conditions.



DESIGN FREEDOM AT THE CLICK OF A MOUSE

The HELLA Shapeline online configuration tool turns you into a lighting designer: With a few clicks, make your own vehicle light design for the front, sides, and rear – and see the result directly after, as applied convincingly to a vehicle outline.

www.hella.com/shapeline



HELLA SHAPELINE BROCHURE

The complete product range in one brochure. Comprehensive product information about the Shapeline range will help you to select the right lamps. You will also find the current brochure on:

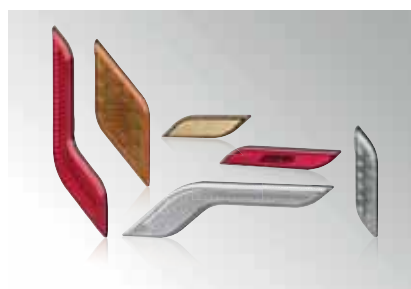
www.hella.com/shapeline



DESIGN YOUR LIGHT – WITH HELLA SHAPELINE!

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

STYLE DESIGN



TECH DESIGN





SHAPELINE
DESIGN YOUR LIGHT

THE HIGHLIGHTS

The HELLA Shapeline series provides design freedom for almost every kind of application!

- **Function diversity:** a countless variety of individually combinable LED lighting functions means the fulfillment of virtually every wish.
- **Flexible design:** whether you prefer the classic straight lines of the Shapeline Tech design or the dynamically curved Shapeline Style design – the choice is yours.
- **High recall level:** with Shapeline you will achieve a unique, yet nevertheless consistent light signature for your vehicles.
















YOUR ADVANTAGES









































Shapeline offers a huge variety of shapes and combination options paired with a technically optimised product design.

- **Innovation:** the modular Shapeline series consists entirely of LED technology – durable and energy-efficient.
- **Individuality:** now you can design your very own light signature for the front, side and rear end of your vehicle thanks to customised lamp combinations and layouts.
- **Variability:** thanks to Shapeline, even manufacturers who produce small batches are able to lend their vehicles a unique look.

HELLA SHAPELINE MODULE OVERVIEW

The modular HELLA Shapeline product range provides a variety of different light functions that can be individually combined with one another. All lights are available in two different designs: the classic straight-line Shapeline Tech design and the dynamic curved Shapeline Style design.

	Style	Tech
FRONT	POSITION LIGHTS  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-...
	INDICATORS  2BA 013 334-... 2BA 013 334-... 2BA 013 335-... 2BA 013 335-...	 2BA 013 330-... 2BA 013 398-...
	DAYTIME RUNNING AND POSITION LIGHTS  2PT 014 627-...	
SIDE	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 LIGHTS	 2XS 013 327-...
	SIDE MARKER LIGHTS  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-...

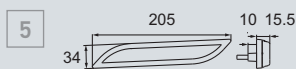
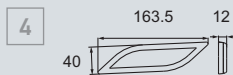
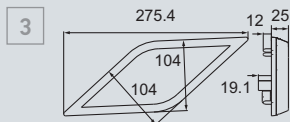
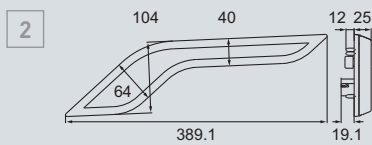
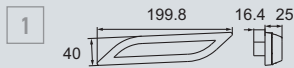
Style	Tech
POSITION LIGHTS	
 2SA 013 324-...	 2SA 013 323-...
STOP TAIL LIGHTS	
      2SB 013 342-... 2SB 013 342-... 2SB 013 399-... 2SB 013 399-... 2SB 013 343-... 2SB 013 343-...	 2SB 013 341-...
INDICATORS	
      2BA 013 331-... 2BA 013 331-... 2BA 013 331-... 2BA 013 331-... 2BA 013 333-... 2BA 013 333-...   2BA 013 332-... 2BA 013 332-...	  2BA 013 330-... 2BA 013 330-...
STOP TAIL DIRECTION INDICATORS	
  2SD 013 342-... 2SD 013 342-...	 2SD 013 341-...
REVERSE LIGHTS	
     2ZR 013 345-... 2ZR 013 345-... 2ZR 013 401-... 2ZR 013 401-... 2ZR 013 401-...	 2ZR 013 344-...
REAR FOG LIGHTS	
       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-...

REAR

HELLA SHAPELINE VERSATILE MODULE COMBINATIONS

Our Shapeline range offers you countless assembly 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.

DIMENSIONAL DRAWINGS



FRONT VIEW EXAMPLE

Daytime running light and position light Slim, front

Homologation	ECE/SAE
Number of LEDs	6
Connectors and wiring	Integrated 3-pin AMP-SUPERSEAL
Dimensional drawing	1

2PT 014 627-021



Direction indicator Wing, front

Homologation	ECE/SAE
Number of LEDs	12
Connectors and wiring	Integrated 2-pin AMP-SUPERSEAL
Dimensional drawing	2

2BA 013 334-021



REAR VIEW EXAMPLE I

Tail-stop light Wing

Homologation	ECE/SAE
Number of LEDs	30
Connectors and wiring	Integrated 3-pin AMP-SUPERSEAL
Dimensional drawing	2

2SB 013 399-031



Direction indicator Wing, rear

Homologation	ECE
Number of LEDs	30
Connectors and wiring	Integrated 2-pin AMP-SUPERSEAL
Dimensional drawing	2

2BA 013 333-031



Rear fog light

Homologation	ECE/SAE
Number of LEDs	12
Connectors and wiring	Integrated 3-pin AMP-SUPERSEAL (with 2-pin function)
Dimensional drawing	3

2NE 013 345-031



Reflex reflector, rear

Homologation	ECE/SAE
Number of LEDs	-
Connectors and wiring	-
Dimensional drawing	4

8RA 013 347-061



REAR VIEW EXAMPLE II

Direction indicator Wing, rear

Homologation	ECE
Number of LEDs	30
Connectors and wiring	Integrated 2-pin AMP-SUPERSEAL
Dimensional drawing	2

2BA 013 333-061



Tail-stop light Wing

Homologation	ECE/SAE
Number of LEDs	30
Connectors and wiring	Integrated 3-pin AMP-SUPERSEAL
Dimensional drawing	2

2SB 013 399-021



Reflex reflector, rear

Homologation	ECE/SAE
Number of LEDs	-
Connectors and wiring	-
Dimensional drawing	4

8RA 013 347-061



Side marker light, amber

Homologation	ECE/SAE
Number of LEDs	3
Connectors and wiring	AMP SUPERSEAL, 250 mm connector, overmoulded
Dimensional drawing	5


2PS 013 305-011





Protection class: IP X9K, IP 6K7


Direction indicator, side, cat. 6

Homologation	ECE
Number of LEDs	2
Connectors and wiring	500 mm cable, open-ended
Dimensional drawing	

2BM 013 339-021




Reverse light

Homologation	ECE/SAE
Number of LEDs	4
Connectors and wiring	Integrated 3-pin AMP-SUPERSEAL (with 2-pin function)
Dimensional drawing	

2ZR 013 345-131




Side marker light, amber

Homologation	ECE/SAE
Number of LEDs	3
Connectors and wiring	AMP SUPERSEAL, 250 mm connector, overmoulded
Dimensional drawing	

2PS 013 305-011




Reverse light Slim

Homologation	ECE/SAE
Number of LEDs	6
Connectors and wiring	Integrated 2-pin AMP-SUPERSEAL
Dimensional drawing	

2ZR 013 401-051





FRONT LIGHTING

Look ahead - with front lighting solutions from HELLA. On long journeys and on dark parking lots, nothing works without powerful headlights. They are, so to speak, the eyes of the vehicle and ensure that you and your passengers are safe on the road.

The HELLA 90 mm front lighting modules are specially attuned to the requirements of commercial and agricultural vehicles and are useful for virtually all vehicles and situations due to their functional flexibility. The modules are small, but powerful - and offer a high degree of flexibility thanks to the modular concept, especially for caravans and motorhomes. Thanks to the future-focused HELLA upgrade concept, traditional halogen modules can also be retrofitted with the efficient powerful LED technology that already characterises most of the modules.

90 MM MODULES RANGE OVERVIEW

The heavy duty HELLA 90 mm headlamps are used in many types of vehicle. Thanks to their modular design, they offer maximum flexibility for a wide range of possible applications and a customised front design.











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

The difference between the individual series of the 90 mm range lies in the detail. The L 4060 LED modules in particular impress with their outstanding light output and additional lighting functions. The daylight-like light colour of the LED modules considerably improves visibility and concentration during night-time journeys and thus increases safety. The L70 and L5570 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.



HELLA 90 MM MODULE HEADLAMPS STAND FOR

- PREMIUM QUALITY
- RELIABILITY
- AND COST EFFICIENCY.

	Low Beam	High Beam	Low beam and high beam	Fog light
LED	PERFORMANCE			
			 	
	L 4060	L 4060	Bi-LED L 70 1st gen. Bi-LED L 5570 2nd gen.	L 4060
	ESSENTIAL			
				
	R 80	R 80		
HALOGEN	PERFORMANCE			
				

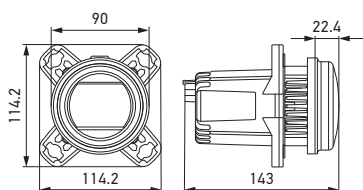


MODULE SELECTOR

A couple of clicks away from the right module headlight: simply use the filter to select the required criteria such as the lighting function or homologation and you'll see suitable products right away.

www.hella.com/headlamp-modules

90 MM MODULES/LED/PERFORMANCE
LED LOW BEAM

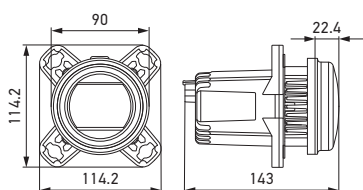


LED low beam headlamp L 4060

Module headlamp with 40 x 60 mm polycarbonate lens, robust die-cast aluminium housing

Rated voltage	Multi-voltage (12/24 V)
Protection class	IP X9K, IP X4K, IP 5KX
ECE test mark	1BL 012 488-001: Ⓢ 3831 1ML 012 488-011: Ⓢ 4090 1BL 012 488-101: Ⓢ 3881 1ML 012 488-111: Ⓢ 4090

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



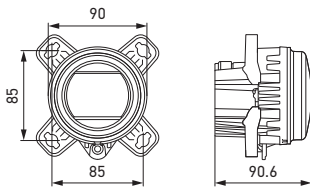
LED low beam headlamp L 4060 with daytime running light /position light

Module headlamp with 40 x 60 mm polycarbonate lens, robust die-cast aluminium housing

Rated voltage	Multi-voltage (12/24 V)
Protection class	IP X9K, IP X4K, IP 5KX
ECE test mark	1BL 012 488-021: Ⓢ 3831 1ML 012 488-031: Ⓢ 4090 1BL 012 488-121: Ⓢ 3881 1ML 012 488-131: Ⓢ 4090

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

90 MM MODULES/LED/PERFORMANCE
LED HIGH BEAM

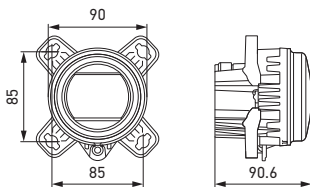


LED high beam headlamp L 4060

Module headlamp with 40 x 60 mm polycarbonate lens, robust die-cast aluminium housing

Rated voltage	Multi-voltage (12/24 V)
Protection class	IP X9K, IP X4K, IP 5KX
ECE test mark	Ⓔ 3831

- 1F0 011 988-021** With pre-mounted carrier frame
- 1F0 011 988-121** For Performance mount

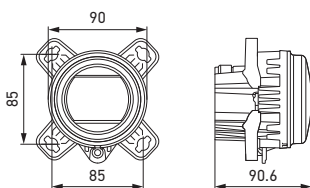


LED high beam headlamp L 4060, with daytime running light/position light

Module headlamp with 40 x 60 mm polycarbonate lens, robust die-cast aluminium housing

Rated voltage	Multi-voltage (12/24 V)
Protection class	IP X9K, IP X4K, IP 5KX
ECE test mark	Ⓔ 3831

- 1F0 011 988-031** With pre-mounted carrier frame
- 1F0 011 988-131** For Performance mount



LED high beam headlamp L 4060, with direction indicator

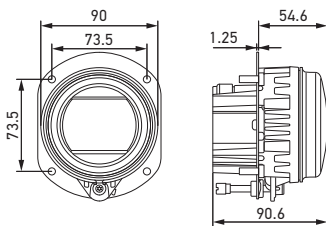
Module headlamp with 40 x 60 mm polycarbonate lens, robust die-cast aluminium housing

Rated voltage	Multi-voltage (12/24 V)
Protection class	IP X9K, IP X4K, IP 5KX
ECE test mark	Ⓔ 3831

- 1F0 011 988-081** With pulse generator and preassembled carrier frame
- 1F0 011 988-071** Without pulse generator and with preassembled carrier frame
- 1F0 011 988-181** For Performance mount, with pulse generator
- 1F0 011 988-171** For Performance mount, without pulse generator

Pulse generator: malfunctions of the main beam with direction indicator module can usually be detected by means of the vehicle control unit. The detection stages are as follows: direction indicator (DI): < 400 mA| high beam (HB): < 800 mA. If your vehicle's control unit cannot detect stage < 400 mA level for DI, the pulse generator will increase the amperage in an interval of 100 to 120 ms to simulate the level consistent with a standard 12 V (21 watt) bulb.

90 MM MODULES/LED/PERFORMANCE
LED FOG LIGHT

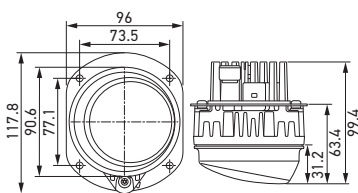


LED fog light L 4060

Module headlamp with 40 x 60 mm polycarbonate lens, robust die-cast aluminium housing, pre-assembled carrier frame

Rated voltage	Multi-voltage (12/24V)
Protection class	IP X9K, IP X4K, IP 5KX
ECE test mark	Ⓔ 3831

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



LED fog light L 4060, with cornering light

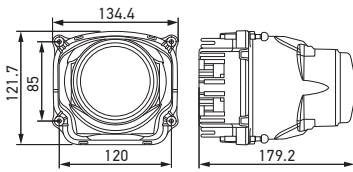
Module headlamp with 40 x 60 mm polycarbonate lens, robust die-cast aluminium housing, pre-assembled carrier frame

Rated voltage	Multi-voltage (12/24V)
Protection class	IP X9K, IP X4K, IP 5KX
ECE test mark	Ⓔ 3832

1N0 011 988-061	Module, right
1N0 011 988-051	Module, left
8JD 156 151-807¹⁾	Connector plug set
8KB 163 160-801²⁾	Harness
5DF 009 244-007³⁾	Control electronics



90 MM MODULES/LED/PERFORMANCE
BI-LED LOW AND HIGH BEAM



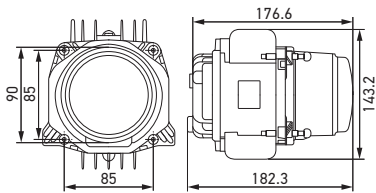
The **L 5570 modules** are equipped with an integrated function monitoring system that monitors power consumption as an alternative to the vehicle. There is a separate PIN for the function confirmation signal.

Bi-LED low and high beam headlamp L 5570, 2nd generation

Module headlamp with 55 x 70 mm polycarbonate lens, robust die-cast aluminium housing, hardened plastic cover lens, no moving parts

Rated voltage	Multi-voltage (12/24V)
Protection class	IP X9K, IP X4K, IP 5KX
ECE test mark	Right-hand traffic: Ⓜ 4208 Left-hand traffic: Ⓜ 4209

1AL 012 758-001	Right-hand traffic, ECE, 4-pin, FEP connector
1LL 012 758-011	Left-hand traffic, ECE, 4-pin, FEP connector
1AL 012 758-021	Right-hand traffic, SAE, 4-pin, FEP connector
1AL 012 758-101	Right-hand traffic, ECE, 4-pin, DEUTSCH connector
1LL 012 758-111	Left-hand traffic, ECE, 4-pin, DEUTSCH connector
1AL 012 758-121	Right-hand traffic, SAE, 4-pin, DEUTSCH connector



Bi-LED low and high beam headlamp L 70, 1st generation

Module headlamp with 70 mm DE lens

Rated voltage	Multi-voltage (12/24V)
Protection class	IP X9K, IP X4K, IP 5KX
ECE test mark	Right-hand traffic: Ⓜ 3351/6189 Left-hand traffic: Ⓜ 3352/6189

1AL 010 820-021	Right-hand traffic
1LL 010 820-031	Left-hand traffic

LED low beam headlamp L70, 1st generation

Module headlamp with 70 mm DE lens

Rated voltage	Multi-voltage (12/24V)
Protection class	IP X9K, IP X4K, IP 5KX
ECE test mark	Right-hand traffic: Ⓜ 3359/6189, left-hand traffic: Ⓜ 3160/6189

1BL 010 820-001	Right-hand traffic
1ML 010 820-011	Left-hand traffic

90 MM MODULES/LED/ESSENTIAL
LOW BEAM AND HIGH BEAM



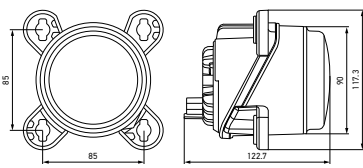
LED low beam headlamp R 80

Module headlamp with innovative reflex reflector, rugged plastic housing

Rated voltage	Multi-voltage (12/24V)
Protection class	IP X9K, IP X4K, IP 5KX

- 1BL 015 050-001** Right-hand traffic, ECE, 2-pin, DEUTSCH connector
- 1BL 015 050-031** Right-hand traffic, SAE, 2-pin, DEUTSCH connector
- 1ML 015 050-011** Left-hand traffic, ECE, 2-pin, DEUTSCH connector
- 1BL 015 050-101** Right-hand traffic, ECE, 2-pin, FEP connector
- 1BL 015 050-131** Right-hand traffic, SAE, 2-pin, FEP connector
- 1ML 015 050-111** Left-hand traffic, ECE, 2-pin, FEP connector

Available from 01/2020



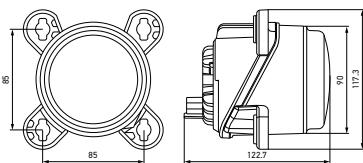
LED high beam headlamp R 80

Module headlamp with innovative reflex reflector, rugged plastic housing

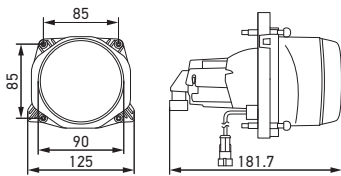
Rated voltage	Multi-voltage (12/24V)
Protection class	IP X9K, IP X4K, IP 5KX

- 1K0 015 050-021** 2-pin DEUTSCH connectors
- 1K0 015 050-121** 2-pin FEP connector

Available from 01/2020



90 MM MODULES/HALOGEN /PERFORMANCE
BI-HALOGEN LOW BEAM AND HIGH BEAM



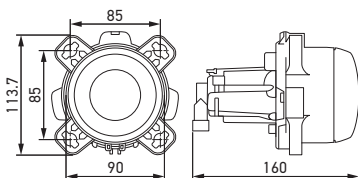
Bi-halogen low and high beam headlamp

Module headlamp with high quality aluminium reflex reflector, unpatterned, hardened glass cover lens for direct view on lens, including light source.

Rated voltage	12 or 24 V
Protection class	IP 5K4K
ECE test mark	Ⓔ 2484, Ⓔ 2485

1AL 009 998-001	12 V, right-hand traffic, H7, ECE
1LL 009 998-011	12 V, left-hand traffic, H7, ECE
1AL 009 998-021	12 V, right-hand traffic, H9, SAE
1AL 009 998-041	24 V, right-hand traffic, H7, ECE
1LL 009 998-051	24 V, left-hand traffic, H7, ECE

HALOGEN LOW BEAM



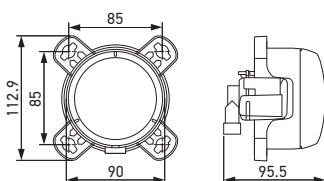
Halogen low beam headlamp

Module headlamp with reflex reflector and clear DE lens behind an unpatterned glass cover lens, including light source.

Rated voltage	12 or 24 V
Protection class	IP 5K4K
ECE test mark	Ⓔ 2397, Ⓔ 2398

1BL 247 042-007	12 V, right-hand traffic, H1, for Performance fixing
1ML 247 042-027	12 V, left-hand traffic, H1, for Performance fixing
1BL 247 042-177	12 V, right-hand traffic, H1, for Premium fixing
1ML 247 042-187	12 V, left-hand traffic, H1, for Premium fixing
1BL 247 042-017	24 V, right-hand traffic, H1, for Performance fixing

90 MM MODULES/HALOGEN /PERFORMANCE
 HALOGEN HIGH BEAM



Halogen high beam headlamp

Module headlamp with free-form reflex reflector and an unpatterned glass cover lens, incl. light source

Rated voltage	12 or 24 V
Protection class	IP 5K4K
ECE test mark	Ⓔ 2397

1K0 247 043-007	12 V, with position light, H1, for Performance fixing
1K0 247 043-017	12 V, without position light, H1, for Performance fixing
1K0 247 043-117	12 V, with position light, H1, for Premium fixing
1K0 247 043-127	12 V, without position light, H1, for Premium fixing
1K0 247 043-027	24 V, with position light, H1 Heavy Duty Longlife, for Performance fixing
1K0 247 043-037	24 V, without position light, H1, for Performance fixing
1K0 247 043-157	12 V, with position light, H1, for replacement Halogen Essential
1K0 247 043-167	12 V, H1, for replacement Halogen Essential



UPGRADE TO LED

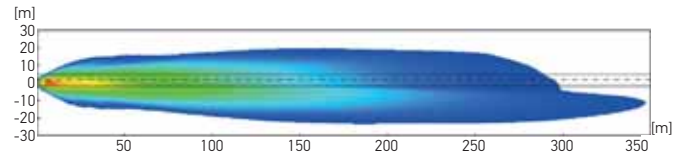
LED lights offer a number of tangible advantages. More and more consumers are therefore deciding to upgrade their existing systems.

The 90 mm halogen single and multifunctional modules from HELLA make the changeover very easy. The installation instructions supplied describe which adjustments are necessary to convert the respective lighting function to LED products on the basis of the halogen version currently in use. Since the assembly solutions are compatible, the conversion can be completed in the shortest possible time.

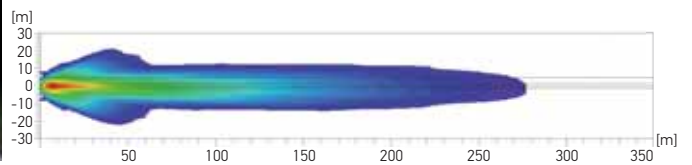
90 MM MODULES - COMPARISON OF THE THREE COMBINATIONS OF LOW BEAM AND HIGH BEAM MODULES



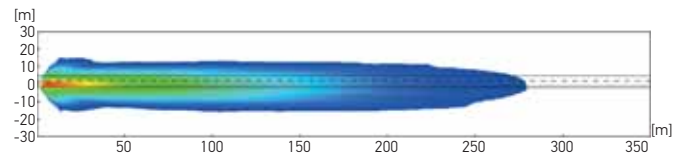
L 4060 LED
(012 488 + 011 988)



L 4060 LED + Performance Halogen
(012 488 + 247 043)



Performance Halogen
(247 042 + 247 043)



Remarks

Headlamp mounting height: 0.65 m/
gap between the headlamps: 1.20 m

Legend, isolux diagram (1 - 350 lux)

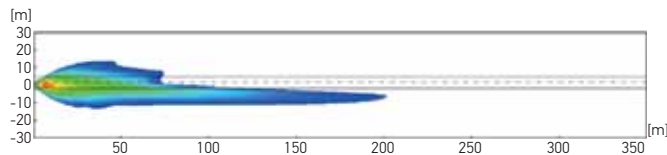


90 MM MODULES - COMPARISON OF LED ILLUMINATIONS

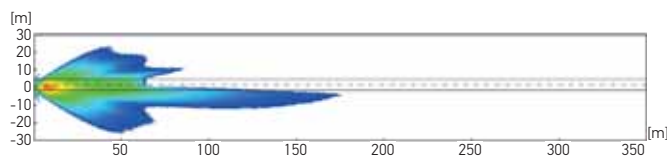
LED LOW BEAM



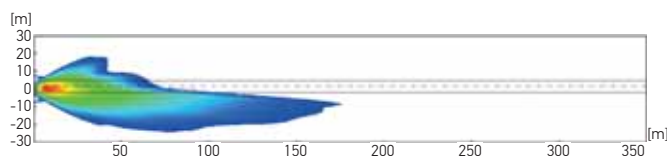
L 4060 LED
(012 488)



L 5570, Bi-LED, 2nd generation
(012 758)



L 70 bi-LED, 1st generation
(010 820)



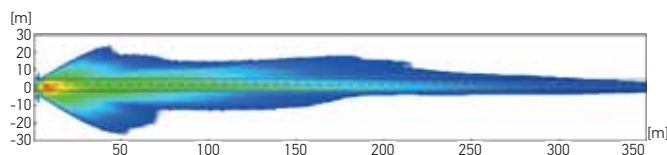
BI-MODULE LED HIGH BEAM



L 5570 bi-LED 2nd generation
(012 758)



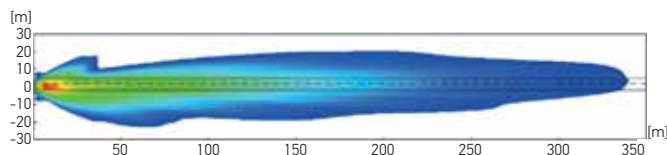
N.B. | Bi-light distributions are generated when low beam is switched on and are only available as a bi-version.



