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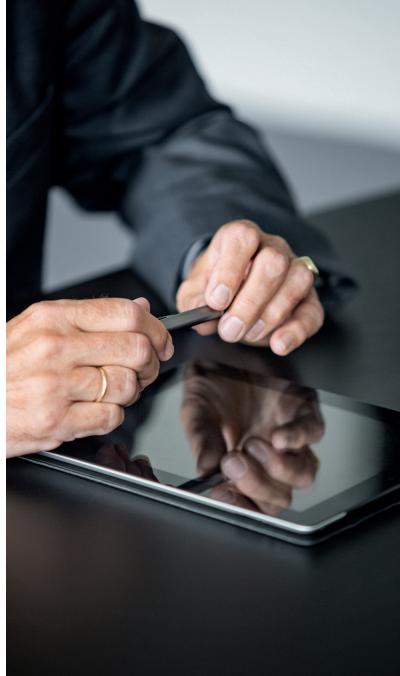
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# RESEARCH AND DEVELOPMENT

As one of the world's leading automotive suppliers, HELLA has been shaping the industry with innovative lighting systems and vehicle electronics since 1899. Over the decades, a lot has changed and developed - new lighting technologies arrived on the scene and with them new products and new possibilities.

Furthermore, the company is one of the most important partners of the spare parts trade and of independent workshops and it also develops solutions for special vehicles. From cars through motorhomes and construction machinery right up to emergency vehicles, we have the right products for every application.

Individual, and to a certain extent, customised solutions and design aspects also play a major role for our developers. Because we work in direct contact together with our customers, we always find the best option for their needs. Every day 36,000 employees around the world, with the full force of their passion, know-how and innovative creativity, strive to achieve this result. Almost 8,000 of these work in research and development.





And this is what drives us on: the wish to shape the mobility of tomorrow and to propel key market trends. The issues we view here, above all else, are autonomous driving, efficiency and electrification. We are constantly gaining new insights thanks to work performed in our own research laboratories, to the carrying out of special test procedures and also to the construction of prototypes. In addition, we are constantly working on the comfort and design of our products while driving forward other topics of the future such as connectivity, digitalisation and indeed individualisation. Consistently high investments maintain and expand the company's technological edge.

Our high standards of quality ensure durable and reliable products, customer support through our international sales network ensures excellent accessibility and our research and development experts ensure that we are constantly evolving.

# **KEY OF ICONS**



#### ECE

This product is tested in line with ECE guidelines.

Further information about the ECE Type approvals can be found on the relevant products.



#### SAE

Product has SAE type approval.



SAE

#### Vehicle electrical system voltage

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



IP

#### Operating temperature

Thermal management and an optimised housing design quarantee full functioning for all operating temperatures as a result of product testing ranging from -40° C to +60° C.





**EMC** 

#### Dust and water protection class - IP

International Protection (IP) according to DIN 40050, Part 9.



### Overvoltage protection

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



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

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

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



#### Bipolarity of the lamps

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

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

#### Polarity reversal protection

Even if the connecting cable is connected with reverse polarity, there is still no danger to the electronics.

#### Electromagnetic compatibility

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

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

#### ECE-R65

Defines the light values to be achieved, the light distribution and also colour location of beacons. Only beacons that fulfil ECE-R65 can be used on public roads.

#### Approved for dangerous goods transport

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

# IP PROTECTION CLASSES

How well a product is protected from environmental influences can have a significant impact on its lifetime. The products are exposed to dust, water and other contaminants. The degree of protection shown indicates which product is suitable for which application or use.

#### PROTECTION CLASS IP 5K4K

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

# PROTECTION CLASS IP 5K9K

Dust may only penetrate to such an extent that function and safety are not impaired. Water that is directed onto the housing using high pressure/steamjet equipment must not have any harmful effects; water pressure approx. 100 bar.

#### PROTECTION CLASS IP 6K4K

Dust must not penetrate. Water that is sprayed against the housing from every direction at increased pressure must not have any damaging effect; water pressure is approx. 4 bar.

#### PROTECTION CLASS IP 67

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

#### PROTECTION CLASS IP 6K9K

Dust must not penetrate. Water that is directed onto the housing using high pressure/steamjet equipment must not have any harmful effects; water pressure approx. 100 bar.

#### General overview

K= Denotes tests for road vehicle equipment.

#### Protection against penetration of foreign material (including dust)

#### Protection against ingress of water

First number		Second numbe	er
0	No special protection	0	No special protection
1	Solids Ø ≥ 50 mm	1	Vertically falling drops of water
2	Solids Ø ≥ 12.5 mm	2	Water dropping up to an angle of 15°
3	Solids Ø ≥ 2.5 mm	3	Water dropping up to an angle of 60°
4	Solids Ø ≥ 1.0 mm	4	Drops of water from all directions
5K or 5	Dust protected	4K	Identical to 4 but at increased pressure
6K or 6	Dustproof	5	Water jet from a nozzle
		6	Identical to 5 but at increased pressure
		7	Temporary immersion in water
		8	Sustained immersion in water
		9K	Cleaning under extremely high pressure

# QUALITY

# Water and dust test

Our products undergo series of tests checking for ingress of water and dust. Each relevant protection class (IP protection class) can be found in the product details.



# Electromagnetic compatibility (EMC)

Interference from other devices or radio waves is not to be expected with our products. We pay attention to the ensuring of electromagnetic compatibility and we protect all installed electronics equipment.

# Thermal tests

All HELLA products undergo a series of thermal tests and are specially developed to withstand temperature shocks or fluctuations without any problems.



#### Lifetime tests

Long-term tests of the products in simulated continuous operation enable us to make precise and reliable statements about the lifetime of our product range.

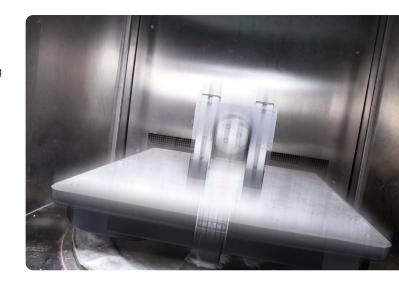


#### Electronic tests

In order to prevent short circuiting and the associated damage to the electronics, our products have polarity reversal protection. This ensures easy and safe connection and also protection of the electronic components.