L 70 bi-LED 1st generation
(010 820)



N.B. | Bi-light distributions are generated when low beam is switched on and are only available as a bi-version.



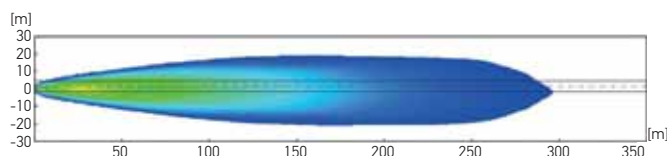
LED HIGH BEAM



L 4060 LED
(011 988)



N.B. | Display of high beam only. When driving, the high beam is augmented by the low beam.

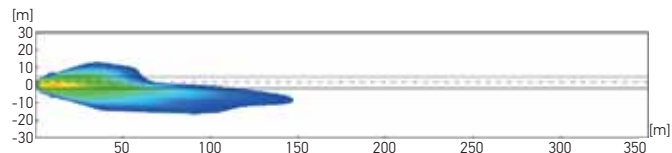


90 MM MODULES - COMPARISON OF HALOGEN ILLUMINATIONS

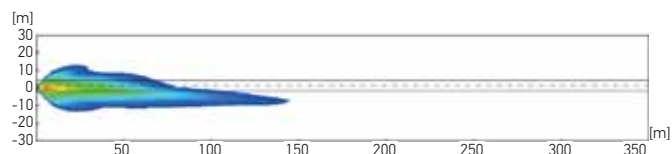
HALOGEN LOW BEAM



Bi-Halogen
(009 998)



Performance Halogen
(247 042)



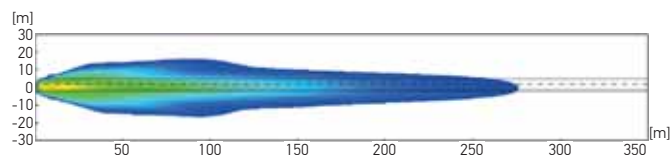
BI-MODULE HALOGEN HIGH BEAM



Bi-Halogen
(009 998)



N.B. | Bi-light distributions are generated when low beam is switched on and are only available as a bi-version.



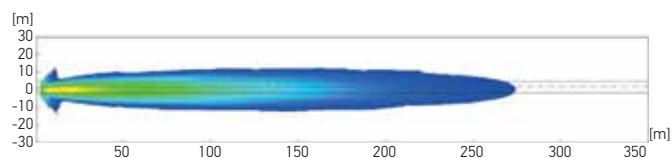
HALOGEN HIGH BEAM



Performance Halogen
(247 043)



N.B. | Display of high beam only. When driving, the high beam is augmented by the low beam.



90 MM MODULES

LED ACCESSORIES

Legend

-) Accessory for proper connection, or mandatory accessory
-) Optional accessory

Accessory components	Part number	Features
Carrier frame		
Premium carrier frame	9AH 169 580-011	Black
Performance carrier frame	9AH 254 228-012	Black
Performance carrier frame for agricultural and truck applications	9AH 185 978-011	Black
Premium carrier frame	9AH 205 652-011	Black
Performance carrier frame	9AH 205 652-111	Black
Adapter for like-for-like replacement from 009 999 bi-halogen modules to bi-LED	9AH 213 181-001	Black
Adapter for like-for-like replacement from bi-LED to 009 999 bi-halogen modules	9AH 205 653-001	Black
Surplus supply LED: AMP SUPERSEAL connector, 3-pin		
Housing	8JA 746 184-032	10 units
Female socket connector	8KW 744 837-002	50 units
Strand insulation	9GD 746 185-002	50 units
Surplus supply LED: FEP connector, 4-pin		
Housing	8JA 202 231-002	10 units
Flat contact	8KW 863 933-013	50 units
Strand sealing, 0.35 - 0.5 mm ² or	9GD 863 952-022	50 units
Strand sealing, 0.75 mm ²	9GD 863 952-012	50 units
Blind plug	9GD 863 952-002	50 units
Surplus supply LED: DT 4-pole connector (together with adapter cable, see ¹⁾ , except for 012 488-1xx and 012 758-1xx)		
Male connector housing	8JA 201 022-042	10 units
Lock / wedgelock	9NB 201 024-042	10 units
Contact sleeve 0.5 - 1.5 mm ²	8KW 201 025-112	50 units
Blind plug	9NB 201 026-012	50 units
Set packaging (1 connector housing, 1 lock, 5 contact sleeves, 3 blind plugs)	8JA 201 022-821	
Headlight beam throw adjustment system		
Headlamp leveling system, 12 V	6NM 007 282-221	1 unit
Headlamp leveling system, 24 V	6NM 008 299-501	1 unit
Bracket for right-side mounting of actuator	8HG 138 620-007	100 units
Bracket for left-side mounting of actuator	8HG 138 619-007	100 units
Left holder/interface for headlamp levelling actuator for connecting to module	9XX 208 791-011	1 unit
Right bracket/interface for headlamp levelling actuator for connecting to the module	9XX 208 791-001	1 unit
Bend lighting accessories		
LED module connecting cable - bend lighting control unit	8KB 163-160-811	1 unit
Bend lighting control unit	5DF 009 244-007	24 units
Adapter cable		
¹⁾ Adapter from FEP plug to DEUTSCH plug (4-pin)	8KA 202 117-001	1 unit
Adapter from FEP connector to Performance module (247 043) or DynaView (009 295)	8KA 202 117-011	1 unit
Other accessories (only if the vehicle was registered ECE-R48, series 05. As of ECE-R48, series 06, no more mandatory accessories)		
Function monitoring device, 12 V	5DS 011 630-001	1 unit
Function monitoring device, 24 V	5DS 011 630-011	1 unit
Function monitoring device, 24 V	5DS 011 630-211	1 unit

L 4060													L 5570		L 70			
Low Beam 012 488-001/-011																		
Low Beam 012 488-101/-111																		
Low beam, daytime running light and position light 012 488-021/-031																		
Low beam, daytime running light and position light 012 488-121/-131																		
High Beam 011 988-021																		
High Beam 011 988-121																		
High beam, daytime running light and position light 011 988-031																		
High beam, daytime running light and position light 011 988-131																		
High beam and direction indicator (with pulse) 011 988-081																		
High beam and direction indicator (with pulse) 011 988-181																		
High beam and direction indicator (without pulse) 011 988-071																		
High beam and direction indicator (without pulse) 011 988-171																		
Fog light 011 988-001																		
Fog light, daytime running light and position light 011 988-011																		
Fog light and cornering light 011 988-051/-061																		
Bi-LED low beam and high beam 012 758-001/-011/-021																		
Bi-LED low beam and high beam 012 758-101/-111/-121																		
Bi-LED low beam and high beam 010 820-021/-031																		
Low Beam 010 820-001/-011																		

90 MM MODULES

HALOGEN ACCESSORIES

Performance

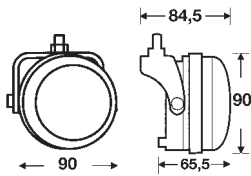
Legend

-) Accessory for proper connection, or mandatory accessory
-) Optional accessory

Accessory components	Part number	Features
Carrier frame		
Premium carrier frame	9AH 169 580-011	Black
Performance carrier frame	9AH 254 228-012	Black
Caps		
Flat version for angled connectors		
Vented	9GH 152 654-007	-
Vented	9GH 152 654-012	-
Deep version for receptacle housing		
Vented	9GH 145 943-001	-
Non-vented	9GH 145 943-012	-
Plug (vehicle side)		
Surplus supply H1/H7	8JD 156 151-807	20 systems
Surplus supply H9	8JD 158 175-807	20 systems
Parking lights	8JD 156 150-807	20 systems
High beam change-over switch 8 AMP SUPERSEAL, 2-pin		
Housing	8JA 746 184-022	10 units
Female socket connector	8KW 744 837-002	50 units
Strand insulation	9GD 746 185-002	50 units

H7 bi-halogen low beam and high beam 009 998	H9 bi-halogen low beam and high beam 009 998 USA version	Halogen low beam 247 042	Halogen high beam 247 043	H1 halogen high beam with position light 247 043
••	••	••	••	••
		••	••	••
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•	•			
•	•			

90 MM MODULES
AUXILIARY LIGHT FUNCTIONS



90 mm LED daytime running light set

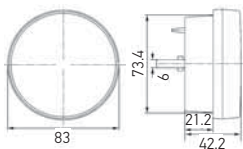
Black aluminium housing, for upright and pendant mounting in or on the front apron, set content: 2 brackets and 2 lamps

Light source	3 LEDs
Rated voltage	Multi-voltage (12/24 V)
Protection class	IP 6K7, IP 6K9K
ECE test mark	Ⓔ 2372

2PT 009 599-811	Daytime running light, set
2PT 009 599-111	Daytime running light, left
2PT 009 599-121	Daytime running light, right
2PT 009 599-131	Daytime running light with position light, left
2PT 009 599-141	Daytime running light with position light, right

Optional accessories

9AH 165 968-001	Universal carrier frame
8KA 165 959-001	Harness, pre-assembled



83 mm LED direction indicator, daytime running light and position light

LED 3 function light with integrated electronics, which is configured so that the daytime running light switches off during flashing, pre-wired with a 2,500 mm long, sheathed, four-wire cable.

Rated voltage	12 or 24 V
Protection class	IP 6K7, IP 6K9K
ECE test mark	Ⓔ 5854

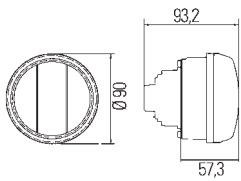
2BE 980 691-001*	Single light, 12 V
2BE 980 690-001*	Single light, 24 V

Optional accessories

9GD 980 696-001	The adapter ring is used to replace a 90 mm light with the 83 mm light. This means that vehicles that previously used a 90 mm HELLA lamp can now easily be converted to 83 mm lamps.
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* No integrated pulse, switching-off of daytime running light during operation of direction indicator.

90 MM MODULES
AUXILIARY LIGHT FUNCTIONS



90 mm direction indicator with position light

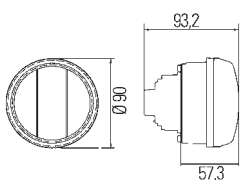
Headlamp with unpatterned glass cover lens, flashing light in bulb technology, position light in LED technology

Light source	Bulb indicator (12 or 24V) Position light: 2 white LEDs
Rated voltage	12 or 24 V
ECE test mark	Ⓔ 2586

2BE 010 102-001	12 V, with silver-coloured bulb
2BE 010 102-011	24 V, with amber bulb

Accessories

9AH 165 968-001	Optional carrier frame with 3 screws
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90 mm daytime running light with position light

Headlamp with unpatterned glass cover lens, daytime running light in bulb technology, position light in LED technology

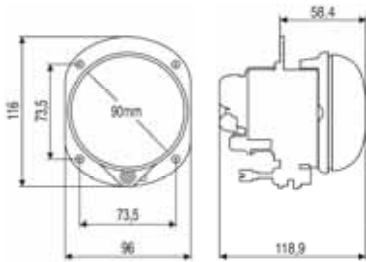
Light source	Daytime running light: white bulb (12 or 24 V) Position light: 2 white LEDs
Rated voltage	12 or 24 V
ECE test mark	Ⓔ 2586

2BE 010 102-101	12 V
2PT 010 102-111	24 V

Accessories

8JD 162 581-802	Connector set, 3-pin
9AH 165 968-001	Optional carrier frame with 3 screws

90 MM MODULES
AUXILIARY LIGHT FUNCTIONS



90 mm high beam or fog lamp

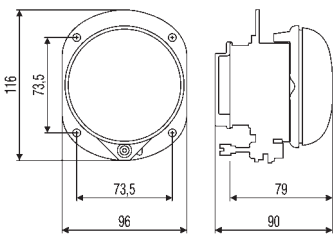
Module headlamp with unpatterned glass cover lens, with carrier frame

Light source	H15 bulb
Rated voltage	12 or 24 V
ECE test mark	High beam: Ⓔ 2680, ECE-R87, ECE-R112 Fog light: Ⓔ 2681, ECE-R19 B Serie 02, B Serie 03, ECE-R87

1F0 010 293-001	12 V, with high beam (additional option: daytime running light)
1F0 010 293-011	24 V, with high beam (additional option: daytime running light)
1N0 010 294-001	12 V, with fog light (additional option: daytime running light)
1N0 010 294-011	24 V, with fog light (additional option: daytime running light)

Accessories for combinations

8JD 162 581-802	Connector set 3-pin (20 systems)
8JA 179 631-002	Male connector housing 3-pin (250 units)



90 mm fog light

Minimum installation dimensions for a discreetly convincing lighting design. Aluminium reflex reflectors with clear lens. Ideal in combination with the matching 90 mm high and low beam headlamps.

Light source	H7 bulb
Rated voltage	12 or 24 V
ECE test mark	Ⓔ 1342, ECE-R19 B series 02, B series 03

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

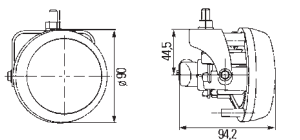
Accessories

9GH 158 051-007	Rubber cap
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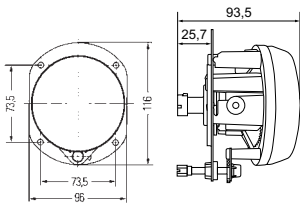
Accessories



90 MM MODULES
AUXILIARY LIGHT FUNCTIONS



With fastening clamp



With carrier frame



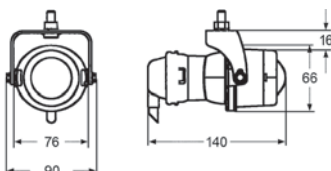
DynaView® Evo 2

Cornering light and fog light, incl. H7 bulb, vertical or suspended mounting

Light source	H7 bulb
Rated voltage	12 or 24 V
Protection class	IP 5KX, IP X4K, IP X9K
ECE test mark	ECE © 1951 Cornering light: ECE-R119 Fog light: ECE-R19 B series 02/B series 03

1N0 009 295-801¹⁾	12 V, set with fastening clamp, including control electronics and cable set
1N0 009 295-077²⁾	12 V, single left, with carrier frame
1N0 009 295-087²⁾	12 V, single, right, with carrier frame
1N0 009 295-057²⁾	24 V, single left, with carrier frame
1N0 009 295-067²⁾	24 V, single right, with carrier frame
8JD 156 151-807^{A)}	Connector plug set
8KB 163 160-801^{B)}	Harness
5DF 009 244-007^{C)}	Control electronics

MICRO DE HEADLIGHTS
FOG LIGHT



Micro DE fog lamps

Compact headlight with aluminium housing, hardened glass cover lens, rubber cap and universal bracket (included)

Light source	H3 bulb
Rated voltage	12 V
Protection class	IP 5KX, IP X4K, IP X9K
ECE test mark	© 877, ECE-R19 B series 02, B series 03

1NL 008 090-821	Set
1NL 008 090-031	Individual

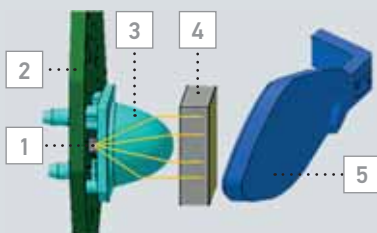


MULTI LENS ARRAY PROJECTOR PROJECTION MODULE

The night is dark and the parking lot is unlit. Where's the car again? With the multi lens array projection module (MLA), a gentle press of a button on the vehicle key is all it takes to find the car. The projector creates a four-metre long carpet of light visible from afar on both sides of the vehicle - or one of many other possible welcome scenarios in the exterior or interior.

The optics of the module consist of a large number of very small microlenses whose projections combine to form a very sharp, high-contrast and homogeneous image. Since each lens contributes only part of the light, the projection is clearly visible even if the cover is slightly soiled in some places.

Contact us and let us assist you with your project to design a customised solution that suits you perfectly.



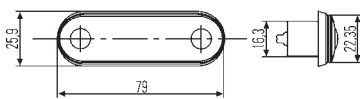
Optical system components

1. LED light source
2. Printed circuit board (PCB)
3. Collimator: focuses the wide beam of light from the LED
4. Multi lens array: generation of the light pattern
5. Lens cover

MICRO LENS ARRAY

Each micro lens array consists of many individual micro lenses, each of which produces a low intensity projection. The combination of a large number of these small projectors results in a very bright and sharp light pattern. One image is created by approximately 150 microprojection lenses per multi lens array.

POSITION LIGHTS

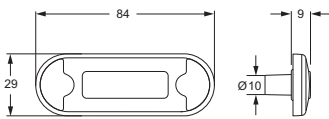


LED position light

For horizontal or vertical installation, with 500 mm cable

Light source	1 white LED
Rated voltage	Multi-voltage (12/24 V)
Current consumption	Approx. 40 mA
Protection class	IP 6K6, IP 6K7
ECE test mark	Ⓔ 7597, Ⓔ 031721

2PF 959 590-401 10–33 V



DuraLED position light

Mounting version, slimline design with 9 mm profile, horizontal or vertical installation, high vibration resistance, extremely low energy consumption, hermetically sealed against dirt and humidity.

Light source	2 LEDs
Rated voltage	Multi-voltage (12/24 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

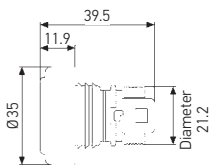
Spare parts/accessories



Spare parts/accessories

9AB 959 685-201	Wheel cover, polished stainless steel (ECE engraving)
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

POSITION LIGHTS

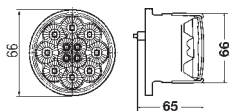


LED position light

For installation, clear lens, black plastic housing with adhesive film for adhering to the body, 2-pin cable, 150 mm long, open cable ends

Light source	2 white LEDs
Rated voltage	12 V
Current consumption	Approx. 50 mA
ECE test mark	Ⓔ 11371

2PF 340 825-041 12 V

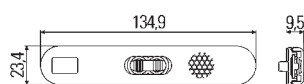


LED position light, diameter 66 mm

For installation

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

2PF 009 001-421 12 V



LED position light

For horizontal mounting, clear lens, self-adhesive with 6.3 mm contacts and mating connector grommet.

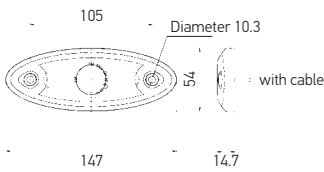
Light source	2 white LEDs
Rated voltage	12 V
Current consumption	Approx. 40 mA
Protection class	IP 5K9K
ECE test mark	Ⓔ 3016

2PF 009 226-097 12 V

Accessories

9GT 186 597-007 Counterplug grommet (order separately)

POSITION LIGHTS

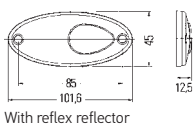
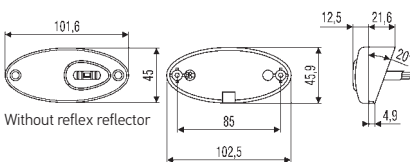


OneLED position light

For horizontal mounting, with 500 mm cable, modern night-time design and high level of safety thanks to maximum illumination area.

Light source	1 LED
Rated voltage	12 V
Protection class	IP 5K9K
ECE test mark	⊕ 5853

2PG 344 690-307 With reflex reflector



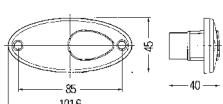
LED position light

For horizontal mounting, clear lens

Light source	2 LEDs
Rated voltage	12 V
Current consumption	Approx. 30 mA
ECE test mark	Position light without reflex reflector: ⊕ 817 Position light with reflector: ⊕ 0301

2PF 964 295-257 Without reflex reflector, with separately enclosed angle bracket 20°

2PG 964 295-121 With reflex reflector



Position light

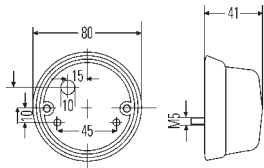
For horizontal installation, with pre-fitted 12 V/5 W bulb and seal

Light source	12 V/5 W bulb
Rated voltage	12 V
ECE test mark	⊕ 9806, ⊕ 811

2PG 964 295-011 With reflex reflector

2PF 964 295-021 Without reflex reflector, for horizontal or vertical installation.

POSITION LIGHTS

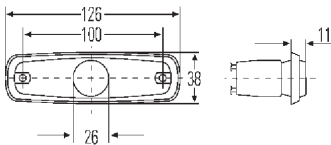


Position light

For mounting, clear lens, 2 M5 fastening screws

Light source	C5W bulb
Rated voltage	12 V
ECE test mark	Ⓔ 21624

2PF 001 259-631 12 V



Position light with reflector

For horizontal or vertical installation, with pre-fitted 12 V/3 W bulb.

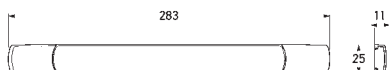
Light source	12 V/3 W bulb
Rated voltage	12 V
ECE test mark	Ⓔ 7499, Ⓔ 3153

2PG 962 964-041 With reflex reflector

Accessories

9GD 963 281-001	Seal (order separately)
9GT 963 129-001	Grommet (order separately)

INDICATORS



Direction indicator "Strip Lamp" LED

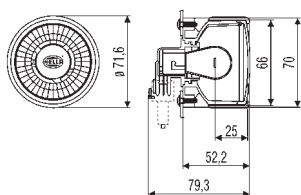
Ultra-flat design, surface mounting version, without pulse for direction indicator failure monitor, low power consumption, lens made from highly impact-resistant Grilamid®.

Light source	10 LEDs
Rated voltage	12 or 24 V
Protection class	IP 5KX X4K
ECE test mark	Ⓔ 5869, Ⓔ 5890

2BA 980 888-311 12 V, horizontal

2BA 980 888-411 24 V, horizontal

INDICATOR AND POSITION LIGHTS



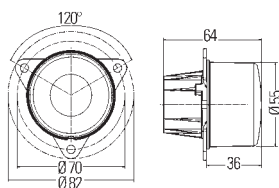
Direction indicator and position lamp, 66 mm diameter

With clear lens

Light source	Direction indicator (-071): PY21W bulb Direction indicator (-091): 1156A 24CP bulb Direction indicator (-201): PY21W SV bulb Position light: P21/5W
Rated voltage	12 V
ECE test mark	Position light: Ⓔ 6546, Ⓔ 7613

2BA 009 001-071*	Direction indicator, amber bulb, ECE
2BA 009 001-091**	Direction indicator, amber bulb, SAE
2BA 009 001-201*	Direction indicator, silver bulb, ECE
2PF 009 001-081***	Position lamp, ECE, SAE

* ECE: distance > 40 mm / < 40 mm / < 20 mm to the low beam headlamp/fog lamp
** SAE: < 2,032 mm wide, distance to the low beam headlamp > 75 – 100 mm
*** SAE: < 2,032 mm wide



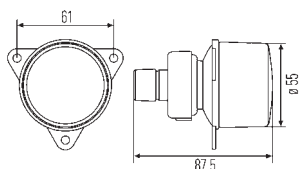
LED direction indicator and position lamp, modular, 55 mm diameter

For front installation, clear patterned lens and 500 mm connecting cable.

Light source	3 LEDs
Rated voltage	12 V
ECE test mark	Ⓔ 3284

2BA 011 172-001*	Direction indicator, without pulse
2BA 011 172-011*	Direction indicator, with pulse

* ECE: distance < 40 mm to the low beam headlamp/fog lamp



Direction indicator and position lamp, 55 mm diameter

For installation with clear lens

Light source	Direction indicator 12 V/21 V bulb, amber Position light, 12V/5W, bulb, white
Rated voltage	12 V
ECE test mark	Direction indicator: Ⓔ 878 Position light: Ⓔ 879

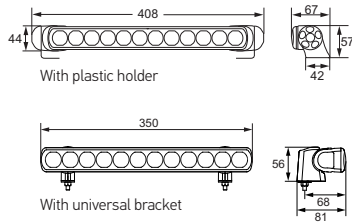
2BA 008 221-107*	Direction indicator
2PF 008 221-177	Position light

Accessories

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

* ECE: distance < 40 mm / > 40 mm to the low beam headlamp/fog lamp

AUXILIARY DRIVING LAMPS FOR ALL-WHEEL DRIVE



The **reference number (Ref.)** is a value that refers to high beam headlamps. Under ECE regulations, this reference number may not exceed the upper limit of 100 per vehicle. This figure includes the two values for the standard high beam headlamps (left and right) plus those of any other that are mounted. The appropriate value is engraved on the lens of each approved headlight.

Auxiliary driving lamp LED Light Bar 350

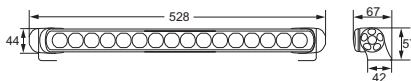
Power requirement: 25 watts, EMC R10

Light source	12 high-power LEDs
Rated voltage	Multi-voltage (12/24 V)
Protection class	IP 6K7
ECE test mark	Ref. 20: ☉ 0008 Ref. 30: ☉ 0009

1FJ 958 040-001	Ref. 20, with plastic bracket
1FJ 958 040-051	Ref. 30, with plastic bracket
1FJ 958 040-072	Ref. 20, with universal bracket
1FJ 958 040-082	Ref. 30, with universal bracket

Spare parts/accessories

8HG 958 053-801	1 plastic bracket
8HG 958 128-811	Holder set (2 steel brackets for double mounting), only for products with universal bracket



Auxiliary driving lamp LED Light Bar 470

Power requirement: 35 watts, EMC R10

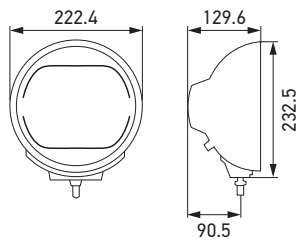
Light source	16 high-power LEDs
Rated voltage	Multi-voltage (12/24 V)
Protection class	IP 6K7
ECE test mark	Ref. 25: ☉ 0012 Ref. 37.5: ☉ 0013

1FJ 958 130-111	Ref. 25, with universal bracket
1FJ 958 130-011	Ref. 37.5, with universal bracket

Spare parts/accessories

8HG 958 139-841	Bracket set (2 universal brackets)
8HG 958 139-071	Bracket (1 universal bracket without steel angle, also for custom angles)
8HG 958 128-811	Bracket set (2 steel angle brackets for dual mounting)

AUXILIARY DRIVING LAMPS FOR ALL-WHEEL DRIVE



Luminator LED

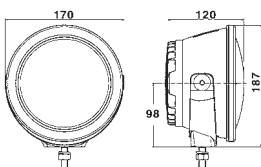
High beam headlamp with position light with distinctive night design, with connecting cable and fastening material; vibration-resistant under extreme conditions

Rated voltage	Multi-voltage (12/24 V)
Protection class	IP X9K, IP 6K7
ECE test mark	High beam lamp: ECE-R112 Position light: ECE-R7

1F8 016 560-001	Ref. 25, metal
1F8 016 560-021	Ref. 25, chromium

Service part

1F8 241 400-011	Headlamp insert (Ref. 25) with LED position light
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Luminator Compact LED

High beam headlamp, ECE Ref. 45

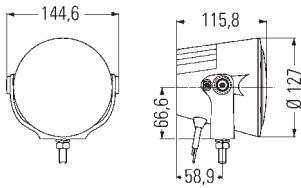
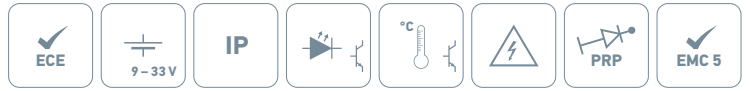
Rated voltage	Multi-voltage (12/24 V)
Protection class	IP 5K4K, IP X9K Heavy duty version (-031): IP 67, IP X9K
ECE test mark	Ⓔ 3738

1F3 011 815-001	With chrome design ring
1F3 011 815-011	With black design ring
1F3 011 815-031	With black design ring (Heavy Duty with hose ventilation)

Spare parts/accessories

9AG 195 614-001	Cover lens with chrome design ring
9AG 195 614-011	Cover lens with matt black design ring
8XS 199 170-011	Protective cap, not for use on public roads

AUXILIARY DRIVING LAMPS
FOR ALL-WHEEL DRIVE



Luminator X LED

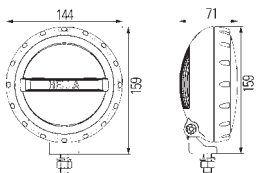
High beam headlamp

Rated voltage	Multi-voltage (12/24 V)
Protection class	IP 5K4K, IP X9K
ECE test mark	Ref. 37.5: Ⓜ 0009 Ref. 25: Ⓜ 0477

1F0 012 206-001	Ref. 37.5, with chrome design ring
1F0 012 206-011	Ref. 37.5, with black design ring
1F0 012 206-112	Ref. 25, with black design ring

Spare parts/accessories

9ES 199 813-001	Cover lens with seal
9AG 199 812-011	Black design ring



Comet 200 LED

High beam headlamp, ECE Ref. 12.5

Rated voltage	12 V
Protection class	IP 5K4K, IP X9K
ECE test mark	Ⓜ 3965

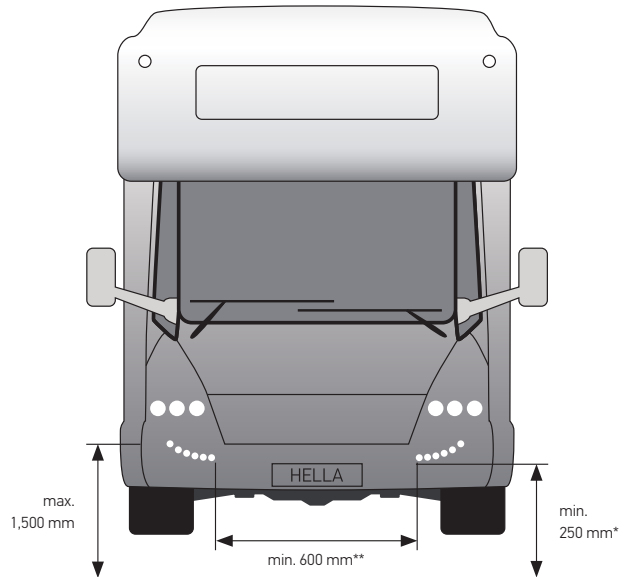
1F2 012 414-001	For upright mounting
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Accessories

8XS 203 384-011	Protective cap, not for use on public roads
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DAYTIME RUNNING LIGHTS LEGAL REGULATIONS



min. = minimum distance
max. = maximum distance

The daytime running light provides a decisive safety advantage in road traffic and prevents 58% of accidents which result in serious injuries – it is far easier to see than a normal low beam lamp. Thanks to the daytime running light, vehicle visibility is significantly increased for earlier recognition, which provides a few more seconds of vital reaction time. It also reduces fuel consumption considerably compared to driving with low beam switched on.

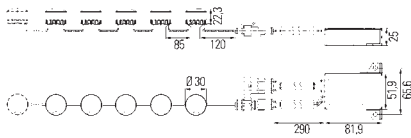
Required by law:

The law has recognised the advantages of daytime running lights: since 2012, daytime running lights have been obligatory for all new commercial vehicles licensed to use the roads in EU countries. Various mounting versions are permitted. However, the distances and beam angles to be observed are specified.

- * When used as a position light, the minimum permitted installation height is 350 mm and the lights must not be more than 400 mm from the outer edge of the vehicle.
- ** For vehicles with a width of < 1,300 mm, the spacing distance must be at least 400 mm.
- When using a daytime running light as a position light, the standard position light must be permanently decommissioned in accordance with ECE R48.

For more information on legal stipulations and mounting regulations, consult the Internet or a qualified garage. See the relevant assembly instructions for more detailed information.

DAYTIME RUNNING LIGHTS



LED daytime running light set LEDayFlex

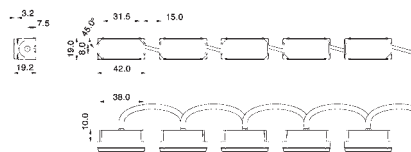
Set consists of two pre-wired module chains with 5-8 round light modules and two electronic boxes to control the daytime running lights and is available with or without a position light. The system is connected to the vehicle's electrical system via a 3-pin AMP SUPERSEAL connector.

Rated voltage	Multi-voltage (12/24 V)
Protection class	IP 6K7, IP 6K9K
ECE test mark	Modules: ECE 5852 Control unit: ECE 1152

2PT 010 458-701	5 LED light modules
2PT 010 458-711	5 LED light modules, with position light
2PT 010 458-721	6 LED light modules
2PT 010 458-731	6 LED light modules, with position light
2PT 010 458-741	7 LED light modules
2PT 010 458-751	7 LED light modules, with position light
2PT 010 458-761	8 LED light modules
2PT 010 458-771	8 LED light modules, with position light

Accessories

5DS 010 668-701	12/24 V, control unit for daytime running light with position light
5DS 010 668-711	12/24 V, control unit for position light
8KA 165 959-001	Harness (not included)



LED daytime running light set LEDayFlex II

Since 2012, LEDayFlex II has been part of the system of flexible, interconnected module chains. The two square LED daytime running light chains with 5 or 6 pre-wired light modules make new designs possible for type-approved mounting positions.

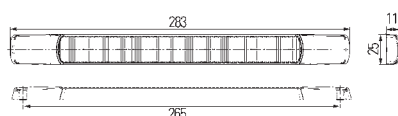
Rated voltage	12 V
Protection class	IP 6K7, IP 6K9K
ECE test mark	ECE 5864

2PT 980 789-851	5 LED light modules
2PT 980 789-861	6 LED light modules

Accessories

	Bracket for screw attachment
8HG 980 797-801	On top, for 5-piece module set (10 items)
8HG 980 797-811	On top, for 6-piece module set (12 items)
8HG 980 793-801	Rear, for 5-piece module set (10 items)
8HG 980 793-811	Rear, for 6-piece module set (12 items)
8HG 980 795-801	Front, for 5-piece module set (10 items)
8HG 980 795-811	Front, for 6-piece module set (12 items)

DAYTIME RUNNING LIGHTS

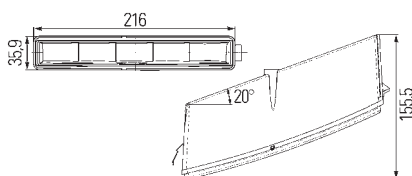


LED daytime running light set LEDayLine "Strip Lamp"

Light for mounting, lens made from highly impact-resistant Grilamid®, horizontal mounting, two fastening screws, one at either end of the light, cover caps for concealing the fastening points, with 2.5 m sheathed connecting cable, power consumption 3 W.

Light source	10 high-performance LEDs
Rated voltage	12 or 24 V
ECE test mark	Ⓜ 5869

2PT 980 880-811	12 V, daytime running lights, set
2PT 980 880-861	24 V, daytime running lights, set



LED daytime running light set LEDayLine with position light

2 lights with 5 LEDs per light and integrated relay for fully automatic switch-on, including professional harness and fastening material, 12 V max. 5.5 W.

Light source	5 LEDs
Rated voltage	12 or 24 V
Protection class	IP 6K7, IP 6K9K
ECE test mark	Ⓜ 2578

2PT 010 043-801	Set for surface-mounting, 12 V
2PT 010 043-011	12 V, left
2PT 010 043-021	12 V, right

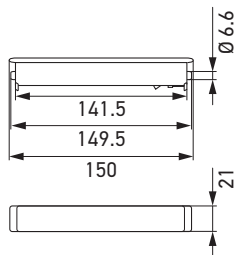
Vehicle-specific trim, black (only daytime running light)

2PT 010 043-811	Suitable for Fiat Ducato, Citroën Jumper, Peugeot Boxer; from 2006–2014, incl. connection harness, assembly material and instructions
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Vehicle-specific finisher



DAYTIME RUNNING LIGHTS

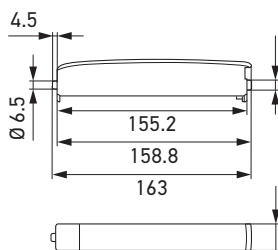


LEDayLine Zero set

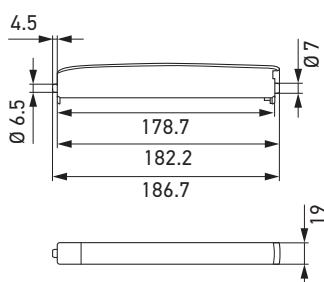
For horizontal installation, suitable for vehicles without sweep angle, power consumption 2 W, high vibration resistance, set including mounting bracket and mounting accessories.

Light source	8 high-performance LEDs
Rated voltage	12 or 24 V
Protection class	IP 6K7, IP 6K9K
ECE test mark	⊕5875

2PT 980 970-821	12 V, daytime running light, set
2PT 980 970-871	24 V, daytime running light, set



For vehicles with 15° angle



For vehicles with 30° angle

LEDayLine with position lamp

Suitable for vehicles with a 15° or 30° sweep angle at the installation location, for horizontal installation, power consumption 2 W.

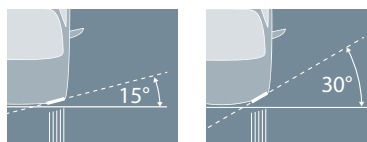
Light source	8 LEDs
Rated voltage	12 or 24 V
Protection class	IP 6K7, IP 6K9K
ECE test mark	Daytime running light for vehicles with 15° angle: ⊕5863 Daytime running light for vehicles with 30° angle: ⊕5862

2PT 980 860-001	12 V, for vehicles with 15° angle
2PT 980 860-501	24 V, for vehicles with 15° angle
2PT 980 850-001	12 V, for vehicles with 30° angle

Accessories

8HG 980 864-101	Brackets (set right/left)
8KA 959 186-801	12 V control unit* with connecting cables
8KA 959 186-811	24 V control unit* with connecting cables

* Lights cannot be switched on separately (L/R) on the vehicle.



Top-down view



HEADLAMPS

HELLA gives your vehicle the perfect look. |

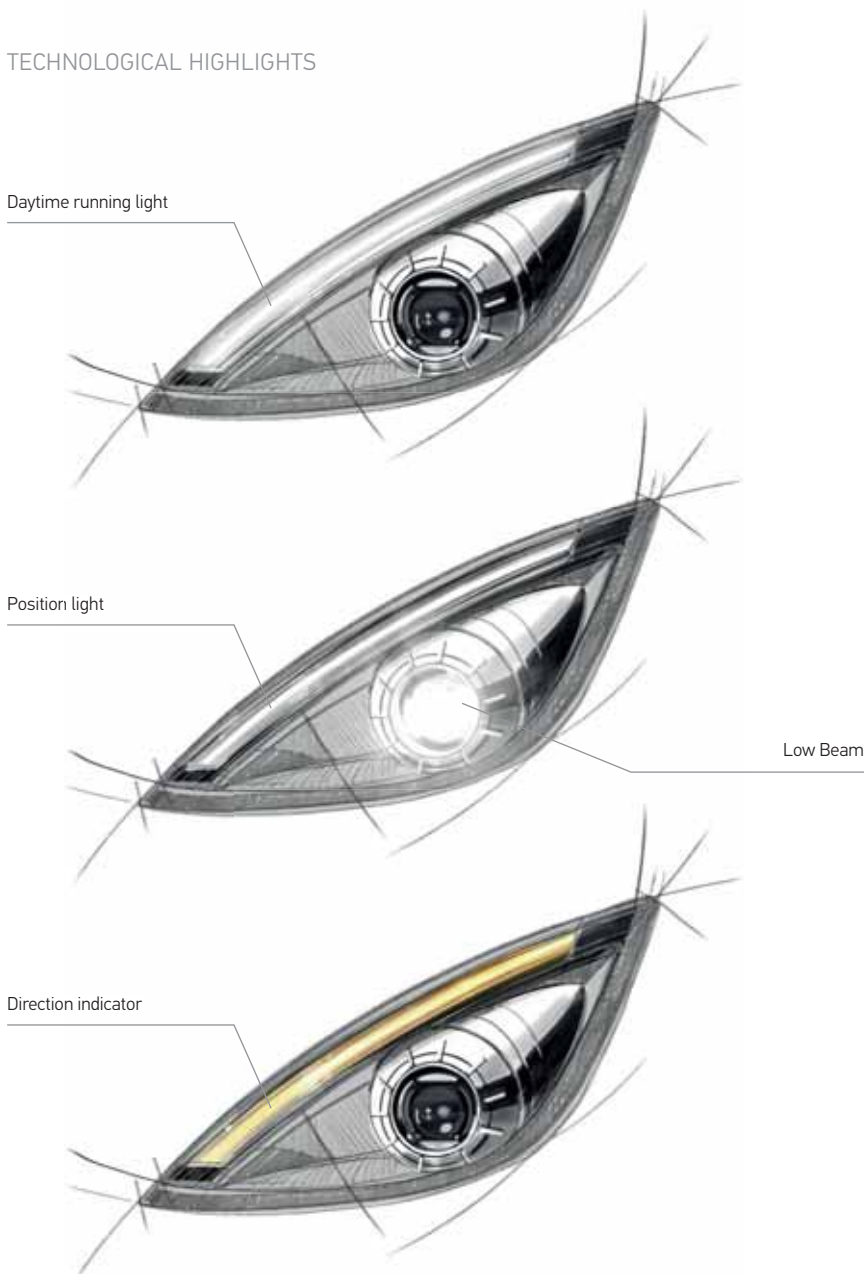
Reliable quality, the very highest comfort, high-quality equipment and maximum safety – all included as standard. HELLA is the leading supplier of vehicle-specific lighting in Germany and parts of Europe. We use our innovative power to continuously expand our product range. Functional safety, a perfect fit and product durability are all guaranteed through "HELLA Original Parts Quality". Our wide product range and various modular systems let customers emphasise their unique brand character and enable customised trend-setting. Benefit from HELLA's expertise in mass production and the associated ease of implementation in your vehicles.

MODERN DESIGN MEETS EXCELLENT PERFORMANCE.

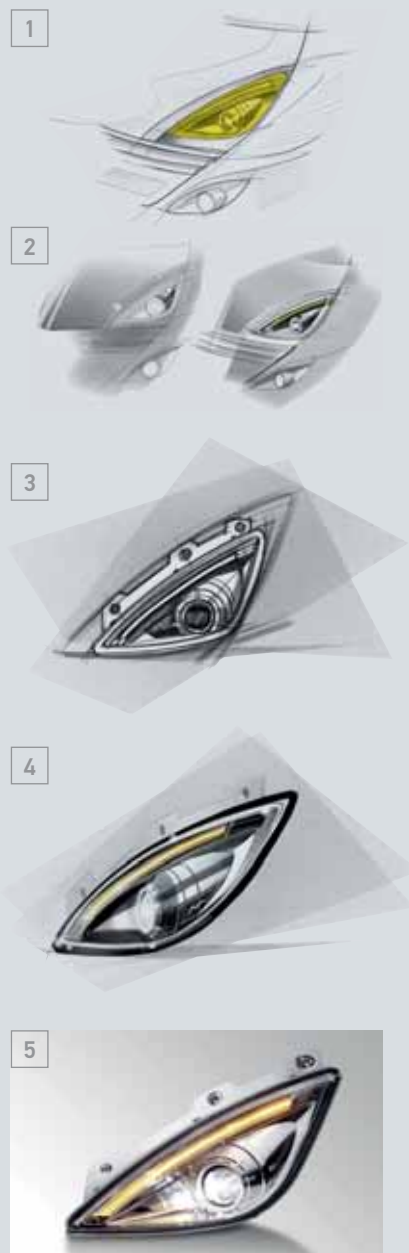
With HELLA on board, caravans and motorhomes are offered infinite possibilities. This is because HELLA stands for technological advances in performance and iconic design.

Hymer motorhomes, for example, are equipped with a custom-designed HELLA headlamp. Particularly noticeable are the three lighting functions – daytime running light, direction indicator and position light – which are all emitted by a single LED-fed light guide.

TECHNOLOGICAL HIGHLIGHTS

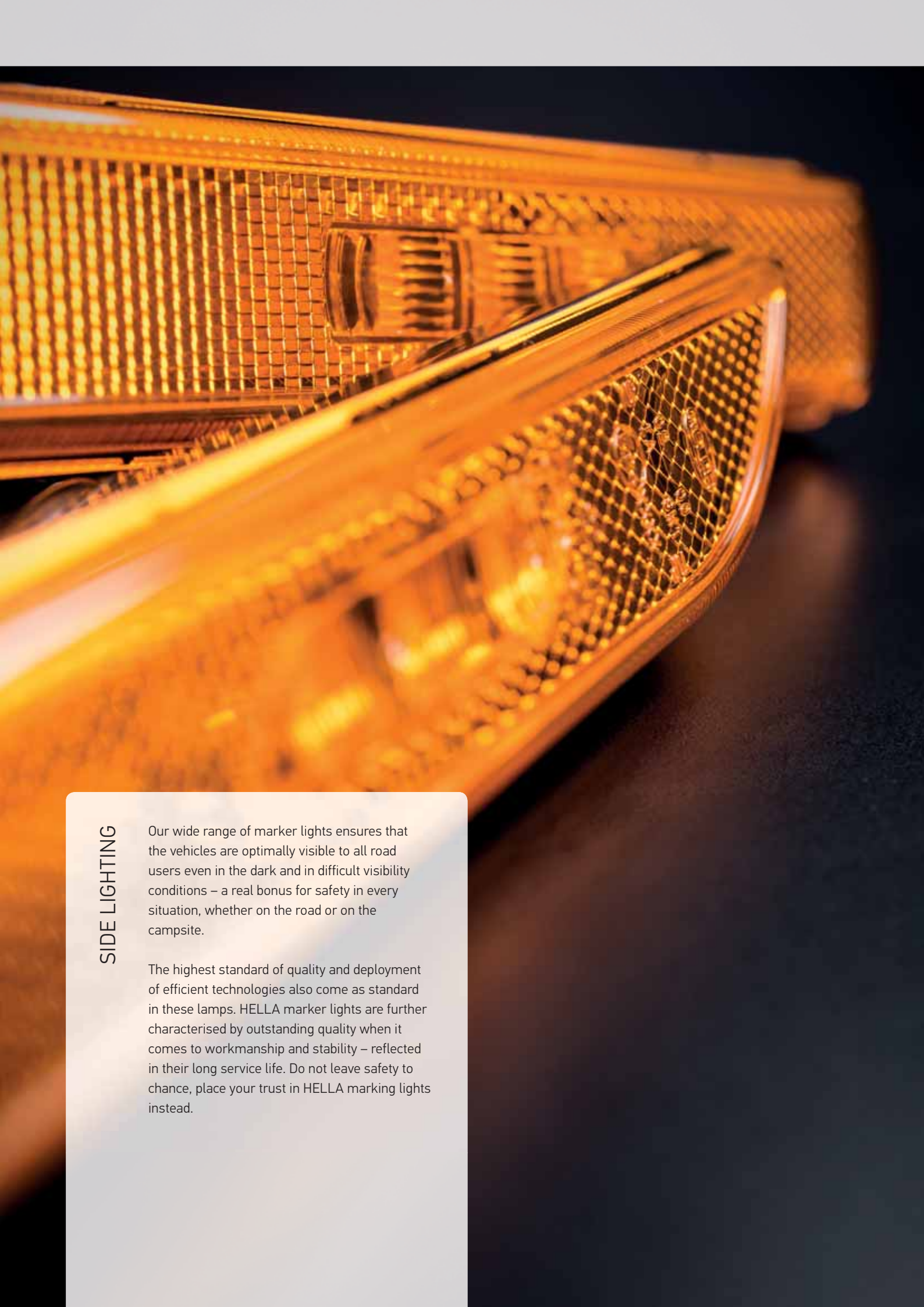


FROM THE FIRST CONCEPT TO THE FINAL DESIGN



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.