## Vibration tests

So as to test the resistance of our products to vibrations, they also undergo a special test procedure for this purpose. In addition, we place special emphasis on obtaining hard-wearing components and on ensuring high-quality workmanship as soon as we start designing our products and selecting their materials.





Roof bars with flexible configuration options, optics modules for lighting in powerful and long-lasting LED technology

- → Signal emission, optionally separately switchable, front / rear, various flashing sequences programmable
- → Control possible via a programmable operating unit or via a vehicle-specific control panel, operation possible either with an analogue switch or via the high-speed CAN bus
- → Flexibility regarding mounting concepts, covering housing widths between 900 and 2,000 millimetres wide in 100 mm increments for all the usual vehicle sizes
- → The flat, streamlined housing design has significantly improved the cw value for a wide range of vehicle and RTK<sup>7</sup>combinations

#### → Approvals

DIN 14620 @ 035717 ~~~W25049 • Germany

T.P POL 12225 Police • France:

> T.P GEN 12226 Police T.P SPO 12227 Fire service T.P ASA 12228 Ambulance

T.P Mobile hospital unit 12229 Mobile hospital unit

• Switzerland: CH-BØ1-13Ø2Ø

• The Netherlands: The tested warning device RTK7 fulfils the requirements of the measurement procedure for the noise

emission of multi-tone horns on fire brigade, police and ambulance priority vehicles stipulated by the

Dutch Organisation for Applied Scientific Research.



#### Technical data

	RTK <sup>7</sup> (12 V)	RTK <sup>7</sup> (24 V)	
1.1.		· D	
Light source	LE	.D	
Rated voltage	12 V	24 V	
Supply voltage range	9 V ≤ UBAT ≤ 16 V	20 V ≤ UBAT ≤ 30 V	
Operating temperature	-40 °C to +60 °C		
Quiescent current consumption	≤ 0.5 mA		
Undervoltage cutoff	$\leq$ 9 V – 0.5 V	$\leq 16 \text{ V} - 0.5 \text{ V}$	
Overvoltage cutoff	≥ 16 V+0.5 V	≥ 32 V+ 0.5 V	
Load capacity Control outputs	≤ 0.3 A		
Load capacity Display outputs	≤ 0.3 A		
Load capacity Light emissions	$\leq$ 0.5 A to 7 A		
EMC protection	VDE 0879 Part 3 interference suppression rating 3, CISPR 25 Class 3		
Operating	Digital with hand-held device type HA 112 or HA 115	Analogue with AZD, eAZD or single switches	
Data bus protocol	CAN open in accordance with CIA 447	FireCAN	
Scope of delivery	Mounting instructions on CD and also slot nuts for flexible, permanent fastening		



#### KL-LM 2 LED MODULE

With 2-level function for day/night mode, highperformance LEDs with additional bundle optics arranged in a semicircle for optimised visibility, also from the side.





#### KL-LM 3

As KL-LM-2, with additional optics for amber warning light.

(1) LED two-colour module: This module enables – depending on the operation – a changeover from the continuous blue light in operation to an amber warning light when the vehicle is stationary at the scene. Other road users not involved are consequently not so distracted.





# KL-LM 4

As KL-LM-2, with extended functionality for rotating signal emission analogue to the classic rotating mirror signal.





# KL-LM 5

As KL-LM-2, with flashing infrared signal.





# KL-LM 6

As KL-LM 4 with rotating infrared signal.





# KL-LM 7

With 2-level function for day/night mode (flashes in daylight, rotates at night) with infrared flight visibility marking.





# KL-LM 8

In blue/red (right/left), including cruise light, use only as far as legally permissible.





### Main beacon modules

Powerful optical signals in various LED technologies, also available with infrared function on request.

2 Optional optics modules in the light dome

White working light, amber warning modules or blue additional flashers

2a Alley Lights

Side LED light for working

2b Hazard warning lamps

Alternative safeguarding of the operation site with amber hazard warning light in accordance with ECE

2c Auxiliary flashers

Auxiliary blue warning signal

3 Work lamps

LED light for working

4 Long-range flash module BSF LED

Long-range warning frontwards for high speeds in dense traffic

5 Stop signal generator

Prompt to control road users and to warn of danger

6 LED signal bar

Additional safeguard and traffic control

7 Internal acoustic modules

Integrated loudspeaker compliant with European regulations

8 Plug-in beacon

Particularly conspicuous signal because of raised warning light

9 Cover

Available in transparent, white, blue

10 Light domes

Available in transparent, blue, red and orange

#### AUXILIARY EQUIPMENT



#### **Alley Lights**

 $4\,LEDs$  for intensive close-range illumination, alternatively also available to the front and to the rear (see work lamps), for 12 V and 24V applications



#### Hazard warning lamp modules/direction indicators

These enable switching from blue light to amber hazard warning light at the scene, automatic synchronisation of the flashing light to the hazard warning light frequency of the vehicle, ECE typeapproved, for 12 V applications



#### LED work lamps

For intensive close-range illumination, front and rear mounting possible, Multivolt (9-33 V), light output (measured) 800 lm, for 12 V and 24 V applications



Blue



Blue with red stop light



stop light

## Long-range flash module BSF LED

Bundled, particularly far-reaching warning signal, effective warning during fast driving while on operations (e.g. on the motorway), for 12 V and 24 V applications

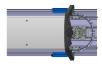


#### Auxiliary flashers

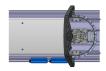
Additional, far-reaching warning signal, optional as an extra in the domes to the front and to the rear or in the central section of the unit to the rear, for 12 V applications



Mounting in the light domes, in each case directed to the front and to the rear



Single placement on the right and left in the central section of the unit, each facing the front and



Double placement on the right and left in the central section of the unit, facing the rear