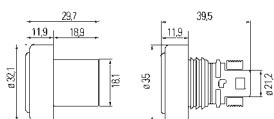


SIDE LIGHTING

Our wide range of marker lights ensures that the vehicles are optimally visible to all road users even in the dark and in difficult visibility conditions – a real bonus for safety in every situation, whether on the road or on the campsite.

The highest standard of quality and deployment of efficient technologies also come as standard in these lamps. HELLA marker lights are further characterised by outstanding quality when it comes to workmanship and stability – reflected in their long service life. Do not leave safety to chance, place your trust in HELLA marking lights instead.

AUXILIARY INDICATORS

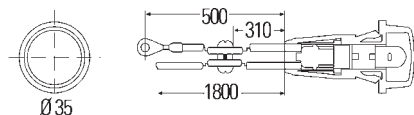


LED auxiliary indicator, cat 5

For installation, lens without reflex reflector, clear or amber, screwed

Light source	2 LEDs
Rated voltage	12 V
Current consumption	Approx. 60 mA
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

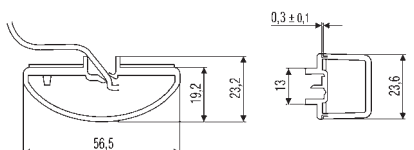


Auxiliary indicator, cat. 5

For side mounting, amber lens, with bulb and connecting cable, small, space-saving

Light source	W5W bulb
Rated voltage	12 V
Protection class	IP 5K9K
ECE test mark	42621

- 2BM 003 563-111** Left and right



LED auxiliary indicator, cat 5

For horizontal installation, simple gluing into prepared mirror, can also be used as a universal auxiliary indicator, with SAE type approval for vehicles: < 12 m total length.

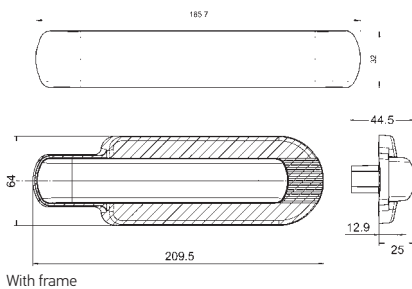
Light source	3 amber LEDs
Rated voltage	12 V
Current consumption	Approx. 60 mA
Protection class	IP 5K9K
ECE test mark	011423

- 2BM 008 771-001** 12 V

NOTE

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

AUXILIARY INDICATORS



LED auxiliary indicator, CAT. 6

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

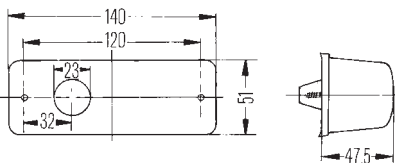
Light source	5 amber LEDs
Rated voltage	12 or 24 V
Current consumption	Approx. 290 mA (12 V), approx. 150 mA (24 V)
Protection class	IP 6K9K
ECE test mark	Ⓜ 7506

With black frame, direct screw connection

2BM 011 788-011	12 V, with 2-pin AMP-SUPERSEAL
2BM 011 788-031	12 V, with 500 mm cable
2BM 011 788-001	24 V, with 2-pin AMP-SUPERSEAL
2BM 011 788-021	24 V, with 500 mm cable

Self-adhesive

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

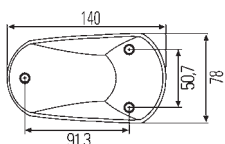


Auxiliary indicator, cat 5. and 6

For side mounting, amber lens, with bulb, suitable for GGVS/ADR.

Light source	P21W bulb
Rated voltage	12 or 24 V
ECE test mark	Ⓜ 0152621

2BM 006 692-017	Left
2BM 006 692-027	Right



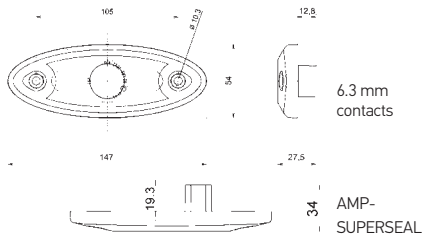
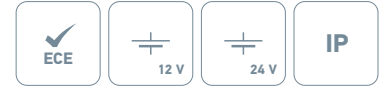
Auxiliary indicator, cat. 6

For ultra-flat side 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

SIDE MARKER LIGHTS



LED side marker light OneLED

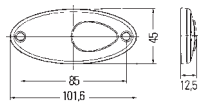
High level of safety thanks to maximum luminous surface, modern night design, for horizontal and vertical mounting, lens with reflex reflector, amber

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

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

Accessories

9GD 343 697-007	Rubber seal
9GT 343 367-002	Grommet

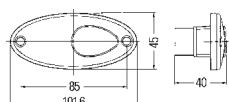


LED side marker light

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

Light source	2 LEDs
Rated voltage	12 V
Current consumption	Approx. 40 mA
Protection class	IP 5KX, IP X9K
ECE test mark	⊕ 0202

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



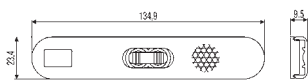
Side marker light

For horizontal installation, with seal and bulb

Light source	12 V bulb
Rated voltage	12 V
Protection class	IP 5KX, IP X9K
ECE test mark	⊕ 9807, ⊕ 812

2PS 964 295-001	12 V/5 W, amber
2XS 964 295-031	Red SMLR in accordance with SAE

SIDE MARKER LIGHTS

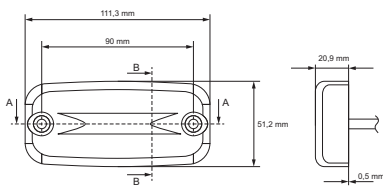


LED side marker light

For 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

2PS 009 226-007	12 V, horizontal, with 250 mm
2PS 009 226-037	24 V, horizontal, with 250 mm
2PS 009 226-077	12 V, vertical, with 250 mm cable
2PS 009 226-087	24 V, vertical, with 250 mm cable
2PS 009 226-067	12 V, horizontal, with 6.3 mm contacts and mating connector grommet

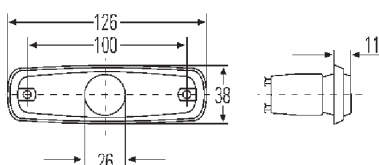


LED side marker light

Lens with reflex reflector, amber, base plate black, with 500 mm cable

Light source	2 LEDs
Rated voltage	12 or 24 V
Current consumption	Approx. 40 mA (12 V), approx. 50 mA (24 V)
Protection class	IP 5KX, IP X4K
ECE test mark	Ⓜ 5881

2PS 345 600-001	12 V
2PS 345 600-011	24 V



Side marker light

For horizontal or vertical installation, lens with reflex reflector, amber, with bulb, with white base plate

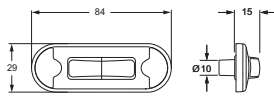
Light source	12 V bulb
Rated voltage	12 V
ECE test mark	Ⓜ 10236, Ⓜ 023153

2PS 962 964-037	12 V
------------------------	------

Accessories

9GD 963 281-001	Seal (order separately)
9GT 963 129-001	Grommet (order separately)

SIDE MARKER LIGHTS



Spare parts/accessories



LED side marker light DuraLED

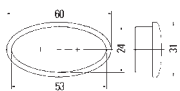
Mounting version, slimline design with 9 mm profile, horizontal or vertical installation, high vibration resistance, extremely low energy consumption, hermetically sealed to protect against dirt and humidity

Light source	2 LEDs
Rated voltage	Multi-voltage (12/24 V)
Protection class	IP 6K7, IP 6K9K
ECE test mark	Ⓔ 0007

2PS 980 868-201	With 500 mm cable
2PS 980 868-211	With 2,500 mm cable

Spare parts/accessories

9AB 959 685-201	Wheel cover, polished stainless steel (ECE engraving)
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




LED side marker light set

For horizontal installation, for retrofitting to passenger cars < 6 m, 4 units each

Light source	3 LEDs
Rated voltage	12 V
Current consumption	Approx. 60 mA
Protection class	IP 5KX, IP X9K
ECE test mark	Ⓔ 9110

2PS 008 138-801	Amber lens, silver grey trim
2PS 008 138-811	Grey lens, black trim
2PS 008 138-821	Grey lens, silver grey trim

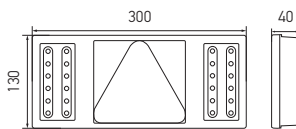
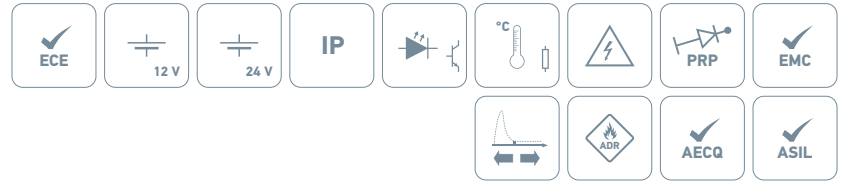
A close-up, artistic photograph of a car's rear light assembly. The image is dominated by a strong red glow, likely from the brake lights. The light housing is visible, showing a grid-like pattern and some internal components. The background is dark, making the red light stand out.

REAR LIGHTING

LED lighting has also made a quantum leap in terms of rear lighting. The development of ever new, innovative lighting concepts has perceptibly improved vehicle safety - and HELLA has made a significant contribution to this from the first.

The combination of light-emitting diodes and advanced optical systems also opens up attractive styling possibilities for an unmistakable, brand-typical appearance, which is also becoming increasingly important in the camping sector.

UNIVERSAL REAR COMBINATION LIGHTS FOR CARAVANS AND MOTORHOMES



Note: The individual functions of the light must only be operated with a 3A fuse. Operation of the light with AC voltage or synchronised DC voltage is not permitted.

Full LED rear combination lamp "Coluna"

Tail light, stop light, rear fog light and red triangular reflex reflector, white direction indicator, white reverse light

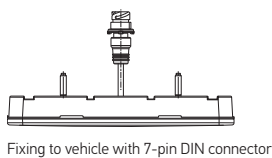
Light source	Tail light: 12 red LEDs Stop light: 6 red LEDs Rear fog light: 6 red LEDs Direction indicator: 6 yellow LEDs Reverse light: 6 white LEDs		
Rated voltage	12 or 24 V		
Current consumption		12 V	24 V
	Tail light:	approx. 200 mA	approx. 120 mA
	Stop light:	approx. 150 mA	approx. 80 mA
	Direction indicator:	approx. 280 mA	approx. 160 mA
	Rear fog light:	approx. 180 mA	approx. 100 mA
	Reverse light:	approx. 320 mA	approx. 230 mA
Protection class	IP 6K9K		
ECE test mark	E 5879, E 5880		

For caravans, horizontal mounting with a triangular reflex reflector, fastening bolts inserted from the rear, 500 mm cable with open ends, no pulse.

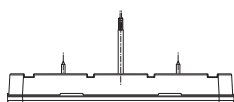
2VP 345 900-331	12 V, left
2VP 345 900-341	12 V, right

For motorhomes, left/right, horizontal or vertical mounting with triangular reflex reflector

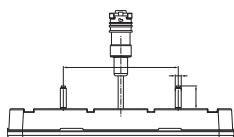
2VP 345 900-401	12 V, fastening screws from front, with 500 mm cable and open ends, with pulse
2VP 345 900-411	12 V, fastening screws from front, with 500 mm cable and open ends, without pulse
2VP 345 900-421	12 V, fastening bolts from the rear, with 500 mm cable and open ends, with pulse
2VP 345 900-431	12 V, fastening bolts from rear, with 500 mm cable and open ends, without pulse
2VP 345 900-441	12 V, fastening screws from front, with 3,000 mm cable and 6.3 mm flat receptacles, with pulse
2VP 345 900-451	12 V, fastening screws from front, with 3,000 mm cable and 6.3 mm flat receptacles, without pulse
2VP 345 900-461	12 V, fastening bolts from rear, with 3,000 mm cable and 6.3 mm flat receptacles, with impulse
2VP 345 900-471	12 V, fastening bolts from rear, with 3,000 mm cable and 6.3 mm flat receptacles, without pulse
2VP 345 900-201	24 V, fastening screws from front, with 500 mm cable and open ends, with pulse
2VP 345 900-211	24 V, fastening screws from front, with 500 mm cable and open ends, without pulse
2VP 345 900-221	24 V, fastening bolts from the rear, with 500 mm cable and open ends, with pulse
2VP 345 900-231	24 V, fastening bolts from rear, with 500 mm cable and open ends, without pulse
2VP 345 900-241	24 V, fastening screws from front, with 3,000 mm cable and 6.3 mm flat receptacles, with pulse
2VP 345 900-251	24 V, fastening screws from front, with 3,000 mm cable and 6.3 mm flat receptacles, without pulse
2VP 345 900-261	24 V, fastening bolts from rear, with 3,000 mm cable and 6.3 mm flat receptacles, with impulse
2VP 345 900-271	24 V, fastening bolts from rear, with 3,000 mm cable and 6.3 mm flat receptacles, without pulse



Fixing to vehicle with 7-pin DIN connector

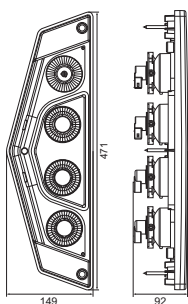


Fixing on vehicle with fastening screws from front, cable with open ends



Fixing on vehicle with fastening screws from rear, cable with EC connector

UNIVERSAL REAR COMBINATION LIGHTS
FOR CARAVANS AND MOTORHOMES



Application examples



Caraluna X

Vertical, horizontal 13° angle mounting, electrical connection: all light functions each via 2-pin AMP connector. Fixing: from the front with 3 screws (ST 4.8 mm)

Rated voltage	12 V		
Current consumption	Tail light: Stop light: Direction indicator: Rear fog light: Reverse light:	Hybrid version approx. 120 mA approx. 1,750 mA approx. 1,750 mA approx. 1,750 mA approx. 1,750 mA	Bulb version approx. 420 mA approx. 1,750 mA approx. 1,750 mA approx. 1,750 mA approx. 1,750 mA
Protection class	IP 5K4K		
ECE test mark	⊕ 5885, ⊕ 5886		

Hybrid version

- 2VP 012 570-111 Vertical, left (light guide towards the inside of the vehicle)
- 2VP 012 570-121 Vertical, right (light guide towards the inside of the vehicle)
- 2VP 012 570-131 Horizontal, left (light guide above)
- 2VP 012 570-141 Horizontal, right (light guide above)
- 2VP 012 570-151 Horizontal, left (light guide below)
- 2VP 012 570-161 Horizontal, right (light guide below)
- 2VP 012 570-171 13° horizontal, left (light transmitter guide below)
- 2VP 012 570-181 13° horizontal, right (light transmitter guide below)

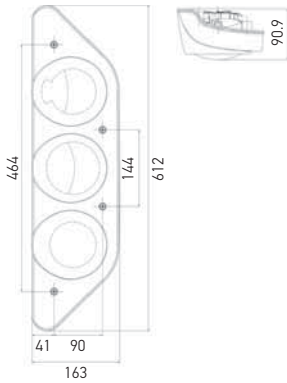
Bulb version

- 2VP 012 570-011 Vertical, left (light guide towards the inside of the vehicle)
- 2VP 012 570-021 Vertical, right (light guide towards the inside of the vehicle)
- 2VP 012 570-031 Horizontal, left (light guide above)
- 2VP 012 570-041 Horizontal, right (light guide above)
- 2VP 012 570-051 Horizontal, left (light guide below)
- 2VP 012 570-061 Horizontal, right (light guide below)
- 2VP 012 570-071 13° horizontal, left (light transmitter guide below)
- 2VP 012 570-081 13° horizontal, right (light transmitter guide below)

Spare parts/accessories

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

UNIVERSAL REAR COMBINATION LIGHTS

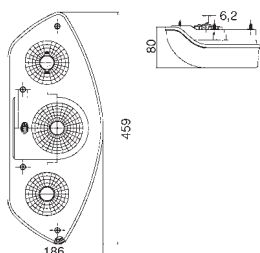


Caraluna Modular

For vertical installation, tail/stop/direction indicator/rear fog/reverse light, with combined direction indicator and reverse light module and integrated red side marker light, including 12 V bulb

Light source	12 V bulbs
Rated voltage	12 V
ECE test mark	Ⓔ 12677

2VP 343 520-011	Red lens, left
2VP 343 520-021	Red lens, right
2VP 343 520-051	Clear lens, left
2VP 343 520-061	Clear lens, right



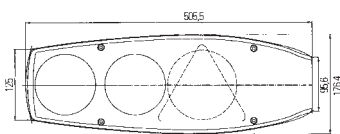
Caraluna Vertical

For vertical installation, tail/stop/direction indicator light including 12 V bulbs.

Light source	12 V bulbs
Rated voltage	12 V
ECE test mark	Ⓔ 0501

2SD 343 440-017	Right-hand traffic, left, including rear fog light
2SK 343 440-027	Right-hand traffic, right, including reverse light
2SD 343 440-057	Right-hand traffic, left, including rear fog light, chromium
2SK 343 440-067	Right-hand traffic, right, including reverse light, chromium
2SK 343 440-037	Left-hand traffic, left, including reverse light
2SD 343 440-047	Left-hand traffic, right, including rear fog light

UNIVERSAL REAR COMBINATION LIGHTS



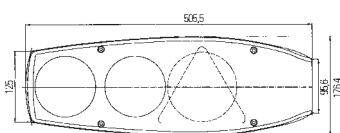
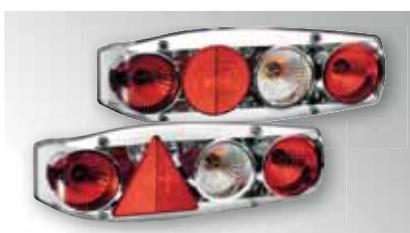
Caraluna II

For horizontal mounting, tail/stop/direction indicator/side marker light with reflex reflector and 12 V bulbs.

Light source 12 V bulbs
Rated voltage 12 V
ECE test mark E 9836

- 2VA 341 419-011** Left, incl. rear fog light, with triangular reflex reflector
- 2VA 341 419-021** Right, with triangular reflex reflector
- 2VA 341 419-111** Left, incl. rear fog light, with round reflex reflector
- 2VA 341 419-147** Right, incl. rear fog light, with round reflex reflector
- 2VP 341 419-137** Left, incl. reverse light, with round reflector
- 2VP 341 419-121** Right, incl. reverse light, with round reflex reflector

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



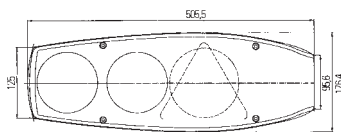
Caraluna II Chromium

For horizontal installation, tail/stop light/direction indicator with rear fog light and reflex reflector, without side marker light, including 12 V bulbs.

Light source 12 V bulbs
Rated voltage 12 V
ECE test mark E 10217

- 2VA 341 419-097** Left, incl. rear fog light, with triangular reflex reflector
- 2VA 341 419-167** Right, incl. rear fog light, with triangular reflector
- 2VP 341 419-157** Left, incl. reverse light, with triangular reflex reflector
- 2VP 341 419-107** Right, incl. reverse light, with triangular reflex reflector
- 2VA 341 419-077** Left, incl. rear fog light, with round reflex reflector
- 2VA 341 419-187** Right, incl. rear fog light, with round reflex reflector
- 2VP 341 419-087** Right, incl. reverse light, with round reflex reflector

UNIVERSAL REAR COMBINATION LIGHTS

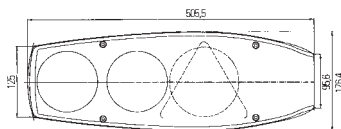


Caraluna II Plus

For horizontal installation, tail/stop/direction indicator/rear fog/reverse light with side marker light and triangular reflex reflector, combined direction indicator and reverse light module, including 12 V bulbs

Light source 12 V bulbs
Rated voltage 12 V
ECE test mark E 9836

2VP 343 590-017 Left
2VP 343 590-027 Right

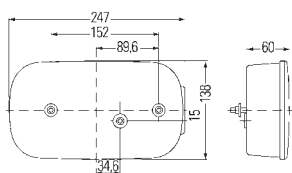


Caraluna II Plus Chromium

For horizontal installation, tail/stop/direction indicator/rear fog/reverse light with triangular reflex reflector and combined direction indicator and reverse light module, also as upgrade of basic version 2.. 343 419-... enabled; without side marker reflector light, including 12 V bulbs

Light source 12 V bulbs
Rated voltage 12 V
ECE test mark E 10217

2VP 343 590-057 Left
2VP 343 590-067 Right



Multifunction rear lamp

Tail light, stop light, rear fog light and red triangular reflex reflector, white reverse light and direction indicator (amber bulb), amber side marker light, for horizontal mounting or installation, 12 V bulbs

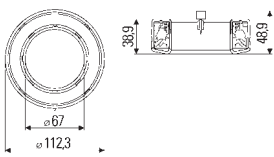
Light source 12 V bulbs
Rated voltage 12 V
ECE test mark E 5447

2VA 998 232-291 Left
2VP 998 232-301 Right

Spare parts

8GD 002 078-121 P21/5W bulb, 12 V
8GA 002 073-121 P21W bulb, 12 V
8GA 006 841-121 PY21W bulb, 12 V
8GM 002 092-121 C5W bulb, 12 V

UNIVERSAL REAR COMBINATION LIGHTS
112 MM RING MODULES



Accessories



LED ring modules, edge, 112 mm diameter

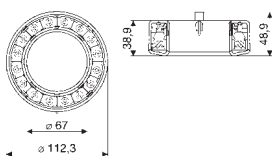
Tail-stop light in innovative LED Edge Light technology, ideal for combination with light series 009 001 (66 mm diameter), optionally available with clear or red cover lens

Rated voltage 12 or 24 V
ECE test mark 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

- 9HB 163 085-012 Design ring, 118 mm diameter, perfect high-sheen finish with one click
- 9HB 163 085-001 High-gloss chromium-plated
- 9HB 163 085-001 Silver



Accessories



LED ring modules, 112 mm diameter

Tail-stop light, ideal for combination with light series 009 001 (66 mm diameter), optionally available with clear or red cover lens

Light source 16 LEDs
Rated voltage 12 V
ECE test mark Tail-stop light: 7747
Reflex reflector: 3302

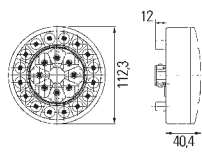
- 2SB 009 362-041* Tail-stop light, red lens
- 2SB 009 362-021* Tail-stop light, clear lens
- 8RA 009 362-001 Reflex reflector, red lens (not shown)

Accessories

- 9XD 161 119-017 Adapter ring, for mounting the reflex reflector, black
- 9HB 163 085-012 Design ring, 118 mm diameter, perfect high-sheen finish with one click
- 9HB 163 085-001 High-gloss chromium-plated
- 9HB 163 085-001 Silver

* With ECE approval for double lights

UNIVERSAL REAR COMBINATION LIGHTS
112 MM RING MODULES



LED tail light/stop light/direction indicator, 112 mm diameter

For rear installation, clear lens, suitable for light series 009 362 and 009 001

Light source	24 red LEDs
Rated voltage	12 V
Current consumption	Approx. 400 mA

2SD 009 362-201 12 V

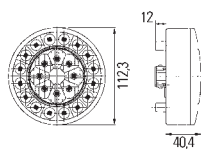
With SAE type approval for vehicles > 2,031 mm wide