#### **AUXILIARY EQUIPMENT**



#### LED stop signal generator ASG

Matrix with fixed fonts, additional fonts freely programmable, alternatively word-specific, e.g. Stop Police (280 mm), Emergency Doctor (280 mm), Stop Police / Please Follow (380 mm), 3 module sizes: 280 mm, 380 mm and 560 mm for various units, automatic day/night mode, switching via photometric sensor, optional red stop light from BSF-LED long-range flash module, optional with ticker (requires SW version 50/19, 51/19 or higher), for 12 V applications



#### LED stop signal generator ASG-E (external)

Separate ASG module for use in the interior or for mounting on vertical body surfaces, flat design, for 12 V applications



#### LED stop signal generator ASG-S for sun visor

Matrix with fixed programmed fonts, also fonts in line with customer requirements possible, module size 320 mm x 100 mm, with self-adhesive black foam cover, other colours on request, with red stop light (homologated in accordance with STVZO-TA13b - the German Road Traffic Licensing Regulations), automatic day/night mode, switching via photometric sensor, analogue control, also for undercover use, acoustic feedback in switched-on state, for 12 V applications



# LED signal bar LSB

Integrated, amber chaser light signal for rear warning and safeguarding, traffic control achieved by using different signal directions, use only as far as is legally permitted, for  $12\,\mathrm{V}$  and  $24\,\mathrm{V}$  applications

# **AUXILIARY EQUIPMENT**



#### Internal acoustic module LSP-I

Integrated front speakers (Fig. A), optionally to the rear (Fig. B), for 12 V and 24 V applications



# External acoustic module LSP-E

External loudspeakers for separate mounting, dimensions: approx. 118 x 105 mm, power consumption: 22 W each, 2 pieces required, for 12 V and 24 V applications

9MM 863 164-051

External acoustic module LSP-E



# Fixture for plug-in beacon KL-A

Stand for additional high-mounted beacon, for long-range safeguarding, with integrated connector, two lengths: 170 mm 1,000 mm, switchable via software coding, for 12 V applications



#### Backlighting module

LED technology, for housing width of 900 mm to 1,600 mm, front and/or rear, for 12 V and 24 V applications

# ROOF BAR RTK 7 AUXILIARY EQUIPMENT



#### FireCAN

Diagnosis of connected components, central operating possible for the user via display units, enables remote diagnosis for all components of firefighting equipment and superstructures



#### RTK7 PC tool

Software configuration of RTK7, RTK7-VE and the matrix stop signal generators via the gateway

**8KA 178 692-801** PC tool



# RTK<sup>7</sup> Software update stick

Enables fleet operators (from software version 01 / 11) to have licensed updates of different software versions for standardised operation within the fleet, includes update of the central control unit (CCU), of the stop signal generator (ASG) and of the gateway

**8PY 191 978-801** Software update stick

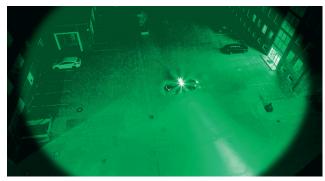
# ROOF BAR RTK<sup>7</sup> INFRARED MODULE

Helicopter night-vision device not only picks up residual light, but also heat sources. As a result of the gradual conversion of modern emergency vehicles from halogen beacons to energy-saving LED technology, it is no longer possible to clearly identify them from the air. This has led to the development of the KL-LM 5/6/7 infrared light module for the RTK<sup>7</sup> special equipment packages.

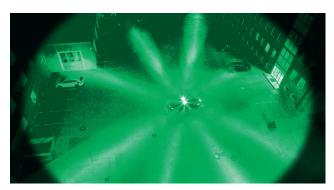


The main beacons, with a switch for day and night, consist of 16 LEDs per side. The infrared light signal is achieved using an additional 8 LEDs per side.

The highly efficient infrared LEDs achieve very long ranges with intense reflections and they ensure clear recognition of the user's own task forces thanks to FLIR/DLIR night-vision devices.



360° flashing KL-LM5 signal



Rotating signal KL-LM6

#### **UNDERCOVER OPERATIONS**

#### RTK7 - VE UNDERCOVER SYSTEM

Solution for undercover emergency vehicles with right of way, suitable not only for police vehicles but also for unmarked fire chief or emergency medical service vehicles of the fire brigade and rescue services, central control unit with two load channels (one active, alterable), pre-programmed for LSP-E, dimensions 60 x 207 x 114 mm (147 mm with bracket).

#### → Approvals

• Germany ~~~W25049

• France: T.P POL 12225 Police

T.P GEN 12226 Police T.P SPO 12227 Fire service T.P ASA 12228 Ambulance

T.P UMH 12229 UMH (Mobile hospital unit)

• Switzerland: CH-BØ1-13Ø2Ø

• The Netherlands: The tested warning device RTK<sup>7</sup> fulfils the requirements of the measurement procedure for the noise

emission of multi-tone horns on fire brigade, police and ambulance priority vehicles stipulated by the

Dutch Organisation for Applied Scientific Research.



#### Technical data

Rated voltage12 VOperating voltage9-16 VOperating-40 °C to +60 °C

temperature

Quiescent current 0.5 mA

consumption

Control outputs

Load capacity 0.3 A

Display outputs

**Data bus control** CAN open in accordance with CIA 447

**3SL 009 678-801** Control unit RTK? – VE - undercover operations **8KB 175 501-001** Vehicle cabling RTK? – VE - undercover operations



#### SYSTEM PROPOSAL "ANALOGUE"

#### SYSTEM PROPOSAL "DIGITAL"







#### Operating

**9SX 008 902-021** eAZD **6ZE 001 759-051** AZD Police **6ZE 001 759-071** AZD Fire brigade





#### Gateway

 9SX 010 392-001
 Gateway German

 9SX 010 392-011
 Gateway International

 8KB 173 872-001
 Gateway lead group



#### Voice announcement options

**9MM 859 358-801** Fist microphone, black, includes bracket

**9MK 860 255-001** Device box

## Operating element with voice announcement option

**9SX 010 391-001** HA 115, operating element for Germany **9SX 010 391-011** HA 112, operating element for Europe



# Loudspeaker

9MM 863 164-051 LSP-E, separate mounting

(2 pieces required)

# Loudspeaker

9MM 863 164-051

LSP-E, separate mounting (2 pieces required)

#### OPTIONAL





#### Beacon (for analogue and digital)

**2XD 011 557-311** K.LED 2.0 magnetic attachment



# RTK<sup>7</sup> PC tool (for analogue and digital)

**8KA 178 692-801** PC tool for later configuration of hardware or software on RTK<sup>7</sup>-VE - undercover system

# LED stop signal generator ASG-S (for analogue and digital)

**On request** ASG module for a sun visor



# LED stop signal generator ASG-E (only for digital)

 2XD 010 978-001
 Separate ASG module, 300 mm matrix

 2XD 010 978-011
 Separate ASG module, 400 mm matrix

OPERATING



# HA 112 and HA 115 operating element, digital

Tailor-made solutions for different operating concepts, integrated microphone function, for 12 V applications

9SX 010 391-001	HA 115 operating element for Germany(Fig. 1)
9SX 010 391-011	HA 112 operating element for Europe(Fig. 2)
9SX 010 392-001	Gateway German (Fig. 3)
9SX 010 392-021	Gateway German CiA2.1
9SX 010 392-011	Gateway International
8KB 173 872-001	Cable group without NF switchover
	Accessories
8KB 174 934-001	Vehicle wiring harness, CAN only
8KB 174 943-001	Vehicle wiring harness, CAN and analogue



#### NF switchbox

Switching between radio or other audio sources and the internal microphone, input via cinch socket, operation via "RAD" button on the control panel

9SX 010 393-801

Includes switchover cable

# ROOF BAR RTK 7 OPERATING



#### eAZD operating element, analogue

For electronic control of the optical and acoustic functions of special signalling systems, control unit for RTK $^7$  or RTK $^7$ -VE - undercover operations - and up to 4 further auxiliary devices (e.g. beacons, warning lamps, stop signal generators, etc.)

9SX 008 902-021	12 V, with switching function, cable length 300 mm	
	Accessories	
8KB 864 105-801	<b>KB 864 105-801</b> Extension cable set 3,500 mm	
8HG 863 383-001 Mounting frame DIN shaft		
<b>8KB 174 943-001</b> Vehicle wiring harness, CAN and analogue		



# MOUNTING



For curved roofs



For straight roofs

#### Mounting systems for permanent fixing

Rubber underlay selections can be chosen to suit vehicles, for curved roofs in fixed lengths, for straight roofs and also individually adaptable sections for mounting on roof attachments with varying housing widths

9GD 175 947-001	Curved, 900 mm
9GD 175 947-011	Curved, 1,000 mm
9GD 175 947-021	Curved, 1,100 mm
9GD 175 947-031	Curved, 1,200 mm
9GD 175 947-041	Curved, 1,300 mm
9GD 175 947-051	Curved, 1,400 mm
9GD 175 947-061	Curved, 1,500 mm
9GD 175 947-071	Curved, 1,600 mm
9GD 176 514-871	Flat, 2 seals 1,600 mm + 2 pieces lateral seal
9GD 176 514-881	Flat, 2 seals 2,000 mm + 2 pieces lateral seal



# Mounting system for roof rails

Basic carrier for vehicles with standard roof railing system, vehicle mounting and anti-theft device with multi-tooth key, with paint-protection, rubber dipped retaining claws

**9XD 177 162-801** Rail carrier

#### Vehicle-specific mounting

Fastening adapted to specific vehicle types

**9XD 857 445-801** VW Touran **9XD 863 403-801** VW T5/T6

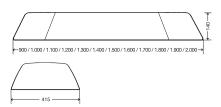
**9XD 863 521-001** Mercedes Vito + Viano

# SPARE PARTS AND ACCESSORIES

Caps		Work lamps	
Cap for 1,000 mm	9HD 172 569-111	Halogen H9, 12 V	1GA 010 467-001
Cap for 1,100 mm	9HD 172 569-121	LED	1G0 010 467-011
Covers		Long-range flash module BSF-LED	
Cover, clear for 1,000 mm	9EL 174 214-011	BSF-LED blue, stop light red	1XA 010 410-001
Cover, clear for 1,100 mm	9EL 172 564-101	without master electronics	
Cover, white for OWS <sup>7</sup> 1,000 mm	9EL 174 215-011	BSF-LED blue, without master electronics	1XA 010 410-011
Cover, white for OWS <sup>7</sup> 1,100 mm	9EL 172 564-011	Stop light red, without master electronics 1XA 010 4	
Light domes		LED signal bar LSB	
Dome LED, blue, without cut-out	9EL 172 563-011	LSB 2 pieces à 80 mm without master	9DW 168 426-811
Dome LED, blue, with cut-out	9EL 172 563-111	electronics, with cable	
Dome, clear	9EL 172 563-241	LSB operating element for analogue operation (includes cable)	9SX 178 258-001
Dome, red, without cut-out	9EL 172 563-031	(includes cable)	
Dome, red, with cut-out	9EL 172 563-131	LSP-I loudspeaker	
		Front loudspeaker	9MM 176 031-001
PCB modules		Rear loudspeaker	9MM 176 032-001
KL-LM 2 / 4, blue	9MK 181 350-001	·	
KL-LM 2 / 4, white for red and amber signal	9MK 181 350-101		
KL-LM 3, blue/yellow	9MK 181 350-301		
KL-LM 5 / 6 / 7, blue and infrared	9MK 181 350-401	Accessories	8HG 860 608-011
		Socket pipe 17 cm	000 000 000-011
LED stop signal generator ASG		LED stop signal generator ASG-E	
ASG matrix 280 mm	2XD 176 212-001	ASG-E 300 mm	2XD 010 978-001
ASG matrix 380 mm	2XD 176 216-001	ASG-E 400 mm	2XD 010 978-011
		7.65 2 .66	
Central control unit (ZSE)		LED stop signal generator ASG-S	
ZSE light/acoustics with 2 load outputs	5DK 009 678-001	ASG-S	On request
ZSE light/acoustics with 12 load outputs	5DK 009 678-021		On request
ZSE light with 12 load outputs	5DK 009 678-031	<b>Set of rubber seals for RTK7</b> for installation in the base plate to improve aeroc	lynamics
Power electronics		Housing width 1,100 mm	9GD 209 213-001
Master electronics - standard V 3.0, 12 V	9MK 174 724-011	Housing width 1,400 mm	9GD 209 213-011
Master electronics - standard V 3.0, 24 V	9MK 174 724-031	3	
Master electronics V 3.0 for KL-LM 3 / 5 / 6 /	9MK 174 724-041	Plug connections	
7, 12 V  Additional optics/light modules		3 male pin contacts each 1.0 – 1.5 mm², female socket contacts 1.0 – 1.5 mm², 4 single cable seals each, 2 blind plugs, 2-pin,	8KW 744 806-801
Amber direction indicators, (2 modules, left		18 pieces, abbreviated to B 04	
and right)	9DW 168 426-801	4 male pin contacts each 1.0 – 1.5 mm²,	
Hazard warning lamp module/direction indicator	1GA 176 800-031 left 1GA 176 800-041 right	female socket contacts 1.0 – 1.5 mm²,	
Alley Light	2XD 176 235-001	20 pieces, appi eviateu to D 00	
Auxiliary flasher, blue	2XD 168 426-241 left 2XD 168 426-261 right		