Accessories

Design ring, 118 mm diameter, perfect high-sheen finish with one click

9HB 163 085-012 High-gloss chromium-plated

9HB 163 085-001 Silver



LED tail light/stop light/direction indicator, 112 mm diameter

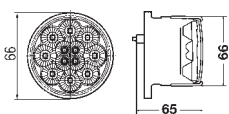
For mounting or installation, suitable for light series 009 362 and 009 001, red lens for tail-stop light, clear lens for direction indicator

Light source	Tail-stop light: 16 LEDs Direction indicator: 12 amber LEDs
Rated voltage	12 V
Current consumption	Approx. 200 mA

2SD 010 546-127 12 V, without design ring

2SD 010 546-137 12 V, with silver-coloured design ring

UNIVERSAL REAR COMBINATION LIGHTS
66 MM MODULES



LED tail-stop light and direction indicator, 66 mm diameter

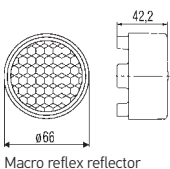
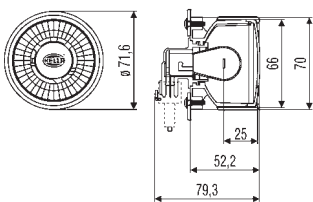
With clear lens, AMP connector

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

2SB 009 001-401	Tail-stop light, 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	2-pin mating connector
8JD 162 581-802	3-pin mating connector
9XD 161 119-017	Adapter ring, for mounting LED lights, black



Rear combination lamps, 66 mm diameter

With mounted bulbs, incl. design ring

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

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

Accessories

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

Accessories

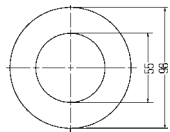
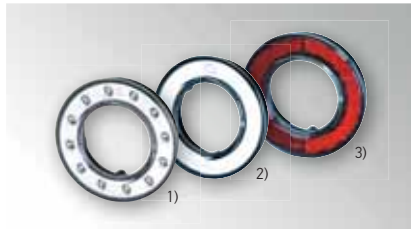


9HB 161 122-012	Design ring, 66 mm diameter, perfect high-sheen finish with one click
9HB 161 122-007	High-gloss chromium-plated
9HB 164 168-002	Silver
9HB 164 168-002	Premium silver
8HG 162 530-002	Locking ring, comet silver

* With ECE approval for double lights

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

UNIVERSAL REAR COMBINATION LIGHTS



LED ring modules, 98 mm diameter

For installation, ideal for combination with light series 011 172 (55 mm diameter), optionally available with clear or red cover lens

Light source	Tail-clearance light: 12 red LEDs Tail-stop light: 12 red LEDs Position light: 12 white LEDs
Rated voltage	12 V
Current consumption	Tail-clearance light: approx. 150 mA Tail-stop light: approx. 150 mA Position light: approx. 150 mA
ECE test mark	Ⓜ 1196, Ⓜ 1197, Ⓜ 1892 Position light: Ⓜ 1696

2SA 008 405-021¹⁾	Tail-clearance light, clear lens
2SB 008 405-101¹⁾	Tail-stop light, clear lens, with passive thermal management
2PF 008 405-061¹⁾	Position light
8XU 008 405-031²⁾	Chrome-plated trim
8RA 008 405-001³⁾	Reflex reflector, red



Examples of combination possibilities, rear lighting

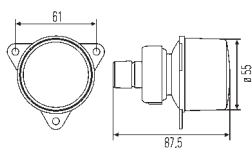
2BA 008 221-041¹⁾ 2SA 008 405-021¹⁾	Tail light and direction indicator
2XA 008 221-021²⁾ 8RA 008 405-001²⁾	Stop light and reverse light
9XB 161 749-007	Heat conducting shield (required at ambient temperature > 50°C)



Tail-stop light and rear fog light, 55 mm diameter

For installation, with red lens

Rated voltage	12 or 24 V
ECE test mark	Tail-stop light: Ⓜ 1048, Ⓜ 1049 Rear fog light: Ⓜ 1050

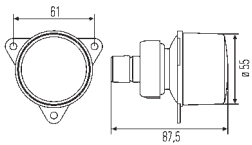


2XA 008 221-021	Tail or stop light without bulb
2SA 008 221-127	Tail light with mounted 12 V/5 W bulb
2DA 008 221-167	Stop light with mounted 12 V/21 W bulb
2NE 008 221-031	Rear fog light without bulb
2NE 008 221-137	Rear fog light with mounted 12 V/21 W bulb

Accessories

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

UNIVERSAL REAR COMBINATION LIGHTS
55 MM MODULES



Direction indicator and reverse light, 55 mm diameter

For installation with grey lens

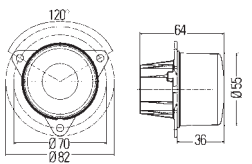
Rated voltage 12 or 24 V
ECE test mark Direction indicator: Ⓜ 1051
Reverse light: Ⓜ 1052

- 2BA 008 221-041** Direction indicator
- 2BA 008 221-147** Direction indicator with mounted amber 12 V/21 W bulb
- 2ZR 008 221-051*** Reverse light
- 2ZR 008 221-157*** Reverse light with mounted 12 V/21 W bulb

Accessories

- 8KA 152 134-007** Harness with grommet
- 9GT 137 236-007** Grommet separate

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

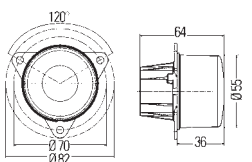


LED tail light, stop light and direction indicator, 55 mm diameter

For installation, clear lens with pattern and a 500 mm connecting cable

Rated voltage 12 V
Current consumption Approx. 90 mA
Protection class IP 6K9K
ECE test mark Ⓜ 3283, Ⓜ 10R-036317

- 2SA 011 172-041** Tail light
- 2DA 011 172-061** Stop light
- 2BA 011 172-021** Direction indicator, without pulse
- 2BA 011 172-031** Direction indicator, with pulse



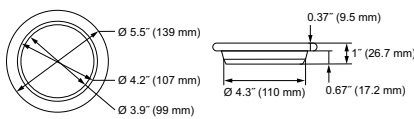
LED rear fog and reverse light, 55 mm diameter

For installation, clear lens with pattern and a 500 mm connecting cable

Rated voltage 12 V
Current consumption Approx. 210 mA
Protection class IP 6K9K
ECE test mark Rear fog light: Ⓜ 3286, Ⓜ 10R-036317
Reverse light: Ⓜ 3285, Ⓜ 10R-036317

- 2NE 011 172-081** Rear fog light
- 2ZR 011 172-101** Reverse light

UNIVERSAL REAR COMBINATION LIGHTS



LED rear combination lamps 4", 140 mm diameter

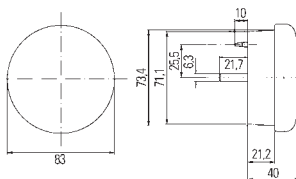
With 300 mm cable and open cable ends, mounting with rubber seal

Light source	12 LEDs, except rear fog light: 16 LEDs
Rated voltage	12 or 24 V
Protection class	IP 67, IP 69
ECE test mark	Ⓜ 11734, Ⓜ 16240, Ⓜ 16341, Ⓜ 11874

2SB 328 870-047	Tail-stop light, ECE, SAE, with red lens
2BA 328 870-057	Direction indicator, ECE, SAE, with amber lens
2ZR 328 870-067	Reverse light, ECE, SAE, with clear lens
2NE 328 870-077	Rear fog light, ECE, with red lens

Accessories

9AR 328 882-007	Chrome ring
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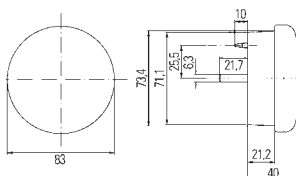


LED rear combination lamps, 83 mm diameter

For installation, with 2,500 mm cable

Light source	12 LEDs, except tail/stop light/indicator: 16 LEDs
Rated voltage	24 V
Protection class	IP 6K7, IP 6K9K
ECE test mark	Tail-stop light: Ⓜ 12373 Tail-stop light/direction indicator: Ⓜ 1538, Ⓜ 042741 Direction indicator: Ⓜ 12373, Ⓜ 042741

2SB 959 010-301	Tail-stop light, with red lens
2SD 959 010-401	Tail light/stop light/direction indicator, with red/amber lens
2BA 959 011-301	Direction indicator, with amber lens



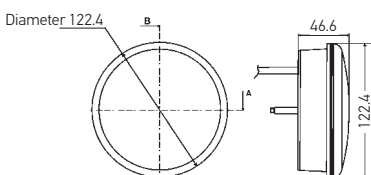
LED rear combination lamps, 83 mm diameter

With clear lens, for installation, with 2,500 cable

Light source	24 LEDs
Rated voltage	Multi-voltage (12/24 V)
Current consumption	Reverse light, approx. 330 mA (12 V), approx. 170 mA (24 V) Rear fog light: approx. 250 mA (12 V), approx. 130 mA (24 V)
ECE test mark	Ⓜ 11391, Ⓜ 042741

2ZR 959 010-501	Reverse light
2NE 959 011-501	Rear fog light

UNIVERSAL REAR COMBINATION LIGHTS

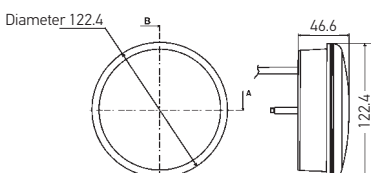


LED tail light/stop light/direction indicator, 122 mm diameter

For mounting, redesign of series 964 169, with 500 mm cable

Light source	24 LEDs
Rated voltage	Multi-voltage (12/24 V)
Current consumption	Tail light: approx. 80 mA (12 V), approx. 40 mA (24 V) Stop light: approx. 170 mA (12 V), approx. 80 mA (24 V) Direction indicator: approx. 170 mA (12 V), approx. 80 mA (24 V)
Protection class	IP 6K9K
ECE test mark	Ⓔ 12371, Ⓔ 12658, Ⓔ 14198

2SD 344 200-001	With clear lens
2SD 344 200-071	With red/ clear lens

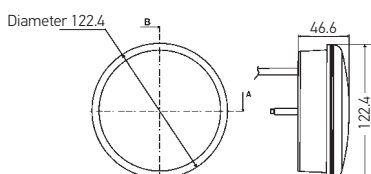


LED tail-stop light, 122 mm diameter

For mounting, with 500 mm cable

Light source	24 LEDs
Rated voltage	Multi-voltage (12/24 V)
Current consumption	Tail light: approx. 80 mA (12 V), approx. 40 mA (24 V) Stop light: approx. 250 mA (12 V), approx. 125 mA (24 V)
Protection class	IP 6K9K
ECE test mark	Ⓔ 12658

2SB 344 200-021	With clear lens
2SB 344 200-081	With red lens



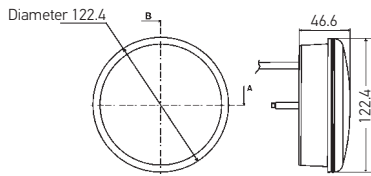
LED direction indicator, 122 mm diameter

For mounting, with 500 mm cable

Light source	24 LEDs
Rated voltage	Multi-voltage (12/24 V)
Current consumption	Approx. 250 mA (12 V), approx. 125 mA (24 V)
Protection class	IP 6K9K
ECE test mark	Ⓔ 12658

2BA 344 200-031	With clear lens
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UNIVERSAL REAR COMBINATION LIGHTS

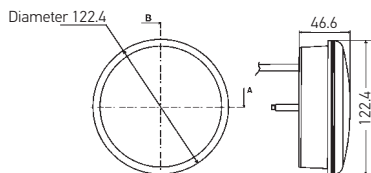


LED rear fog light, 122 mm diameter

For mounting, with 500 mm cable

Light source	24 LEDs
Rated voltage	Multi-voltage (12/24 V)
Current consumption	Approx. 170 mA (12 V), approx. 80 mA (24 V)
Protection class	IP 6K9K
ECE test mark	Ⓔ 14198

2NE 344 200-061	With clear lens
2NE 344 200-091	With red lens

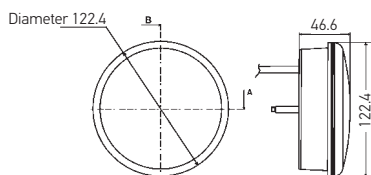


LED reverse light, 122 mm diameter

For mounting, clear lens, with 500 mm cable

Light source	24 LEDs
Rated voltage	Multi-voltage (12/24 V)
Current consumption	Approx. 170 mA (12 V), approx. 80 mA (24 V)
Protection class	IP 6K9K
ECE test mark	Ⓔ 14198

2ZR 344 200-051	Multivolt
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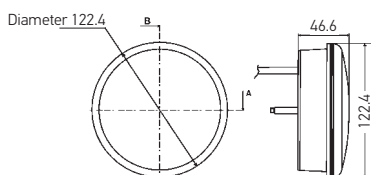
LED tail-stop light, 122 mm diameter

For mounting, passive electronics, with 500 mm cable

Light source	24 LEDs
Rated voltage	12 or 24 V
Current consumption	Stop light: approx. 300 mA (12 V), approx. 200 mA (24 V) Tail light: approx. 80 mA (24 V), approx. 40 mA (24 V)
Protection class	IP 6K9K
ECE test mark	Ⓔ 12658

2SB 344 200-221	12 V, clear lens
2SB 344 200-321	24 V, clear lens
2SB 344 200-231	12 V, red lens
2SB 344 200-331	24 V, red lens

UNIVERSAL REAR COMBINATION LIGHTS

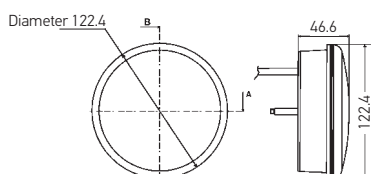


LED tail light/stop light/direction indicator, 122 mm diameter

For mounting, passive electronics, with 500 mm cable

Light source	24 LEDs
Rated voltage	12 or 24 V
Current consumption	Tail light: approx. 80 mA (12 V), approx. 40 mA (24 V) Stop light: approx. 170 mA (12 V), approx. 80 mA (24 V) Direction indicator: approx. 170 mA (12 V), approx. 80 mA (24 V)
Protection class	IP 6K9K
ECE test mark	Ⓔ 12371

2SD 344 200-201	12 V, clear lens
2SD 344 200-211	12 V, red/ clear lens
2SD 344 200-311	24 V, red/ clear lens
2SD 344 200-301	24 V, clear lens

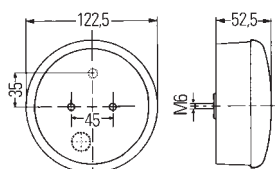
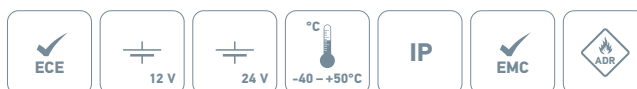


LED direction indicator, 122 mm diameter

For mounting, clear lens, passive electronics, with 500 mm cable

Light source	24 LEDs
Rated voltage	12 or 24 V
Current consumption	Approx. 170 mA (12 V), approx. 80 mA (24 V)
Protection class	IP 6K9K
ECE test mark	Ⓔ 12658

2BA 344 200-241	12 V
2BA 344 200-341	24 V



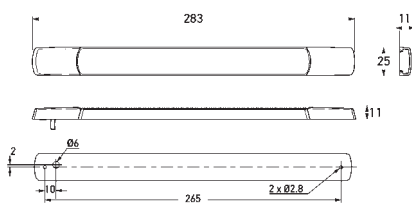
LED rear fog light/reverse light, 122 mm diameter

Combination light, long service life with low power consumption, rear fog light in red, for mounting and installation, clear lens, with moulded 500 mm cable

Light source	30 LEDs (9 red LEDs for rear fog light, 21 white LEDs for reverse light)
Rated voltage	12 or 24 V
Current consumption	Reverse light: approx. 375 mA (12 V), approx. 210 mA (24 V) Rear fog light: approx. 170 mA (12 V), approx. 120 mA (24 V)
Protection class	IP 5K9K
ECE test mark	Ⓔ 5876

2NR 344 169-441	12 V
2NR 344 169-461	24 V

UNIVERSAL REAR COMBINATION LIGHT



LED rear combination light "Strip Lamp"

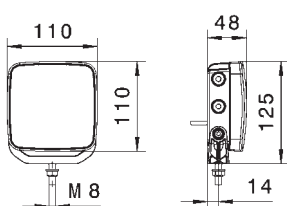
Mounting version, low power consumption, lens made of particularly impact-resistant Grilamid®

Light source	10 LEDs
Rated voltage	12 or 24 V
ECE test mark	Tail-stop light: ☉ 10R 04-2913, ☉ 5891 Direction indicator: ☉ 10R 04-2910 (only 24 V), ☉ 5891 Auxiliary stop light: ☉ 10R 04-2910 (only 24 V), ☉ 0087 Rear fog light: ☉ 10R 04-2910 (only 24 V), ☉ 0010 Reverse light: ☉ 0027 (horizontal), ☉ 0028 (vertical)

2SB 980 887-011*	Tail-stop light, 12 V with 300 mm cable
2SB 980 887-211*	Tail-stop light, 24 V with 300 mm cable
2BA 980 888-011*	Direction indicator, 12 V, with 2,500 mm cable, without pulse, for indicator failure check
2BA 980 888-211*	Direction indicator, 24 V, with 2,500 mm cable, without pulse, for indicator failure check
2DA 980 887-311*	Auxiliary stop light, 12 V, with 2,500 mm cable
2DA 980 887-411*	Auxiliary stop light, 24 V, with 2,500 mm cable
2NE 980 889-501*	Rear fog light, 12 V, with 2,500 mm cable
2NE 980 889-601*	Rear fog light, 24 V, with 2,500 mm cable
2ZR 980 889-011	Reverse light, 12 V, for horizontal surface mounting, with 2,500 mm cable
2ZR 980 889-111	Reverse light, 12 V, for vertical surface-mounting, with 2,500 mm cable
2ZR 980 889-211	Reverse light, 24 V, for horizontal surface mounting, with 2,500 mm cable
2ZR 980 889-311	Reverse light, 24 V, for vertical surface-mounting, with 2,500 mm cable

* For horizontal and vertical mounting

AUXILIARY REVERSE LIGHT ECE TYPE APPROVAL



Repulse & Repulse Pro

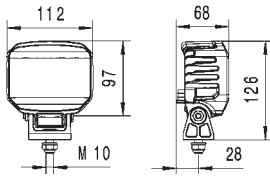
Power requirement: 11 W, colour temperature: 5,500° kelvins, heat-conducting plastic housing, full corrosion protection, mounting upright/pendant

Light source	1 LED (Repulse), 3 LEDs (Repulse Pro)
Rated voltage	Multi-voltage (12/24 V)
Protection class	IP 6K9K
ECE test mark	Repulse: ☉ 0016 Repulse Pro: ☉ 0017, ECE-R10, ECE-R23

2ZR 012 456-001	Repulse With 2,000 mm cable and 2-pin AMP SUPERSEAL connector
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2ZR 012 456-201	Repulse Pro With 2,000 mm cable and 2-pin AMP SUPERSEAL connector
2ZR 012 456-211	With 1,000 mm cable and 2-pin EasyConn connector (angled 90°)
2ZR 012 456-221	With 3,500 mm cable and 6.3 mm flat receptacles

AUXILIARY REVERSE LIGHTS ECE TYPE APPROVAL

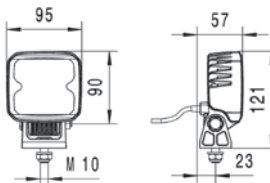


Power Beam 1000 LED compact reverse light

1,000 lumens, power requirement: 12 W, colour temperature: 5,000° kelvins, heat-conducting plastic housing, full corrosion protection, mounting upright/pendant

Light source	6 LEDs
Rated voltage	Multi-voltage (12/24 V)
Protection class	IP 6K9K, IP 6K8
ECE test mark	ECE-R23, ECE-R10

ZZR 996 188-521 With DEUTSCH connector



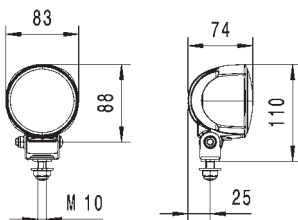
Q90 LED compact reverse light

1,200 lumens, power requirement: 15 W, colour temperature: 5,000° kelvins, heat-conducting plastic housing, full corrosion protection, mounting upright/pendant

Light source	4 high-power LEDs
Rated voltage	Multi-voltage (12/24 V)
Protection class	IP 6K9K, IP 6K7
ECE test mark	ECE-R23, ECE-R10

ZZR 996 284-501 With 2,000 mm cable

ZZR 996 284-511 With 500 mm cable and DEUTSCH connector, ADR/GGVSEB-tested



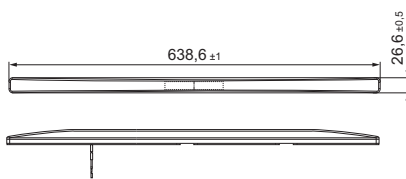
Module 70 LED compact reverse light

1,500 lumens, power requirement: 13 W, colour temperature: 5,000° kelvins, heat-conducting plastic housing, full corrosion protection, mounting upright/pendant

Light source	3 high-power LEDs
Rated voltage	Multi-voltage (12/24 V)
Protection class	IP 6K9K, IP 6K8
ECE test mark	ECE-R23, ECE-R10

ZZR 996 576-621 With 2,000 mm cable

AUXILIARY STOP LIGHTS

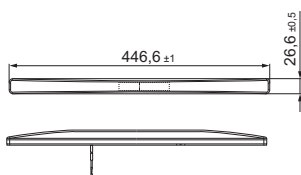


CHMSL auxiliary stop light, LongLED 64

For horizontal mounting, 637 mm long, extremely slimline design with a profile height of just 11 mm, highly efficient electronic mounting with a power consumption of > 3 W, 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
Current consumption	Approx. 220 mA (12 V), approx. 60 mA (24 V)
Protection class	IP 67
ECE test mark	Ⓔ 4127

2DA 012 596-021	12 V
2DA 012 596-031	24 V

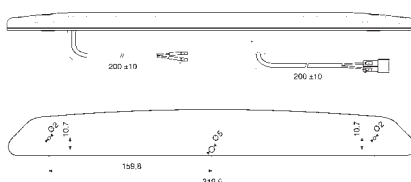


CHMSL auxiliary stop light, LongLED 45

For horizontal mounting, 445 mm long, extremely slimline design with a profile height of just 11 mm, highly efficient electronic mounting with a power consumption of > 3 W, 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
Current consumption	Approx. 120 mA (12 V), approx. 40 mA (24 V)
Protection class	IP 67
ECE test mark	Ⓔ 024128

2DA 012 596-001	12 V
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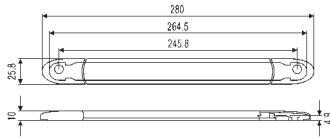
LED auxiliary stop light

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

Light source	12 red LEDs
Rated voltage	12 or 24 V
Current consumption	Approx. 150 mA
Protection class	IP 5KX, 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 LIGHTS

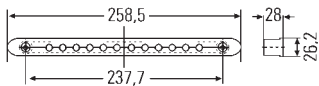


LED auxiliary stop light

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

Light source	10 red LEDs
Rated voltage	12 V
Current consumption	Approx. 60 mA
Protection class	IP 5KX, IP X9K
ECE test mark	Ⓔ 7696

2DA 343 106-001	Red lens, for screw mounting
2DA 343 106-201	Lens red, self-adhesive
2DA 343 106-021	Smoked glass lens, for screw mounting
2DA 343 106-221	Smoked glass lens, self-adhesive



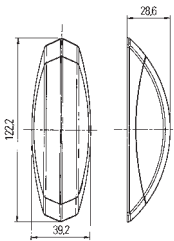
LED auxiliary stop light

For horizontal installation, 2,500 mm cable and open cable ends

Light source	12 red LEDs
Rated voltage	12 or 24 V
Current consumption	Approx. 160 mA (12 V)
ECE test mark	Ⓔ 7547

2DA 959 071-537	12 V, red lens
2DA 959 071-037	12 V, clear lens

CLEARANCE LIGHTS

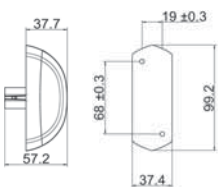


Clearance light

For vertical 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



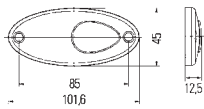
LED clearance light

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

Light source 4 LEDs
Rated voltage 12 or 24 V
Current consumption Approx. 50 mA (12 V), approx. 30 mA (24 V)
Protection class IP 6K9K
ECE test mark E 3011

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

CLEARANCE LIGHTS

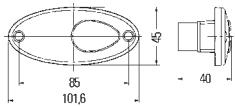


LED tail reflex reflector light

For horizontal mounting, with seal, lens with red reflex reflector, with 5,000 mm cable

Light source	2 LEDs
Rated voltage	12 or 24 V
Current consumption	Approx. 40 mA (12 V)
Protection class	IP 5K9K
ECE test mark	Ⓔ 0302

2TM 964 295-101 12 V

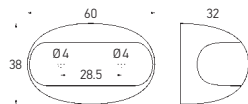


Clearance light

For horizontal installation, with installed 12 V bulb and seal, lens without red reflex reflector.