# MORE ROOF BARS



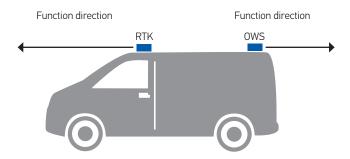


# Roof bar OWS 7

Optical warning system based on the RTK $^7$ , without acoustic function and with white housing covers, housing widths of 900 - 2,000 mm available, can be equipped with optical add-on modules such as Alley Lights, work lamps and stop signal generators from the RTK $^7$  range

Approvals	
Germany	DIN 14620 035717 ~~~~W25049
·	
Light source	LED
Rated voltage	12 V
Operating voltage	9–16 V
Operating temperature range	-40 °C to +80 °C
Type approval	ECE-R65: TB2
On request	KL-LM 2 / 4( blue)
On request	KL-LM 3 (blue/amber), only in conjunction with central control unit ZSE
	Accessories
5DK 009 678-001	Central control unit ZSE light/acoustics with 2 load outputs
5DK 009 678-021	Central control unit ZSE light/acoustics with 12 load outputs
<b>5DK 009 678-031</b> Central control unit ZSE Light with 12 load outputs	





The  $OWS^7$  can also be combined with an  $RTK^7$ . The entire system can be conveniently controlled via the RTK<sup>7</sup> operating elements. It should be noted that the RTK7 offers a maximum of 4 output lines for controlling an OWS<sup>7</sup> . Each output can be loaded with a maximum of 7 amperes and can be used for the various functions (main beacons, Alley Lights, LSB, LED stop signal generators or work lamps) in the OWS<sup>7</sup>

# ROOF BAR OWS 7

# ACCESSORIES AND SPARE PARTS

<b>Dome, amber</b> Dome for LED modules	
Without cut-out	9EL 172 563-351
With cut-out	9EL 172 563-251
Alley Lights	
White, 12 V	2XD 176 235-001
LED work lamps	
LED work lamps	1G0 010 467-011
<b>Rubber bases</b> For mounting the OWS'system on curved	l or straight roofs
	or straight roofs 9GD 175 947-001
For mounting the OWS <sup>7</sup> system on curved	
For mounting the OWS'system on curved Curved, 900 mm	9GD 175 947-001
For mounting the OWS'system on curved Curved, 900 mm Curved, 1,000 mm	9GD 175 947-001 9GD 175 947-011
For mounting the OWS'system on curved Curved, 900 mm Curved, 1,000 mm Curved, 1,100 mm	9GD 175 947-001 9GD 175 947-011 9GD 175 947-021
For mounting the OWS'system on curved Curved, 900 mm Curved, 1,000 mm Curved, 1,100 mm Curved, 1,200 mm	9GD 175 947-001 9GD 175 947-011 9GD 175 947-021 9GD 175 947-031
For mounting the OWS'system on curved Curved, 900 mm Curved, 1,000 mm Curved, 1,100 mm Curved, 1,200 mm Curved, 1,300 mm	9GD 175 947-001 9GD 175 947-011 9GD 175 947-021 9GD 175 947-031 9GD 175 947-041
For mounting the OWS'system on curved Curved, 900 mm Curved, 1,000 mm Curved, 1,100 mm Curved, 1,200 mm Curved, 1,300 mm Curved, 1,400 mm	9GD 175 947-001 9GD 175 947-011 9GD 175 947-021 9GD 175 947-031 9GD 175 947-041 9GD 175 947-051

LSB operating element for OWS <sup>7</sup>	
Includes cable	9SX 178 258-001
<b>Changeover switch, latching</b> 2-pole switch, latching, with one step	
12 V	6FH 353 100-031

#### MORE ROOF BARS





Standard bracket system (included in delivery)

#### Accessories





Changeover switch

LSB operating element



Angled bracket system

#### Roof bar Raptor +

Optical warning system with a particularly flat design, long-life LED technology, focused signal emission, variants available with auxiliary functions such as lateral road illumination (Alley Light) and chaser light signal (LSB\*) to the rear