Light source	12 V bulb
Rated voltage	12 V
ECE test mark	Ⓔ 812

2XS 964 295-031 12 V



LED clearance light

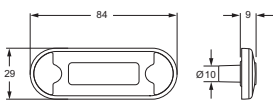
For horizontal mounting, clear lens, red inner lens

Light source	2 LEDs
Rated voltage	Multi-voltage (12/24 V)
Current consumption	Approx. 40 mA
Protection class	IP 6K6, IP 6K7
ECE test mark	Ⓔ 7574

2XA 959 560-401 With 500 mm cable

2XA 959 560-411 With 5,000 mm cable

CLEARANCE LIGHTS



Spare parts/accessories



DuraLED clearance light

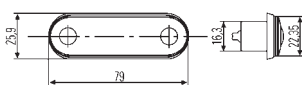
Mounting version, slimline design with 9 mm profile, horizontal or vertical installation, high vibration resistance, extremely low energy consumption, hermetically sealed against dirt and humidity

Light source	2 red LEDs
Rated voltage	Multi-voltage (12/24 V)
Protection class	IP 6K7, IP 6K9K
ECE test mark	⊕ 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

9AB 959 685-201	Wheel cover, polished stainless steel (ECE engraving)
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



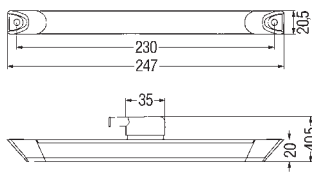
Clearance light

For horizontal or vertical installation, clear lens, can be used as tail or clearance light, with two cover caps for screw heads

Light source	2 red LEDs
Rated voltage	Multi-voltage (12/24 V)
Current consumption	Approx. 40 mA
Protection class	IP 6K6, IP 6K7
ECE test mark	⊕ 7597

2XA 959 790-401	With 500 mm cable
2XA 959 790-411	With 5,000 mm cable

CLEARANCE LIGHTS

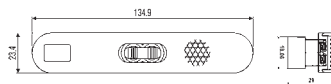


LED clearance light

For horizontal or vertical mounting, red light guide, 2 screw holes, 5.4 mm diameter for fastening screws, clear lens

Light source	2 red LEDs
Rated voltage	12 or 24 V
Current consumption	Approx. 60 mA (12 V)
Protection class	IP 5K9K
ECE test mark	Ⓔ 0515

2XS 008 078-011 12 V



LED clearance light

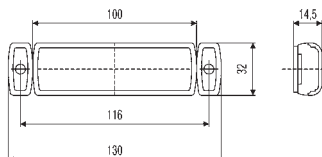
For horizontal mounting, self-adhesive, with 6.3 mm flat plug connections, red lens

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

2XS 009 226-107 12 V

Accessories

9GT 186 597-007 Mating connector grommet



LED clearance light

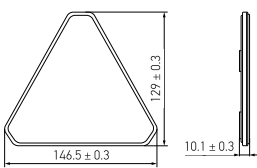
For horizontal or vertical mounting, with reflex reflector, 2 holes for fastening screws B 4.2, in case of horizontal mounting the LED field must face the vehicle exterior; in case of vertical mounting the LED must face upwards or downwards; clearance light can also be used as a tail light with reflex reflector.

Light source	1 LED
Rated voltage	12 or 24 V
Current consumption	Approx. 50 mA (12 V)
Protection class	IP 5K9K
ECE test mark	Ⓔ 1395, Ⓔ 1398

2TM 008 645-931 12 V, with 500 mm cable

2TM 008 645-921 12 V, with 5,000 mm cable

REFLEX REFLECTORS

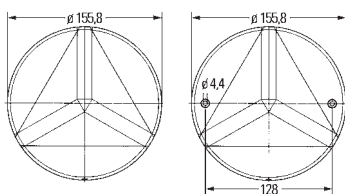
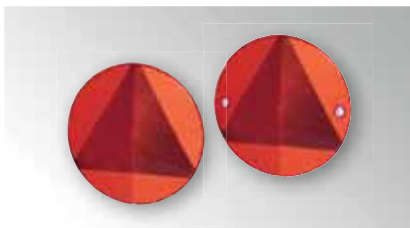


Triangular reflex reflector

Red, with dark appearance

Protection class IP 5K9K
ECE test mark ECE-R3

8RA 329 500-701 Self-adhesive



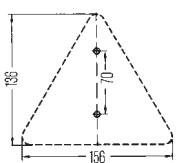
Reflex reflectors

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



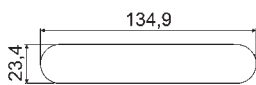
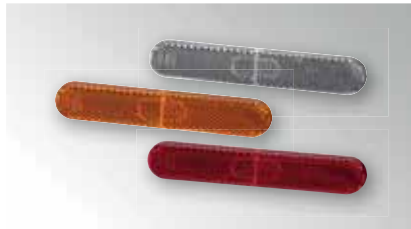
Reflex reflector

Red, effective surface area 85 cm², with plastic base plate

ECE test mark E 02346

8RA 002 020-001 With 2 holes for fastening screws

REFLEX REFLECTORS

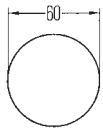
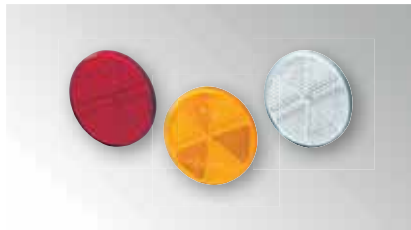


Reflex reflectors

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

ECE test mark 020668

8RA 009 226-137	Red
8RA 009 226-127	Amber
8RA 009 226-117	White

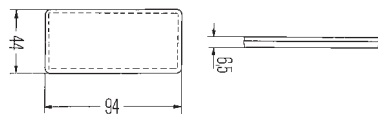


Reflex reflectors

Self-adhesive, effective reflection area 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

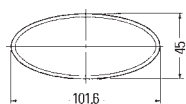
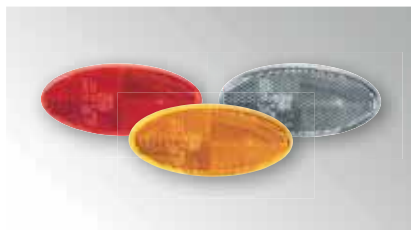


Reflex reflectors

For horizontal or vertical mounting, self-adhesive

ECE test mark 0292031

8RA 003 326-031	Red
8RA 003 326-041	Amber
8RA 003 326-051	White



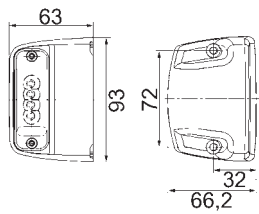
Reflex reflectors

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

ECE test mark 3190

8RA 343 160-007	Red
8RA 343 160-027	Amber
8RA 343 160-017	White

LICENCE PLATE LIGHTS



LED licence plate light

For mounting on the right or left next to the licence plate, only 1 lamp needed for illumination, clear lens, black plastic housing.

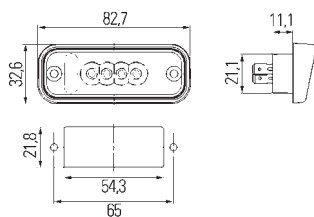
Light source	4 LEDs
Rated voltage	12 or 24 V
Current consumption	Approx. 80 mA (12 V), approx. 40 mA (24 V)
Protection class	IP 6K9K
ECE test mark	Ⓔ 2609

Licence plate 520 x 120 mm

2KA 010 278-321	12 V, with 6.3 x 0.8 mm blade terminal
2KA 010 278-021	24 V, with 6.3 x 0.8 mm blade terminal
2KA 010 278-051	24 V, with 500 mm cable and 2-pin EasyConn female connector housing
2KA 010 278-031	24 V, with 2,000 mm cable and 6.3 x 0.8 mm blade terminal

Licence plate 340 x 240 mm or 280 x 200 mm

2KA 010 278-421	12 V, with 6.3 x 0.8 mm blade terminal
2KA 010 278-121	24 V, with 6.3 x 0.8 mm blade terminal



LED licence plate light

For installation above the licence plate, 2 lights required to illuminate the licence plate

Light source	4 LEDs
Rated voltage	12 or 24 V
Current consumption	Approx. 80 mA (12 V), approx. 40 mA (24 V)
Protection class	IP 6K9K
ECE test mark	Ⓔ 2609

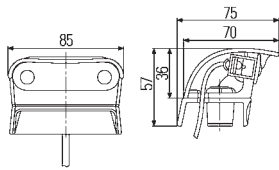
Licence plate 520 x 120 mm

2KA 010 278-311	12 V, with 6.3 x 0.8 mm blade terminal
2KA 010 278-011	24 V, with 6.3 x 0.8 mm blade terminal
2KA 010 278-617	12 V, with 1,000 mm cable
2KA 010 278-607	24 V, with 1,000 mm cable

Licence plate 340 x 240 mm

2KA 010 278-411	12 V, with 6.3 x 0.8 mm female connector housings, 1 light required for illuminating the licence plate.
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LICENCE PLATE LIGHTS

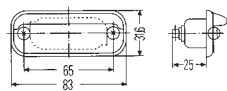


LED licence plate light

For mounting on the left or right next to the licence plate 520 x 120 mm, bracket for mounting the light on the body, cover, fastening screws, cover caps for screws and a spacer for various mounting situations, clear lens, black housing

Light source	2 LEDs
Rated voltage	Multi-voltage (12/24 V)
Current consumption	Approx. 40 mA
Protection class	IP 6K6, IP 6K7
ECE test mark	Ⓔ 4048

2KA 959 640-607 With 2,500 mm cable



Licence plate light

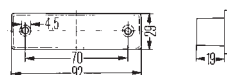
For installation above or below the licence plates 520 x 120 mm (2 or 3 lights) and 340 x 240 mm (2 lights), installation depth: approx. 25 mm, clear lens

Rated voltage	12 V
ECE test mark	Ⓔ 12958

2KA 001 378-001 With brilliant chrome rim and two fastening screws

2KA 001 378-041 With silver-coloured rim, without fastening screws

2KA 001 378-127 With silver-coloured rim and 12 V bulb, without fastening screws



Licence plate light

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

Rated voltage	12 V
ECE test mark	Ⓔ 22890

2KA 004 331-061 With 12 V bulb



MULTI-FUNCTION LIGHTS

Customised look at the rear. | We are specialised in developing customised solutions that are deployed in tailored applications to tackle your challenges. For rear lighting, too, you can benefit from the synergies that HELLA generates through its many years of experience in the development of original automotive equipment at international level.

NEW, INNOVATIVE REAR COMBINATION LIGHTS - DEVELOPED ON THE BASIS OF PROVEN DESIGNS.

HELLA has added a new dimension to the striking night design of iconic motor homes and caravans. The changes are more evolution than revolution. The result is surprisingly refreshing - and perfectly tailored to suit the concept of customised vehicle styling.

In the case of the Adria rear combination lamp, the new "light curtain" technology creates a flat tail light, while in the case of Fendt and Carthago the "Glowing Body" light guide technology ensures optimum homogeneity and, in conjunction with the dark appearance, an unmistakable signature.



HYMER MULTIFUNCTION LIGHT

- Clear red and white lens
- Tail/stop and side marker light as "Glowing Body"
- Auxiliary reverse, rear fog and indicator light with bulbs

BEFORE AND AFTER

ADRIA MULTIFUNCTION LIGHT



Dark

FENDT MULTIFUNCTION LIGHT




Upgrade

CARTHAGO MULTIFUNCTION LIGHT



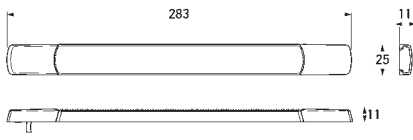
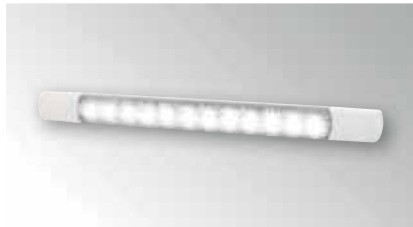
Extension

The image shows a close-up, black and white view of two cylindrical LED light fixtures. The fixtures are arranged diagonally, with one in the foreground and another slightly behind it. Each fixture has a textured, faceted lens that creates a shimmering, crystalline effect. The background is a plain, light-colored surface.

INTERIOR LIGHTING

The LED also creates new accents in the living area of motorhomes. Thanks to the constantly increasing performance of white and coloured LEDs, new applications are becoming possible - not only in the functional sector, but also in the decorative sector of interior lighting for caravans and motorhomes. The extremely low power consumption compared to bulbs and the almost unlimited service life of the lamps are, of course, decisive arguments in favour of using modern technology.

CANOPY, AWNING AND PUDDLE LIGHTS



Accessories



LED canopy light "Strip Lamp"

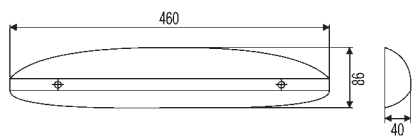
With white screw caps (end pieces right and left), for horizontal or vertical mounting, connection via 2,500 mm cable, clear lens

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

2JA 980 879-011	12 V, white
2JA 980 879-111	24 V, white
2JA 980 879-201	12 V, warm white
2JA 980 879-301	24 V, warm white

Spare parts/accessories

8HG 958 000-011	"Strip Lamp" holder, 45°, white
8HG 958 000-021	"Strip Lamp" holder, 45°, dark gray
9HD 980 885-018	Screw caps, dark gray
9HD 980 885-108	Screw caps, chromium-plated
9HD 980 885-008	Screw caps, white (as a spare part)

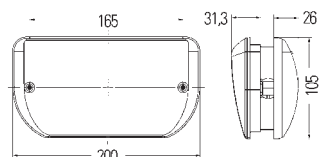


Entry light and awning light

Optimum illumination in, and in front of, the step area with silver-coloured painted housing, for surface mounting, clear lens

Light source	3 tubular bulbs at 5 W
Rated voltage	12 V
Illuminance in the 1 m range	Approx. 23 lux

2XT 008 929-001	12 V
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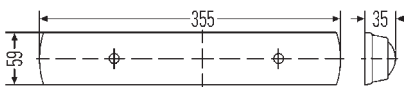
Puddle light

White colour, for installation, clear lens

Light source	1 bulb P21W, 12V
Rated voltage	12 V
Illumination	0.5 m – approx. 138 lux, 1 m – approx. 37 lux, 1.5 m – approx. 15 lux

2XT 007 945-077	With double pole safety switch
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CEILING LIGHTS



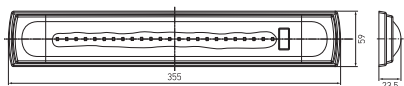
LED ceiling light

Lens and frame in impact-proof material, with switch, for mounting

Light source	12 or 24 LEDs
Rated voltage	Multi-voltage (12/24 V)
Current consumption	12 LEDs: approx. 300 mA (12 V), approx. 150 mA (24 V) 24 LEDs: approx. 580 mA (12 V), approx. 290 mA (24 V)
Light colour	4,000 K (neutral white)
Illuminance in the 1 m range	Approx. 100 Lux (12 LEDs), approx. 200 Lux (24 LEDs)

2JA 007 373-151 12 LEDs

2JA 007 373-161 24 LEDs



LED ceiling light

For mounting, clear lens

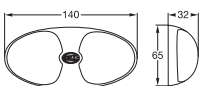
Light source	24 LEDs
Rated voltage	12 or 24 V
Current consumption	Approx. 400 mA (12 V), approx. 200 mA (24 V)
Protection class	IP 54 (with switch), IP 67 (without switch)
Light colour	4,000 K (neutral white)
Illuminance in the 1 m range	Approx. 200 lux (24 LEDs)

2JA 007 373-301 12 V, with switch

2JA 007 373-321 12 V, without switch

2JA 007 373-311 24 V, with switch

2JA 007 373-331 24 V, without switch



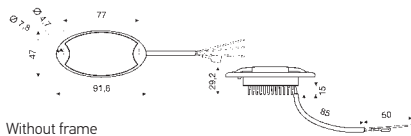
DuraLED oval ceiling light

White lens, with 500 mm cable

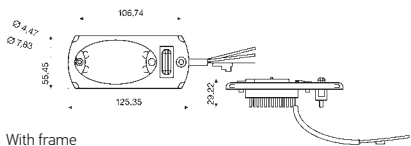
Light source	12 white LEDs
Rated voltage	Multi-voltage (12/24 V)
Current consumption	Approx. 250 mA
Protection class	IP 6K6, IP 6K7
LED angle of radiation	120°
Illuminance in the 1 m range	Approx. 60 lux

2JA 959 700-102 Multivolt

CEILING LIGHTS



Without frame



With frame

Mini Oval LED

Brilliant and clear lens, illumination of side driver or instrument area, ambient lighting can be switched on, for installation, red or blue lighting possible

Light source	4 white LEDs, 1 ambient LED
Rated voltage	12 or 24 V
Current consumption	Approx. 300 mA (12 V), approx. 150 mA (24 V)
Protection class	IP 6K9K (without frame/switch), IP 40 (with frame/switch)
Illumination angle	50° for main light (4 LEDs), 100° for ambient lighting (1 LED)
Illuminance in the 1 m range	Standard = approx. 14.5 lux, Power = approx. 54 lux

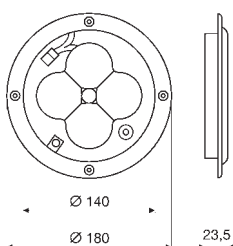
Without bracket and switch

2JA 343 570-117	Power LEDs, 12 V, blue
2JA 343 570-011	Power LEDs, 12 V, red
2JA 343 570-001	Power LEDs, 24 V, red

With bracket and switch

2JA 343 570-157	Power LEDs, 12 V, blue
2JA 343 570-141	Power LEDs, 24 V, blue
2JA 343 570-051	Power LEDs, 12 V, red
2JA 343 570-041	Power LEDs, 24 V, red
2JA 343 570-061	Standard LEDs, 24 V, red

Other versions are available on request.



CargoLED ceiling light

Clear lens, for installation (aluminium mounting frame), electrical connection via 310 mm long cable

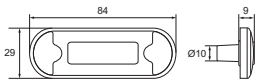
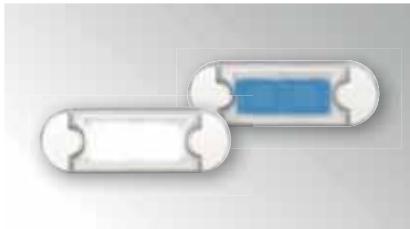
Light source	4 white Power LEDs
Rated voltage	Multi-voltage (12/24 V)
Current consumption	Approx. 500 mA (12 V), approx. 250 mA (24 V)
Protection class	IP 6K9K
Illumination angle	44° (wide illumination at close range)
Illuminance in the 1 m range	Approx. 280 lux

2JB 344 227-001	Cold white
2JB 344 227-041	Warm white

Accessories

9XD 344 118-101	Installation frame, grey
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ORIENTATION LIGHTS
LED STEP LIGHTS

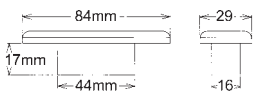


LED step light

Clear lens, seal, fastening screws and screw caps included; electrical connection via a 500 mm cable, for installation

Light source	2 LEDs
Rated voltage	Multi-voltage (12/24 V)
Current consumption	Approx. 40 mA
Protection class	IP 6K9K
Connecting bracket	22°
Illuminance in the 1 m range	Approx. 25 lux

2XT 980 855-117	White LEDs
2XT 980 855-417	Blue LEDs



LED step light

Clear lens; seal, fastening screws and screw flaps included; electrical connection via 120 mm long cable, for installation

Light source	2 LEDs
Rated voltage	Multi-voltage (12/24 V)
Current consumption	Approx. 40 mA
Protection class	IP 6K6, IP 6K7
Illumination angle	30°
Illuminance in the 1 m range	Approx. 15 lux

2XT 959 510-427	White LEDs
2XT 959 510-657	Blue LEDs

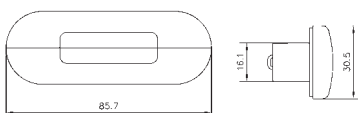


LED step light

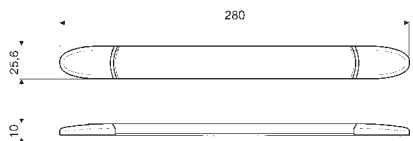
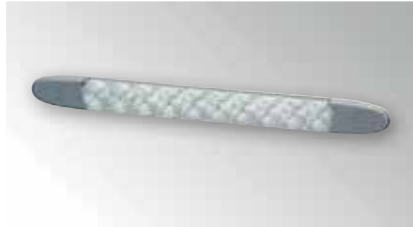
With polished stainless steel frame, 120 mm cable, seal and fastening screws; for installation

Light source	2 LEDs
Rated voltage	Multi-voltage (12/24 V)
Protection class	IP 67

2XT 959 680-612	Blue LEDs
2XT 959 680-812	White LEDs



ORIENTATION LIGHTS
LED STEP LIGHTS

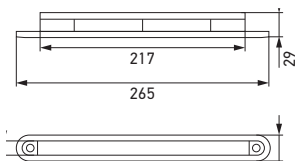
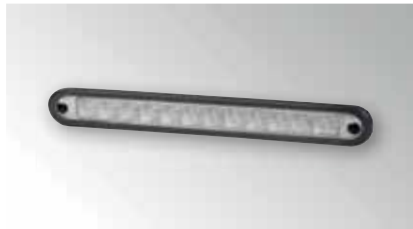


LED orientation light

Clear lens, for mounting, permanently bonded to grey base plate, electrical connection via a 500 mm cable

Light source	10 LEDs
Rated voltage	12 or 24 V
Current consumption	Approx. 150 mA (12 V)
Protection class	IP 6K9K
Illumination angle	38°
Illuminance in the 1 m range	Approx. 32 lux

- 2JA 343 606-001 White LEDs
- 2JA 343 606-201 Blue LEDs

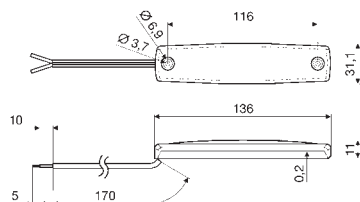


LED step light

Clear lens; screws, screw caps, seal and cable connector included; connection via a 2,500 mm cable, for installation

Light source	12 white LEDs
Rated voltage	12 or 24 V
Current consumption	Approx. 160 mA (12 V)
Illumination angle	24°
Illuminance in the 1 m range	Approx. 130 lux

- 2JA 959 073-001 12 V



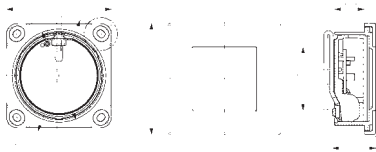
Mini Thin LED orientation light

Electrical connection via a 170 mm cable

Light source	5 white LEDs
Rated voltage	12 or 24 V
Current consumption	Approx. 230 mA (12 V), approx. 110 mA (24 V)
Protection class	IP 6K9K
Illumination angle	34°
Illuminance in the 1 m range	Approx. 7.2 lux

- 2JA 343 660-101 12 V
- 2JA 343 660-117 24 V

ORIENTATION LIGHTS
LED STEP LIGHTS

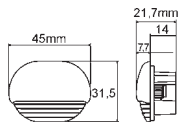


LED step light

White lens, with square white frame, 120 mm cable, seal and fastening screws; for installation

Light source	4 white LEDs
Rated voltage	12 or 24 V
Current consumption	Approx. 80 mA (12 V), approx. 40 mA (24 V)
Protection class	IP 67
Connecting bracket	32°
Illuminance in the 1 m range	100 Lux

2JA 980 596-002 12 V, passive electronics



LED step light, 2nd gen.