Light source LED Rated voltage 12 V

Operating temperature range

**EMC protection** CISPR 25, Class 5 **Type approval** ECE-R65: TB1

#### 598 mm

**2RL 010 743-141** 598 mm, blue main beacons

1 switch required

-40 °C to +60 °C

**2RL 010 743-001** 598 mm, amber main beacons

1 switch required

#### 1,118 mm

**2RL 010 743-011** 1,118 mm, blue main beacons

1 switch required

**2RL 010 743-101** 1,118 mm, blue main beacons, with Alley Light

3 switches required

**2RL 010 743-111** 1,118 mm, blue main beacons, with Alley Light and LSB\*

4 switches and 1 operating element required

**2RL 010 743-091** 1,118 mm, amber main beacons

1 switch required

**2RL 010 743-051** 1,118 mm, amber main beacons, with Alley Light

3 switches required

**2RL 010 743-041** 1,118 mm, amber main beacons, with LSB\*

3 switches and 1 operating element required

2RL 010 743-061 1,118 mm, amber main beacons, with Alley Light and LSB\*

4 switches and 1 operating element required

## 1,248 mm

**2RL 010 743-131** 1,248 mm, blue main beacons with Alley Light and LSB\*

4 switches and 1 operating element required

**2RL 010 743-021** 1,248 mm, amber main beacons

1 switch required

2RL 010 743-071 1,248 mm, amber main beacons with Alley Light

3 switches required

**2RL 010 743-031** 1,248 mm, amber main beacons with LSB\*

3 switches and 1 operating element required

**2RL 010 743-081** 1,248 mm, amber main beacons, with Alley Light and LSB\* 4 switches and 1 operating element required

## Accessories

**6FH 353 100-031** Changeover switch, 12 V, latching, 2-pin, 1 level

9SX 178 258-001 LSB operating element

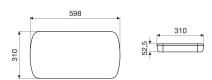
**8HG 168 011-001** Angled bracket system (2 stainless steel angle brackets)

# Module fittings

Main beacons	_		■ LSB* modules	Alley Lights	
Raptor + (598 mm)					
2RL 010 743-141					
2RL 010 743-001		•			
Raptor + (1,118 mm)					
2RL 010 743-011					
2RL 010 743-101	8				8
2RL 010 743-111	8	•		•	8
2RL 010 743-091		•		•	
2RL 010 743-051	8			•	8
2RL 010 743-041		•		•	
2RL 010 743-061	8			•	8
Raptor + (1,248 mm)					
2RL 010 743-131	0	•		•	8
2RL 010 743-021		•		•	
2RL 010 743-071	8			•	8
2RL 010 743-031		•		•	
2RL 010 743-081	8	•		•	8

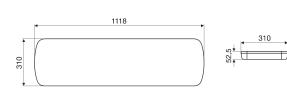
# 598 mm





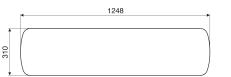
# 1,118 mm





#### 1,248 mm







 $<sup>^{\</sup>star}$  Use of LSB only as far as permitted by law. Please observe national regulations.



#### SURFACE MOUNTING

Almost all HELLA beacons have the same dimensions and feature the same number of screw attachment points (pitch circle diameter: 130 mm). Consequently, it is no problem to simply exchange or replace them with a new beacon model. Halogen and LED lighting technology models also feature the same attachment points. As a result, it is very easy to replace a halogen beacon that was purchased for surface mounting by a LED beacon which is also planned to be a permanent fixture.





#### PIPE SOCKET MOUNTING

The varying shapes of vehicle roofs, extensions or restricted installation spaces do not always permit the surface mounting of beacons. The beacon must be adequately visible in order to achieve the statutory 360° warning effect. Angled pipes are suitable for this purpose, fixtures that can, for example, be attached to the side of the vehicle to make sure that the beacon protrudes from the vehicle roof and is easily visible from all sides. Our beacons with their pipe socket mounting are suitable for pipe diameters of 24 mm and are thus perfect for the widely used DIN pipes. These can be purchased as accessories from HELLA in a variety of variants.

#### FLEXIBLE PIPE SOCKET MOUNTING

A flexible pipe socket variant, offering additional benefits, is also available for selected beacons. In the event of collisions, such as impacts with branches, the housing buckles by up to 45° only to then return to its original position. This prevents damage from being done to the beacon. We use weatherproof, elastic EPDM rubber material to guarantee this function, a material which is also resistant to contact with chemicals.





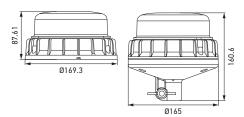
#### MAGNETIC MOUNTING

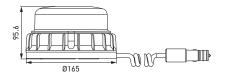
The slim shape of the magnetic adapter makes it quite inconspicuous. It is enhanced by a rubber sheath to guarantee scratch resistance and to protect the vehicle's roof. Our high-performance neodymium magnets have a very high holding force and are manufactured in Germany. They are produced in line with REACH and RoHS to thus take into account the restricted use of certain hazardous substances in electrical and electronic devices. Quality you can rely on!

#### **BEACONS**

LED























#### K-LED 2.0

Equipped with flashing and rotating signal, two brightness levels thanks to integrated sensor (day/night mode), high-quality corrosion protection, up to 4 beacons can be synchronised with the surface-mount variant

**Light source** LED

**Rated voltage** Multi-voltage (10 – 32 V)

Protection classIP 67, IP X9KType approvalECE-R65: TB2, TR1EMC protectionCISPR 25, Class 5

Surface mounting, blue, flashing/rotating
Surface mounting, red, flashing/rotating
Surface mounting, green, flashing/rotating
Pipe socket mounting, blue, flashing/rotating
Pipe socket mounting, red, flashing/rotating
Magnet mounting, blue, flashing/rotating
Magnet mounting, red, flashing/rotating

#### Accessories

**9GD 856 863-001** Rubber base, wedge-shaped

**8HG 005 436-041** Pipe socket









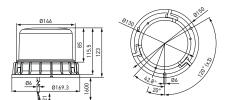












# K-LED 1.2

Flashing or rotating signal, large light-emitting surface, high-quality corrosion protection, red version on request

Light source LED

**Rated voltage** Multi-voltage (10 – 30 V) **Protection class** IP 6K7, IP X9K

Type approval ECE-R65: TB1, TR1
EMC protection CISPR 25, Class 5

2RL 012 983-311 Surface mounting, blue, rotating
2XD 012 984-311 Surface mounting, blue, flashing
On request Surface mounting, red, rotating
On request Surface mounting, red, flashing

#### Accessories

9GD 856 863-001 Rubber base, wedge-shaped

**8HG 005 436-041** Pipe socket









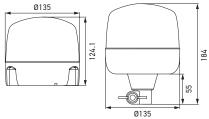


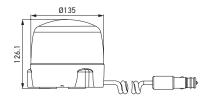












# Rota LED

Flashing or rotating signal, compact design, impact-resistant polycarbonate light dome

Light source LED

Rated voltageMulti-voltage (10 – 30 V)Protection classIP 5K4K, IP X9KType approvalECE-R65: TB1EMC protectionCISPR 25, Class 5

2RL 010 979-101Surface mounting, blue, rotating2XD 012 878-101Surface mounting, blue, flashing2RL 010 979-111Flexible pipe socket mounting, blue, rotating2XD 012 878-111Flexible pipe socket mounting, blue, flashing2RL 010 979-121Magnet mounting, blue, rotating2XD 012 878-121Magnet mounting, blue, flashing

#### Spare parts

**9EL 181 506-011** Dome, blue (polycarbonate)



#### **BEACONS**

LED











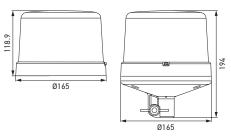


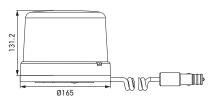












# KL 7000 LED

Flashing or rotating signal, compact design scratch-resistant and dirt-resistant, smooth light dome

Light source LED Rated voltage Multi-voltage (10 – 32 V) Protection class IP 5K4K, IP X9K Type approval ECE-R65: TB1

**EMC** protection CISPR 25, Class 5

2RL 011 484-101 Surface mounting, blue, rotating 2XD 012 972-101 Surface mounting, blue, flashing 2RL 011 484-111 Flexible pipe socket mounting, blue, rotating 2XD 012 972-111 Flexible pipe socket mounting, blue, flashing 2RL 011 484-121 Magnet mounting, blue, rotating 2XD 012 972-121 Magnet mounting, blue, flashing

#### Spare parts

9EL 190 025-011 Dome, blue (polycarbonate)

# **BEACONS HALOGEN**

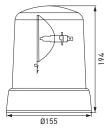


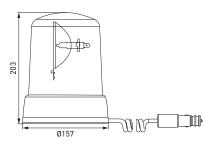












#### KL 7000

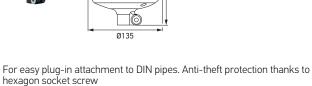
Halogen beacon, rotating signal, smooth light dome with handy and practical pressure point mounting, electronic motor control

Light source Halogen

Rated voltage Multi voltage (12 / 24 V) Protection class IP 5K4K, IP 9K Type approval ECE-R65: TB1 **EMC** protection CISPR 25, Class 5

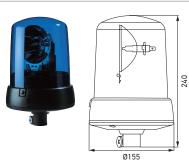
2RL 008 061-001 12 V, surface mounting, blue, rotating 2RL 008 061-011 24 V, surface mounting, blue, rotating 2RL 008 060-001 12 V, pipe socket mounting, blue, rotating 2RL 008 060-011 24 V, pipe socket mounting, blue, rotating 2RL 008 063-001 12 V, flexible pipe socket mounting, blue, rotating 2RL 008 063-011 24 V, flexible pipe socket mounting, blue, rotating 2RL 008 062-001 12 V, magnet mounting, blue, rotating 2RL 008 062-011 24 V, magnet mounting, blue, rotating

#### Pipe socket mounting



221

#### Flexible pipe socket mounting



With shock-absorbing, vibration-damping base; even heavy impact is cushioned and lamp always returns to upright position. The maximum tilt angle is at an inclination of 45°

Anti-theft protection thanks to hexagon socket screw.

# BEACONS HALOGEN

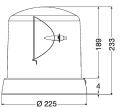












# KL 8000

Halogen beacon, rotating signal, smooth light dome with handy and practical pressure point mounting, electronic motor control, distance between drill holes:  $\emptyset$  200 mm

**Light source** Halogen

Rated voltageMulti voltage (12 / 24 V)Protection classIP 5K4K, IP 9KType approvalECE-R65: TB1EMC protectionCISPR 25, Class 5

2RL 008 065-0012RL 008 065-01124 V, surface mounting, blue, rotating











# 174 222 Ø135 174

#### KL Rotafix/Rotaflex

Halogen beacon, rotating signal, smooth light dome, motor with plastic worm drive

Light source Halogen

Rated voltage Multi voltage (12 / 24 V) IP 5K4K, IP 9K Protection class Type approval ECE-R65: TB1 CISPR 25, Class 3 **EMC** protection

2RL 007 337-101 12 V, surface mounting, blue, rotating 2RL 007 337-111 24 V, surface mounting, blue, rotating

2RL 006 846-101 12 V, flexible pipe socket mounting, blue, rotating 2RL 006 846-111 24 V, flexible pipe socket mounting, blue, rotating