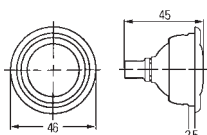
Clear lens, bright illumination at close range, white cover cap, pre-wired with 120 mm cable, for installation

Light source	1 LED
Rated voltage	Multi-voltage (12/24 V)
Current consumption	Approx. 40 mA (12 V), approx. 20 mA (24 V)
Protection class	IP 67

2JA 958 126-017 White LED

2JA 958 126-117 Blue LED

READING LIGHT



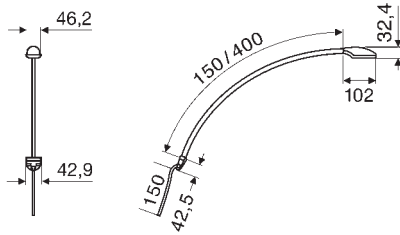
Reading light

Clear lens, black housing, electrical connection via cable with tinned cable ends, 130 mm long, for installation, snap-in mounting

Light source	1 bulb WY5W, 12 V, amber
Rated voltage	12 V
Current consumption	Approx. 410 mA

2AB 004 074-027 12 V

READING LIGHTS

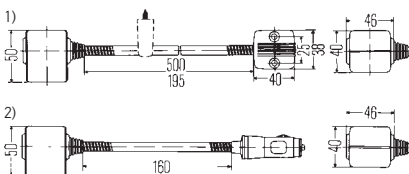


LED reading light

Lens with optics; with flexible arm, ideal for reading maps; electrical connection via a 150 mm long cable, for surface mounting

Light source	1 white Power LED
Rated voltage	Multi-voltage (12/24 V)
Current consumption	Approx. 200 mA
Protection class	IP 53
Illumination angle	38°
Illuminance in the 0.7 m range	Approx. 110 lux

2JA 346 720-111	400 mm arm, trim colour, white
2JA 346 720-021	150 mm arm, trim colour, black
2JA 346 720-121	400 mm arm, trim colour, black
2JA 346 720-191	400 mm arm, trim colour, silver
2JA 346 720-081	150 mm arm, with plug for cigarette lighter, trim colour, black



Reading light


Clear-lens, with flexible metal arm; light source, strong and glare-free; with holder for permanent mounting included; for mounting

Light source	1 bulb, 12 V
Rated voltage	12 V
Current consumption	Approx. 500 mA

2AB 004 532-001¹⁾	500 mm arm, for permanent mounting
2AB 004 532-011¹⁾	195 mm arm, for permanent mounting
2AB 004 532-021²⁾	160 mm arm, with plug for cigarette lighter

Spare parts/accessories

9EL 128 922-011	Lens, red
8GH 002 473-151	Halogen bulb, 12 V
9XB 136 202-005	Bracket



ELECTRONICS

HELLA electronic components have proved their worth millions of times over - frequently under adverse conditions. That is why they are also the first choice for caravans and motorhomes to ensure reliable and economical operation. We develop customised, high-quality solutions for the key remits in the automotive industry: increasing energy efficiency, minimising CO₂emissions and improving comfort.

We offer a versatile electronics portfolio specially for caravans and motorhomes that besides sensors and actuators, also includes components for a large number of application scenarios.

ELECTRONICS EXPERTISE

PRODUCT RANGES, SPECIAL OE ELECTRONICS

We are constantly expanding our electronics competence in special vehicles such as agricultural and construction machinery, buses, motorhomes, electric cars and in the marine sector: in line with this, we are strengthening our global sales network and expanding our global development expertise on the one hand, while on the other, we focus on extending our electronics portfolio.

Our application specialists are always available to support you with the integration of the latest technologies and functions. No matter how specific your requirements are, HELLA tackles the challenge and ensures that a customised solution is found and implemented.

Together, Sales, Product Management and Development focus on your electronics projects, offering flexibility and technical support for your product application.

Reliable, intensive and personal customer support: HELLA works hand in hand with you.

ENERGY MANAGEMENT



Intelligent Battery Sensors

ENVIRONMENTAL AND MEDIUM SENSORS



Rain light sensors

ACTUATORS



Actuators (Smart URA)



Actuators (High Force)



Actuators (Medium Force)



Actuators (Low Force)

BODY AND LIGHTING ELECTRONICS



LED light control unit



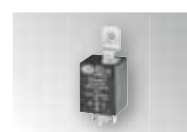
Simulation device for cold check



Control unit for flashing side marker lights



LED flasher unit: towing vehicle



Control device for current monitoring



Remote control systems



Mounted to standard battery pole



IBS intelligent battery sensor generation II

1. Shunt on the sensor
2. Plug
3. Sensor module
4. Negative terminal clip
5. Screw-on bolt for cable lug contacting (earth cable)

ENERGY MANAGEMENT
INTELLIGENT BATTERY SENSORS

Second generation of intelligent battery sensors (IBS) for caravan and motorhome applications | Energy supply plays a central role, especially in caravans and motorhomes. It often presents a challenge, especially in living areas that need a reliable power supply for interior lighting, television sets, refrigerators and other electrical appliances. The nearest campsite with a shore power connection can often be a long way off, and board batteries can supply only limited amounts of energy. This makes it particularly important for drivers to keep an eye on their exact battery capacity and power consumption. Yet this is something that HELLA's IBS units have been helping with since 2009.

HELLA has been supplying the second generation of intelligent battery sensors (IBS) since 2017 and uses the latest technology from the automotive sector to provide higher performance in caravan and motorhome applications. The space-saving, compact sensor precisely detects the voltage, electricity and temperature battery parameters and can be electrically and mechanically integrated into the most inaccessible installation positions with ease.

BASIC DESIGN AND FUNCTION

The IBS generation II is attached directly to the negative terminal of the battery via the pole terminal. Alongside the terminal, the mechanical part of the battery sensor consists of the shunt and earthing bolt. The shunt is attached to the vehicle's load path and serves as a measuring resistor to measure the current indirectly. The existing earth cable can be conveniently fixed to the earthing bolt with a cable lug.

The electronics are located in a molded casing with a plug connector, functioning as the interface to the energy management system. The communication interface to the higher-level control unit is the LIN protocol. The supply voltage, used simultaneously as the reference voltage for voltage measurement, is provided by the connection to the positive pole of the battery.

Unlike its predecessors, the IBS generation II boasts the following advantages: The sensor is now also able to monitor larger batteries. Thanks to the higher and adjustable nominal capacity, this battery sensor can also be used to monitor several series-connected batteries. Instead of 250 ampere hours, it can be configured for up to 500 ampere hours (Ah). This is particularly important in view of the growing energy requirements of motorhomes and caravans. These new IBS generation II units are also particularly rugged and can therefore reliably detect short-term, high current consumption – for example when a power inverter is used.

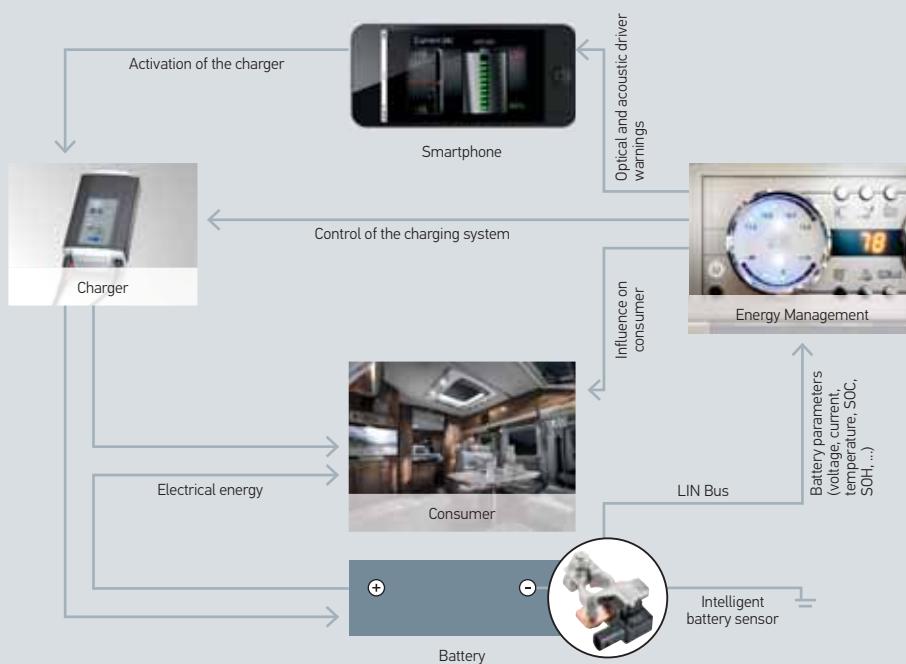
CUSTOMER BENEFITS

The intelligent battery sensor (IBS) generation II informs you about the current energy balance, allowing you to plan your energy supply.

APPLICATION

HELLA's IBS intelligent battery sensor generation II is the key element of energy management in the vehicle. The IBS generation II reliably and accurately measures the following battery parameters: voltage, current and temperature. Information about the battery's state of charge (SOC), state of health (SOH) and state of function (SOF) is calculated algorithmically using the measurements. The IBS generation II is intended for use in starter, gel and AGM batteries to monitor in-vehicle starter or consumer batteries. Via the standardised LIN protocol, the IBS generation II can be directly integrated into the vehicle's electrical system e.g. CI-BUS.

The IBS generation II also comes with the tried-and-tested CI bus interface, which is increasingly becoming the standard in the caravan and motorhome industry. This communications interface can be used, for example, to convey the battery's charge condition to the charging system, which switches on automatically if necessary. You can find additional information about the CI bus interface at: www.civd.de



ENERGY MANAGEMENT IN MODERN MOTORHOMES

By using the intelligent battery sensor, the energy management system can react quickly in the event of a critical battery condition and influence both consumer and charging behaviour. The driver is immediately notified on their smartphone, letting them initiate the next steps, such as activating the charger.

PRODUCT RANGES, SPECIAL OE ELECTRONICS
 EXTRACT FROM THE PRODUCT RANGE FOR MOTORHOMES



Intelligent battery sensor (IBS) generation II

Accurate measurement of voltage, current and temperature battery parameters

Voltage range	6–18 V
Rated voltage	12 V
Dimensions (length/width/height)	Approx. 66/46.6/31 mm
Weight	70 g
Operating temperature	-40 °C to +115 °C
Protection class	IP 6K7
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. It may be purchased from Hirschmann Automotive.



Intelligent battery sensor (IBS) generation I

Accurate measurement of voltage, current and temperature battery parameters

Voltage range	6–16.5 V
Rated voltage	12 V
Dimensions (length/width/height)	Approx. 71.4/68.35/22.8 mm
Weight	125 g
Operating temperature	-40 °C to +115 °C
Protection class	IP 6K7
Mating connector*	Hirschmann 872-858-565

6PK 010 842-001	IBS 12 V, Gen. I
9MK 179 472-007	Battery pole adapter for IBS 12 V, Gen. I

* This accessory is not included in the scope of delivery. It may be purchased from Hirschmann Automotive.

PRODUCT RANGES, SPECIAL OE ELECTRONICS
EXTRACT FROM THE PRODUCT RANGE FOR MOTORHOMES



Rain/light sensor

For vehicles with steep windscreens, rain and light detection (environment and tunnel detection); holder and design cover available as accessories

Voltage range	9 – 16 V
Rated voltage	12 V
Dimensions (width/radius/height)	Approx. 58.5/Ø 49/32.8 mm (without protective cap)
Weight	≤ 42 g
Operating temperature	-40 °C to +85 °C
Protection class	IP 50
Mating connector*	AMP C-1718346, A coding

available on request

* This accessory is not included in the scope of delivery. May be purchased from TE Connectivity.



Remote control system

Switching lamps on and off or opening and locking doors and flaps

	Remote control transmitter
Transmission frequency	434.42 MHz
Transmission power	30 µW ERP
Battery type*	CR2032
Battery service life	100,000 clicks (equivalent of approx. 3 years)
Average range**	70.5 m
Max./Min. range	119 m/51 m
Operating/storage temperature	-20 °C to +60 °C
Protection class	IP 6K7, IP X5

	Remote receiver
Operating voltage	6 – 32 V
Operating temperature	-40 °C to +80 °C
Storage temperature	-40 °C to +90 °C
Power consumption	11 mA (signal output not activated)
Switching currents	Up to 4x < 300 mA
Idling current	< 2 mA
Max. voltage	58 V for 250 ms
Overvoltage	36 V (at 40 °C, 1 hour)

available on request 2 remote control transmitters with light symbol button and receiver, enhanced version

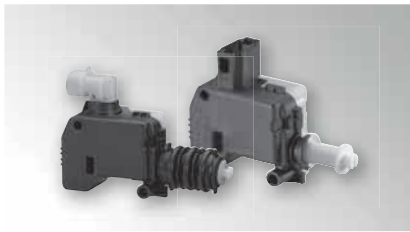
5FA 012 485-817 2 remote control transmitters and receivers, enhanced variant

5FA 012 485-201 Replacement key for 5FA 012 485-817

* A battery is included in the scope of delivery for the radio transmitter.

** Ranges depend on the installation position and interference factors. The values specified are merely an example and must be verified for each new application.

PRODUCT RANGES, SPECIAL OE ELECTRONICS
 EXTRACT FROM THE PRODUCT RANGE FOR MOTORHOMES



Door locking actuator/central locking system

Electrical opening and closing (medium force) of all doors (locking systems), flaps, roof windows, seats, covers, hoods, glove compartments

Rated voltage	12 or 24 V
Voltage range	9–15 V (12 V), 18–30 V (24 V)
Position on delivery	Retracted or extended
Mainspring reset	None, retract/extend
Positioning force at the positioning mechanism	From 30 up to 170 N
Manual adjustment	None to < 35 N
Functional stroke	≤ 18 mm
Operating temperature	-40 °C to +80 °C
Service life	Up to 100,000 cycles

Electrical extension and retraction

6NW 009 203-401	12 V, positioning force 30 - 130 N, IP 5K0, with manual override
6NW 009 203-411	12 V, positioning force 30 - 140 N, IP 5K0
6NW 009 203-621	12 V, positioning force 20 - 130 N, IP 5K4, with manual override
6NW 009 203-631	12 V, positioning force 30 - 160 N, IP 5K4
6NW 009 203-441	24 V, positioning force 30 - 130 N, IP 5K4, with manual override
6NW 009 203-451	24 V, positioning force 40 - 150 N, IP 5K4
6NW 009 203-557	12 V, positioning force 30 - 140 N, IP 5K4

Electrical retraction, extension with clockwork spring

6NW 009 203-461	12 V, positioning force 30 - 170 N, IP 5K0
6NW 009 203-471	12 V, positioning force 30 - 170 N, IP 5K4
6NW 009 203-541	24 V, positioning force 15 - 90 N, IP 5K4, with manual override

Electrical extension, retraction with clockwork spring

6NW 009 203-491	12 V, positioning force 30 - 170 N, IP 5K0
6NW 009 203-501	12 V, positioning force 30 - 170 N, IP 5K4
6NW 009 203-521	24 V, positioning force 20 - 140 N, IP 5K4

* The positioning force depends on the operating voltage and ambient temperature.



Actuator as door closing assistance

Electric locking/unlocking and tightening (high force), especially for applications requiring high forces (e.g. large locks, large flaps, seat release)

Rated voltage	12 V
Voltage range	9–16 V
Functional angle	0° to 198°
Manual adjustment	None
Operating temperature	-40 °C to +85 °C
Protection class	IP 5K0

6NW 009 424-781	Retraction via spring, electric extension, torque 150 Ncm
6NW 009 424-791	Electrical retraction & extension, torque 300 Ncm

PRODUCT RANGES, SPECIAL OE ELECTRONICS
EXTRACT FROM THE PRODUCT RANGE FOR MOTORHOMES



Universal rotary actuator (Smart URA)

Electrical locking/unlocking and tightening, electrical rotary movement right and left, with position feedback via CIPOS technology, application in supply/discharge air flaps, control of valves in the cooling circuit or the air flaps in the radiator grill

Rated voltage	13.5 V
Voltage range	9 – 16 V
Nominal torque (13.5 V; RT)	60 Ncm
Max. torque (13.5 V; RT)	< 300 Ncm
Operating angle range	> 360° (< 180° true power on)
Operating temperature	-40 °C to +85 °C
Protection class	IP 6K9K, IP 6K7 (depending on category of mating connector)
Service life	Typ. 250,000 cycles (1 cycle = 90° angle open – closed – open)
Control system	LIN 2.0 & PWM

6NW 011 303-701



Fuel filler door actuator

Electrical locking/unlocking of tank modules, service flaps or glove compartments, for instance, space-saving, with micro-switch, electrical forward rotation, reverse rotation via return spring, with soft touch button

Rated voltage	12 V
Voltage range	9 – 15.5 V
Function and service life	Electrical forward and reverse rotation: 100,000 switching cycles Electrical forward and reverse rotation with micro-switch: 60,000 switching cycles Electrical forward rotation; reverse rotation via return spring: 7,500 switching cycles
Locking lever retention force	> 75 N
Locking lever breaking force	≥ 300 N
Functional angle	≤ 78°
Operating temperature	-40 °C to +85 °C
Protection class	IP 5K4

6NW 011 122-017 Forward and reverse rotation electrical

6NW 011 122-027 Electrical forward and reverse rotation with micro-switch

6NW 011 122-047 Electrical forward rotation and return rotation via return spring with soft touch button

FAILURE MONITOR AND ELECTRICAL CONNECTION LED LIGHTING

LED LIGHT FAILURE MONITOR

A defined standard such as for bulbs cannot be used for the monitoring of LED lights. Every LED light is different in its technical design and its energy consumption:

- Due to the number of LEDs,
- the intensity with which they are driven,
- and also due to the electronic ballast necessary for their operation.

Monitoring of the failure check is therefore no longer as simple as it once was with bulbs.

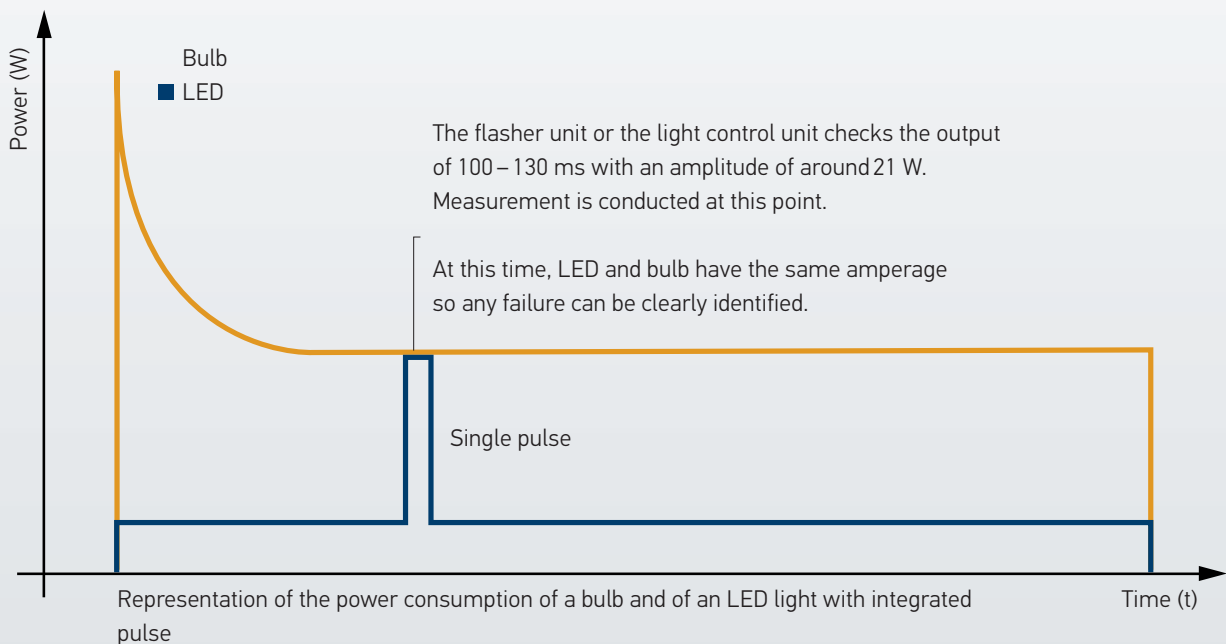
HELLA has various approaches to solving this problem. They are summarised here under the heading "Lighting Electronics".

WHAT IS DEMANDED BY LAW?

ECE R48 defines that flashers as direction indicators have to be monitored and that their failure has to be signaled optically or visually.

There are two possibilities:

- The LED light either has to be able to "communicate" with the vehicle
- Or it is monitored for its energy requirements. Communication is the better approach here, but is not always possible, e.g. between towing vehicle and trailer.



SOLUTIONS:

The optimum solution is to match the lighting electronics or the flasher unit to the connected lighting. This is only possible in the most seldom of cases, however, as either a towing vehicle or trailer is involved or the vehicle electronics have already been stipulated by third parties.

FLASHER UNIT

ISO 13207-conformant LED direction indicators can "communicate" with the flasher unit. The flasher unit checks for a defined energy consumption at a defined point in time: exactly 21 W for 100-130 ms after each activation of the direction indicator. The energy consumption or "pulse" corresponds here to that of a bulb, so that the flasher unit notices no difference between a bulb and an ISO 13207-conformant LED light.

If the intelligent ISO 13207-conformant LED light detects a defect or only a partial defect, this "pulse" is switched off and the flasher unit can interpret this as a failure. ISO 13207-compliant LED lights and ISO 13207-compliant flasher units are required for this method.

Advantage:

Bulbs and ISO LED lights can be operated in any combination on an ISO 13207-conformant flasher unit. This is relevant both for vehicles that are frequently operated with different trailers and for manufacturers who wish to offer several variants of the lighting system without having to modify the underlying electronics.

LED LIGHT CONTROL UNITS FOR USE WITH THIRD-PARTY ELECTRONICS

If the vehicle electronics have already been stipulated by third parties, HELLA offers LED control units that monitor the LED lights on the one hand, and on the other hand simulate to the vehicle that bulbs are connected. This allows LED lights to be used without any problems.

CURRENT MONITORING

Another possibility is to measure the average energy consumption of the headlamp or the LED light.

Disadvantage:

In most cases, however, partial defects cannot be detected in this way: With very efficient LED lights, it is possible that their energy consumption is so low that they are detected as defective even when functioning correctly. Or in the worst case: The electronic ballast of the LED light requires so much energy that a failure cannot be detected even if all the LEDs are defective.

SUITABLE PRODUCTS



LED flasher unit: towing vehicle



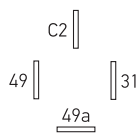
LED light control unit



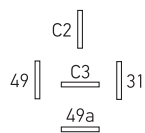
Control unit for current monitoring

FAILURE MONITOR AND ELECTRICAL CONNECTION

LED LIGHTING



Pin configuration
LED flasher unit 3+1



Pin configuration
LED flasher unit 2+1+1

LED flasher unit: towing vehicle

ISO 13207-conformant LED direction indicators can "communicate" with the flasher unit. The flasher unit checks for a defined energy requirement at a defined point in time: exactly 21 W for 100-130 ms after each activation of the direction indicator. The energy consumption or "pulse" corresponds here to that of a bulb, so that the flasher unit notices no difference between a bulb and an ISO 13207-conformant LED light.

Operating voltage	10 – 15 V (12 V), 18 – 32 V (24 V)
Functional voltage	11 – 14 V (12 V), 20 – 28 V (24 V)
Protection class	IP 53 (contacts underneath)

4DW 009 492-111	12 V, LED flasher unit 3+1
4DN 009 492-101	12 V, LED flasher unit 2+1+1
4DW 009 492-011	24 V, LED flasher unit 3+1
4DM 009 492-001	24 V, LED flasher unit 2+1



LED flasher unit: towing vehicle

Controls the flashing function in the vehicle, switches the display and the indicator lamp on and off.

Operating voltage	10.5 – 16 V
Rated load	2 + 1 + 1 x 21 W (8 x 21 W) or comparable LED cluster to ISO standard

4DN 008 768-161	12 V, LED flasher unit 2 + 1 + 1
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LED light control unit

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

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

Mating connector	Amphenol 6-pin (basic control unit) Amphenol 6/12-pin (premium control unit)
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5DS 227 488-001	Basic control unit, 12 V
5DS 227 488-101	Basic control unit, 24 V
5DS 227 489-001	Premium control unit, 12 V Premium (1 stop light channel)
5DS 227 489-011	Premium control unit, 12 V Premium (2 stop light channels)
5DS 227 489-101	Premium control unit, 24 V Premium (1 stop light channel)

FAILURE MONITOR AND ELECTRICAL CONNECTION

LED LIGHTING



Onboard power supply adapter / PWM module

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

Operating voltage	9-16V
Rated voltage	12V
Dimensions (length/width/height)	Approx. 155/ 67/ 38 mm
Operating temperature	-40 °C to +80 °C

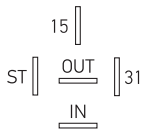
5DS 167 819-807	12 V, with wiring harness
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Control unit for current monitoring

In order to test LED low beam beam headlights, the average energy consumption is determined by measuring the current. The current monitors are matched to the HELLA products and enable very reliable monitoring.

5KG 011 630-001	Direct measurement, 12 V, 500 mA
5KG 011 630-011	Direct measurement, 24 V, 500 mA
5KG 011 630-211	Direct measurement, 24 V, 350 mA
5KG 011 630-101	Integrated measurement over time, 12 V



Pin configuration



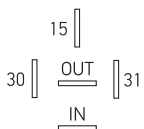
Simulation device for cold checking

If the existing vehicle electrical system is programmed to monitor the lighting even when it is not in operation, we speak of a cold check. During a cold check, a small test pulse is transmitted to the light while switched off to see whether this pulse is discharged via the bulb to ground. The energy here is so low that the bulb does not light up.

As LED lights are essentially not suitable for this form of monitoring, HELLA offers an electronic system for "simulation of the cold check" to ensure operation.

Functional voltage	1.5 A
Protection class	IP 54 (contacts underneath)

5DS 009 602-011	12 V
5DS 009 602-001	24 V



Pin configuration



ELECTRICS AND ACCESSORIES

What does the perfect switch for the cockpit of caravans and motorhomes look like? Our development engineers have thought long and hard about this question - and the result is something to be proud of. The modular switches from HELLA impress with a timeless design, a pleasant touch and feel and lasered symbols that are reliably backlit by up to 4 LEDs. They have self-cleaning contacts so that even very small currents can be switched without contamination. In addition, the modules can be freely configured. This means that the number and type of switches can be individually adapted to your requirements.

SWITCH SERIES

3100

**The HELLA switch configurator**

You can configure your own switches individually at www.hella.com/switch

Select switching functions, symbol combinations and accessories with just a few clicks.

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 according to test standard IEC EN 60529
- Extremely reliable in extreme conditions
- The most diverse switch functions in 12/24 V
 - Normally open contact/ changeover contact
 - Button/grid
 - Locking functions
 - Hazard warning light switch
- Wide range of standard and customised lasered symbols
- Up to two LED light sources enable direct symbol illumination
- Simple to install, directly in the mounting hole or using a modular mounting frame
- Display lights in the same design for safety-related feedback

Technical Data	
Mounting opening	21.1 mm x 37.0 mm
Material rocker	PC transparent, painted
Housing material	PBT
Blade terminals	6.3 x 0.8 mm
Coating of switch contacts	CuZn silver-plated
Light Source	max. 2 LEDs 1 x orientation lighting, green 1 x function light, red Indicator lights available in amber and green
Symbol type	lasered
Mechanical service life	150,000 switching cycles
Protection class	IP 68, connector side: IP 66
Operating temperature	-40 °C to +85 °C
Dashboard thickness	For direct installation: 1.6 mm to 6.3 mm
Available on request	12 V
Available on request	24 V

Our switch configurator can be found at: www.hella.com/switch

Accessories	
	Installation frame
9AR 169 209-102/7	End piece left, right
9AR 169 208-102/7	Centre piece
	Dummy cover
9HB 172 229-101/7	
	Female connector housing
8JD 010 076-102/7	Type I
8JD 010 076-112/7	Type II
8JD 010 076-122/7	Type III
	Flat receptacle 6.3 mm
8KW 744 882-003	0.5 mm ² – 1 mm ²
8KW 744 825-003	1.5 mm ² – 2.5 mm ²
8PE 197 631-001	Dismantling tool

SWITCH SERIES

4100



The HELLA switch configurator

You can configure your own switches individually at www.hella.com/switch

Select switching functions, symbol combinations and accessories with just a few clicks.

The rocker switch series with self-cleaning contacts is suitable for modern electrical and electronic systems. This also ensures reliable switching of small currents without contaminating the contacts. The series features a timeless design, with lasered symbols illuminated by integrated LEDs.

The strengths of the product range

- Modular design of the switch
- Realisation of a wide variety of 12 V and 24 V switching functions:
 - Normally open contact/ changeover contact
 - Button/grid
 - Locking function
 - Hazard warning light switch
- Wide range of standard and customer-specific symbols
- Selective, reliable and durable illumination of the symbols by using up to 4 LED light sources
- Simple to install, directly in the mounting hole or using a modular mounting frame
- Display lights in the same design for safety-related feedback
- Modern and timeless design
- Pleasant to the touch

Technical Data

Mounting opening	19.8 mm x 41.8 mm
Material rocker	PC transparent, painted
Base plate material	PA white, housing PA black
Blade terminals	2.8 x 0.8 mm
Coating of switch contacts	AgNi
Light Source	Max. 4 LEDs 2 x orientation lighting, green 2 x function lighting, red Warning lights also available in blue and amber
Symbol type	Lasered
Mechanical design life	450,000 hours
Protection class	IP 52
Operating temperature	-40 °C to +85 °C
Dashboard thickness	2 mm switch for direct installation

Available on request 12 V

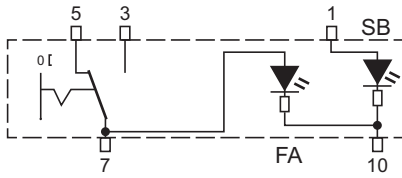
Available on request 24 V

Our switch configurator can be found at: www.hella.com/switch

Accessories

	Installation frame
9AR 168 396-002/7	Single frame
9AR 169 209-002/7	End piece, left
9AR 169 210-002/7	End piece, right
9AR 169 208-002/7	Centre piece
	Dummy cover
9HB 172 229-002/7	
	Female connector housing, 10-pin
8JD 010 076-002/7	
	Flat receptacle, 2.8 mm
8KW 863 934-003	Junior Power Timer 0.5 mm ² – 1 mm ²
8KW 863 934-023/4	Junior Power Timer 1.5 mm ² – 2.5 mm ²

ROCKER SWITCHES FROM SERIES 4100
FOR MOTORHOMES

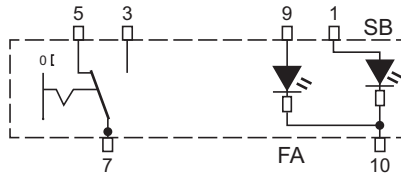


Heatable outer mirror

Locking changeover contact, 1-pin, 2-level

Function	01
Function check	1 x internal
Rated voltage	12 V
Symbol	1: 176
Packaging unit	1 unit

6FH 354 100-671

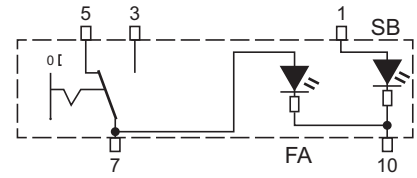


Heatable outer mirror

Locking changeover contact, 1-pin, 2-level

Function	08
Function check	1 x external
Rated voltage	12 V
Symbol	1: 176
Packaging unit	12 units

6FH 354 103-922

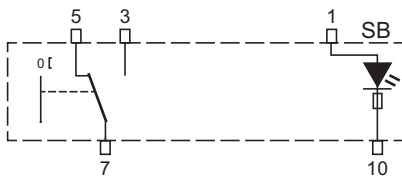


Interior lighting

Locking changeover contact, 1-pin, 2-level

Function	01
Function check	1 x internal
Rated voltage	12 V
Symbol	1: 020
Packaging unit	1 unit

6FH 354 103-541

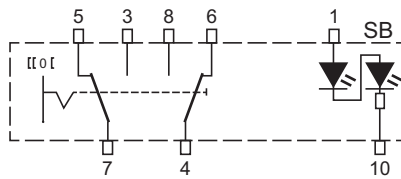


Step

Locking changeover contact, 1-pin, 2-level

Function	07
Function check	none
Rated voltage	12 V
Symbol	1: 183
Packaging unit	12 units

6FH 354 100-682

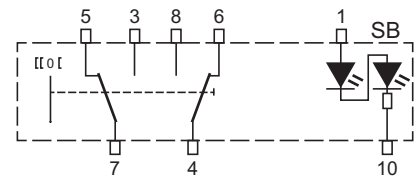


Air conditioning

Locking changeover contact, 2x1-pin, 2-level

Function	14
Function check	none
Rated voltage	12 V
Symbol	1: 235, 2: 100
Packaging unit	1 unit

6FH 354 104-831

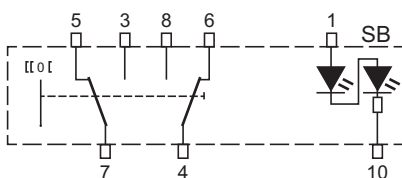


Jalousie

Locking changeover contact, 2 x 1-pin, 2-level

Function	15
Function check	none
Rated voltage	12 V
Symbol	1: 308, 2: 307
Packaging unit	12 units

6FH 354 105-762

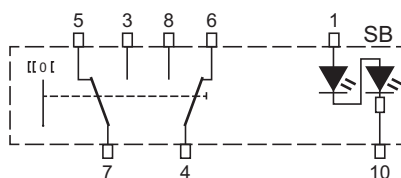


Window up/down

Locking changeover contact, 2 x 1-pin, 2-level

Function	15
Function check	none
Rated voltage	12 V
Symbol	1: 250, 2: 249
Packaging unit	12 units

6FH 354 111-392

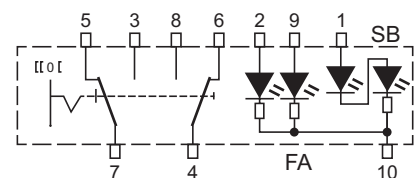


Sun protection

Locking changeover contact, 2 x 1-pin, 2-level

Function	15
Function check	none
Rated voltage	12 V
Symbol	1: 286, 2: 285
Packaging unit	12 units

6FH 354 111-412



Blower

Locking changeover contact, 2x1-pole, 2-level

Function	21
Function check	2 x external
Rated voltage	12 V
Symbol	1: 156, 2: 155
Packaging unit	12 units

6FH 354 111-402

ROCKER SWITCHES FROM SERIES 4100 FOR MOTORHOMES



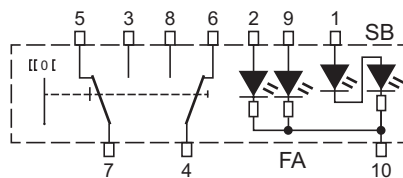
www.hella.com/switch

HELLA ROCKER SWITCH CONFIGURATION TOOL

Configure your switches yourself! Firstly, choose between the waterproof 3100 series or the 4100 series.

You can select any switch functions as well as the operating voltage, combinations of symbols and the corresponding accessories with only a few clicks. They can easily be transferred to a favourites list, printed out or sent as an online request.

Your request will be processed individually with the desired symbol configuration and customer-specific article number on a project-specific basis.

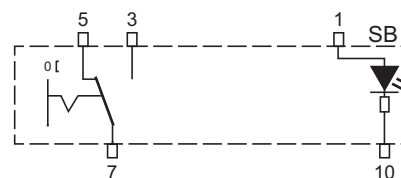


Defrosting windshield

Locking changeover contact, 2 x 1-pin, 2-level

Function	22
Function check	2 x external
Rated voltage	12 V
Symbol	1 : 177
Packaging unit	12 units

6FH 354 112-811

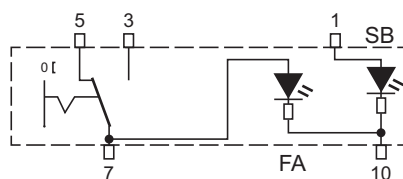


Reading light

Locking changeover contact, 1-pin, 1-level

Function	01
Function check	1 x internal
Rated voltage	12 V
Symbol	1 : 026
Packaging unit	1 unit

6FH 354 126-301

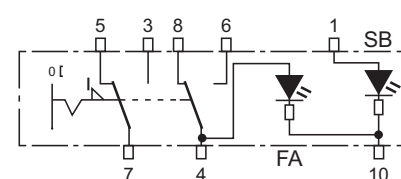


Heated fresh water tank

Locking changeover contact, 1-pin, 1-level

Function	00
Function check	none
Rated voltage	12 V
Symbol	1 : 295
Packaging unit	1 unit

6FH 354 120-301

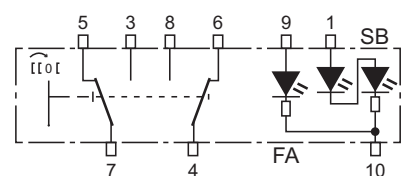


Waste water

Locking changeover contact, 2-pin, 1-level

Function	05
Function check	1 x external
Rated voltage	12 V
Symbol	1 : 658
Packaging unit	12 units

6FH 354 122-942

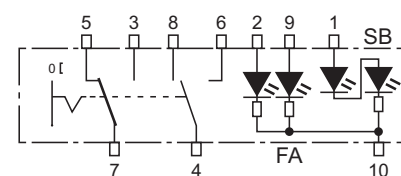


Bluetooth

Locking, non-latching changeover contact, 2 x 1-pin, 2-level

Function	20
Function check	1 x external
Rated voltage	12 V
Symbol	1 : 646, 2 : 645
Packaging unit	12 units

6FH 354 122-152



Radio

Locking changeover contact, 2-pin, 1-level

Function	13
Function check	2 x external
Rated voltage	12 V
Symbol	1 : 657, 2 : 656
Packaging unit	12 units

6FH 354 122-682

UNIVERSAL ACCESSORIES

CONNECTORS, ADAPTERS AND SOCKETS



Universal connector

2-pin with screwed-on strain relief and 8 A fuse, suitable for cigarette lighters and standard sockets (ISO 4165), screw connection up to 2.5 mm

8JA 007 589-001 6–24 V



Connector

2-pin according to ISO 4165, cross section of cable entry 9.2 mm

8JA 002 262-001 6–24 V



Connector

7-pin according to ISO 1724, plastic version, screw connections

8JA 001 930-003 12 V



Connector

13-pin according to ISO 11 446, plastic version, screw connections, with rubber grommet

8JA 005 951-001 12 V



Mini-short adapter

From 7-pin socket (ISO 1724) on the traction vehicle to 13-pin connector (ISO 11 446) on the trailer

8JA 008 981-001 12 V



Cable adapter

From 13-pin socket (ISO 11 446) on the traction vehicle to 7-pin connector (ISO 11 446) on the trailer, with 250 mm cable

8JA 005 952-001 12 V



Super-short adapter

From 13-pin socket (ISO 11 446) on the traction vehicle to 7-pin connector (ISO 11 446) on the trailer

8JA 008 969-001 12 V



Connector socket

7-pin according to ISO 1724, plastic version, screw connections

8JB 001 943-003 12 V



Connector socket

13-pin according to ISO 11 446, plastic version, screw connections, with rubber grommet and rubber seal in the cover

8JB 005 949-001 12 V



Connector socket

13-pin according to ISO 11 446, plastic design, screw connections, with rear fog light deactivation

8JB 005 949-011 12 V



Connector socket

2-pin according to ISO 4165, without cover, 6.3 mm male spade connectors, load capacity: max. 16 A, installation opening cross section 18.5 mm

8JB 001 946-072 6–24 V



Connector socket

2-pin according to ISO 4165, 6.3 mm blade terminal connections, with spring-loaded cover, load-carrying capacity: max. 16 A, installation opening cross section 18.5 mm

8JB 001 946-082 6–24 V



Connector socket

2-pin according to ISO 4165, 6.3 mm blade terminal connections, with spring-loaded cover, load-carrying capacity: max. 16 A, installation opening cross section 18.5 mm

8JB 001 946-092 6–24 V



Surface-mounted socket

2-pin according to ISO 4165, screw connections, load-carrying capacity: max. 16 A.

8JB 004 123-001 6–24 V



Power socket

2-pin with cover and clamping sleeve, suitable for cigarette lighter socket, 6.3 mm male spade connectors, load capacity: max. 16 A.

8JB 008 023-001 6–24 V

BATTERY ISOLATOR SWITCH



Battery isolator switch

Disconnecter for battery, optional circuit for plus or minus cable, switch key can be removed in off position, fastening with 2 screw terminals; load capacity: max. 1,000 A at 12 sec, max. 50 A/80°C ambient temperature in continuous state; cable cross-section 35 mm²

6EK 002 843-002

BREAKDOWN ACCESSORIES



Hazard warning light Model 3003/3003 ACCU

Type-tested: with fastening bracket (for battery operation via 5 mono cells, not included)
ACCU version: type-tested, automatic battery charging when engine is running; automatic switchover 12/24 V, operating time in flashing mode 40 h or 7 h with working light; charging cradle and lead-gel battery included

2XW 007 146-001 Model 3003

2XW 007 146-011 Model 3003 ACCU



Boxes of spare bulbs

A must for every responsible camper. The assortment contains one bulb each for the most common lighting functions as well as various spare fuses

8GJ 002 525-913 H4, 12 V

8GH 007 157-901 H9, 12 V

SUPERSEAL CONNECTORS



Comply with the guidelines in IEC 529 as well as DIN ISO 40050 and have been given protection rating IP class 67, which guarantees maximum protection from water and dust penetration. The quality of the SUPERSEALS makes them ideal wherever other interconnection systems reach their limits due to adverse pressure or humidity conditions.

Range benefits:

- OEM quality
- Reliable electrical connection
- Maximum protection from external influences

Description	Pin	Part number	Packaging unit
SUPERSEAL pin housing	1-pin	8JA 746 183-012	10 units
SUPERSEAL socket housing	1-pin	8JA 746 184-012	10 units
SUPERSEAL pin housing	2-pole	8JA 746 183-022	10 units
SUPERSEAL socket housing	2-pole	8JA 746 184-022	10 units
SUPERSEAL pin housing	3-pin	8JA 746 183-032	10 units
SUPERSEAL socket housing	3-pin	8JA 746 184-032	10 units
SUPERSEAL pin housing	4-pin	8JA 746 183-042	10 units
SUPERSEAL socket housing	4-pin	8JA 746 184-042	10 units
SUPERSEAL pin housing	5-pin	8JA 746 183-052	10 units
SUPERSEAL socket housing	5-pin	8JA 746 184-052	10 units
SUPERSEAL pin housing	6-pin	8JA 746 183-062	10 units
SUPERSEAL socket housing	6-pin	8JA 746 184-062	10 units
Male pin contact, B 143	0.75 – 1.5 mm ²	8KW 744 836-002	50 units
Female contact, B 144	0.75 – 1.5 mm ²	8KW 744 837-002	50 units
Strand insulation, B 145	Ø 1.8–2.4 mm	9GD 746 185-002	50 units
Strand insulation, B 146	Ø 2.6 – 3.3 mm	9GD 746 186-002	50 units
Blind plug, B 147	–	9GD 746 187-002	50 units

DEUTSCH PLUG CONNECTIONS "DT SERIES"



The concept combines high-quality materials with a connecting system characterised by reliability and easy handling. Thanks to these qualities, the range is particularly suited to applications where maximum performance is required with a minimum number of disruptions, despite tough environmental conditions. The symmetrical star crimp process allows a gas-tight connection which is characterised by high resistance to temperature and oxidation-based fluctuations in resistance. The housing locking mechanism with integrated click-in function guarantees a quick and secure connection with a strong grip. The "wedgelocks" used for secondary locking facilitate precise, strain-resistant alignment of the contacts and are "clicked" into position on the contact side of the DT housing.

Range benefits:

- environmental sealing – maximum protection from external influences
- high quality housing material
- Strong, gas-tight crimp connections

Description	Pin	Part number	Packaging unit
DEUTSCH housing	2-pole	8JA 201 021-022	10 units
DEUTSCH connector	2-pole	8JA 201 022-022	10 units
DEUTSCH "wedgelock" for housing	2-pole	9NB 201 023-022	10 units
DEUTSCH "wedgelock" for connector	2-pole	9NB 201 024-022	10 units
DEUTSCH housing	3-pin	8JA 201 021-032	10 units
DEUTSCH connector	3-pin	8JA 201 022-032	10 units
DEUTSCH "wedgelock" for housing	3-pin	9NB 201 023-032	10 units
DEUTSCH "wedgelock" for connector	3-pin	9NB 201 024-032	10 units
DEUTSCH housing	4-pin	8JA 201 021-042	10 units
DEUTSCH connector	4-pin	8JA 201 022-042	10 units
DEUTSCH "wedgelock" for housing	4-pin	9NB 201 023-042	10 units
DEUTSCH "wedgelock" for connector	4-pin	9NB 201 024-042	10 units
DEUTSCH housing	6-pin	8JA 201 021-062	10 units
DEUTSCH connector	6-pin	8JA 201 022-062	10 units
DEUTSCH "wedgelock" for housing	6-pin	9NB 201 023-062	10 units
DEUTSCH "wedgelock" for connector	6-pin	9NB 201 024-062	10 units
DEUTSCH housing, coding "A"	8-pin	8JA 201 021-082	10 units
DEUTSCH connector, coding "A"	8-pin	8JA 201 022-082	10 units
DEUTSCH "wedgelock" for housing	8-pin	9NB 201 023-082	10 units
DEUTSCH "wedgelock" for connector	8-pin	9NB 201 024-082	10 units
DEUTSCH housing, coding "A"	12-pin	8JA 201 021-122	10 units
DEUTSCH connector, coding "A"	12-pin	8JA 201 022-122	10 units
DEUTSCH "wedgelock" for housing	12-pin	9NB 201 023-122	10 units
DEUTSCH "wedgelock" for connector	12-pin	9NB 201 024-122	10 units
Contact sleeve	2 mm ²	8KW 201 025-012	50 units
Contact pin	2 mm ²	8KW 201 025-022	50 units
Contact sleeve	0.5 – 1.5 mm ²	8KW 201 025-112	50 units
Contact pin	0.5 – 1.5 mm ²	8KW 201 025-122	50 units
Blind plug	–	9NB 201 026-012	50 units

HELLA WORLDS WEBSITE, TOOLS AND MORE

Our online information is designed to let you efficiently and conveniently identify the latest HELLA products and find out significant details about them.

No matter what you are looking for, we are sure to have the right part in our range!



www.hella.com/caravan

WEBSITE FOR MOTORHOMES AND CARAVANS

Here, you can find everything you need to know about new products, technology and options for equipping your vehicle. Learn more about our solutions for a modern temporary home.



SHAPELINE CONFIGURATION TOOL

Become a lighting designer and configure your own custom vehicle light signature.

www.hella.com/shapeline



MODULE SELECTOR

The right module headlight for your motorhome in just a few steps.

www.hella.com/headlamp-modules



ROCKER SWITCH CONFIGURATOR

Put your own individual switches together quickly and easily by using our rocker switch configurator.

www.hella.com/switch



ELECTRONICS TOOL

Electronics products from HELLA for special original equipment intended for caravans and motorhomes.

www.hella.com/electronics-tool

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