2RL 007 337-121 12 V, magnet mounting, blue, rotating

#### ACCESSORIES

#### FOR BEACONS AND WORK LAMPS WITH PIPE SOCKET MOUNTING

Product picture	Description	Part number	PU
	Socket pipe for welding on, straight, 100 mm long, with rubber stopper and socket, compliant with DIN 14620	1-pin 8HG 002 365-001 2-pin 8HG 006 294-101	1
n se	Socket pipe with screw-on base plate, total height 126 mm, with rubber stopper and socket, compliant with DIN 14620	1-pin <b>8HG 006 294-011</b> 2-pin Available on request <sup>1)</sup>	1
	Angled socket pipe with base plate for lateral screw attachment, clearance 90 mm, height 100 mm including rubber stopper, socket , 2 x hexagon screws M8 x 35, 2 x hexagon nuts M8, 2 x spring washers, compliant with DIN 14620	1-pin <b>8HG 006 294-021</b> 2-pin <b>Available on request</b> <sup>1)</sup>	1
	Angled socket pipe with base plate for lateral screw attachment, clearance 120 mm, height 105 mm including rubber stopper, 2 x hexagon screws M8 x 35, 2 x hexagon nuts M8, 2 x spring washers, compliant with DIN 14620	1-pin <b>8HG 006 294-171</b> 2-pin Available on request <sup>1)</sup>	1
	Angled socket pipe with base plate for lateral screw attachment, clearance 50 mm, height 100 mm including rubber stopper, socket , 2 x hexagon screws M8 x 35, 2 x hexagon nuts M8, 2 x spring washers, compliant with DIN 14620	1-pin <b>8HG 006 294-111</b> 2-pin Available on request <sup>1)</sup>	1
	Socket pipe for inclined screw-on surfaces, beacon adjustable parallel to the roadway, height approx. 105 mm, with rubber stopper, socket, $2 \times 10^{-2}$ k hexagon screws M8 x 35, 2 x hexagon nuts M8, 2 x spring washers, compliant with DIN 14620	1-pin 8HG 006 294-031 2-pin 8HG 006 294-141	1
	Socket pipe with screw mounting, height approx. 100 mm, with rubber stopper and socket, compliant with DIN 14620	1-pin 8HG 006 294-051 2-pin 8HG 006 294-091	1
• • •	Socket pipe with 2 screw holes for surface mounting to the rear of the cab, with telescopic bracket, total height approx. 1,000 mm, can be shifted up to 700 mm, with rubber stopper and socket, compliant with DIN 14620	1-pin <b>8HG 006 294-041</b> 2-pin Available on request <sup>1)</sup>	1
	Socket pipe for welding on, straight, height 100 mm, compatible with 8HG 002 365-001 / 8HG 006 294-101	8HG 096 531-007	2
	Socket pipe, straight, black, with M8 thread, approx. 220 mm long, compatible with 8HG 990 368-001 / -007	8HG 331 470-007	2
	Socket pipe, straight, with screw-on base plate, total height 126 mm, compatible with 8HG 006 294-011 / -121	8HG 096 531-107	2
	Socket pipe, angled, with base plate for lateral screwing, clearance 90 mm, compatible with 8HG 006 294-021 and -221	8HG 096 531-117	2
	Socket pipe, angled, with base plate for lateral screwing, clearance 50 mm, compatible with 8HG 006 294-111/-211	8HG 096 531-127	2

<sup>1)</sup> Based on individual minimum purchase quantities

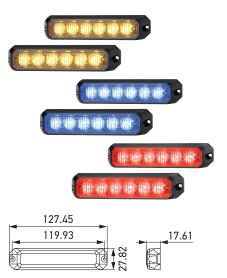
#### ACCESSORIES

Product picture	Description	Part number	PU
	Socket pipe for slanting, screw-on surfaces, beacon adjustable parallel to the road, height approx. 105 mm, compatible with 8HG 06 294-031 / -141	8HG 096 531-137	2
	2-pin socket with cover, with 2 flat connector connections 6.3 mm	9JB 004 777-001* 9JB 004 777-002*	5 1
	2-pin round socket with ground contact, with 2 flat connector connections 6.3 mm	8JB 862 757-001* 8JB 862 757-007*	1 24
	2-pin 6-edge SW20 socket with ground contact, with 2 flat connector connections 6.3 mm	8JB 862 757-027*	1/24
	2-pin socket with cover, with 300 mm cable 2.5 mm² and 2 flat connector connections 6.3 mm	8JB 001 946-101*	1
	2-pin light alloy socket with cover and 1 screw connection, ground on housing	8JB 001 946-021*	10
TO GO	2-pin socket with cover and 2 flat connector connections 6.3 mm	8JB 004 123-031*	1
	1-pin round socket with oval-head screw M4 x 8	8JB 850 434-011*	10
	1-pin socket with cover	8JB 001 946-011*	10
	Alarm rotary switch with three or four switch positions, for visual and acoustic signal		1
	Police, 4 switching positions	12 V, <b>6ZE 001 759-051</b> 24 V, <b>6ZE 001 759-061</b>	1
	Fire brigade / ambulance / civil defence / disaster control, 3 switch positions	12/24 V, <b>6ZE 001 759-071</b>	1
Experience of the control of the con	12 V, test equipment to monitor the function of rotating beacons and strobe- type beacons, indicates beacon failure.	5KG 011 630-101	1
	Rubber stopper/cap in accordance with DIN 14620	9GH 096 532-001 9GH 096 532-007	10 200

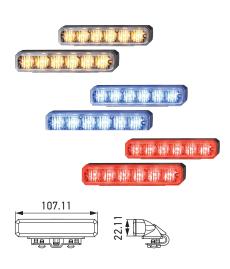
 $<sup>^{\</sup>star}$  Sockets are in accordance with DIN ISO 4165; mount opening: Ø 18.5 mm, switchboard thickness max. 7 mm











Bracket mounting

#### BST warning lamp (6 LED)

Auxiliary warning lamp for horizontal surface-mounting, supplied as a set of 2, variants with day/ night mode available

6 LEDs Light source

Multi-voltage (11 – 30 V) Rated voltage Protection class IP 5K4K, IP 9K, IP 6K9K

Type approval ECE-R65:

2XD 012 160-801

XA1,XB1,XR1(1 level)

XA2, XB2, XR2 (day/night mode)

CISPR 25, Class 3 **EMC** protection

2XD 012 160-851 Surface mounting, amber, 1 level

2XD 014 560-201 Surface mounting, amber, day/night mode

Surface mounting, blue, 1 level 2XD 014 560-001 Surface mounting, blue, day/night mode

2XD 012 160-821 Surface mounting, red, 1 level

2XD 012 160-861 Bracket mounting, amber, 1 level

2XD 014 560-401 Bracket mounting, amber, day/night mode

2XD 012 160-811 Bracket mounting, blue, 1 level

2XD 014 560-101 Bracket mounting, blue, day/night mode

2XD 012 160-831 Bracket mounting, red, 1 level





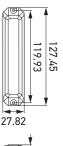












Surface mounting

#### BST-V warning lamp (6 LED)

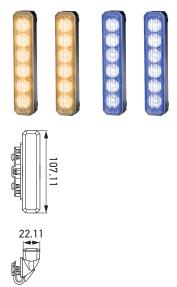
Auxiliary warning lamp for vertical surface mounting, supplied as a set of  $2\,$ 

Light source 6 LEDs

Multi-voltage (11 – 30 V) Rated voltage Protection class IP 5K4K, IP 9K, IP 6K9K Type approval ECE-R65: XA1, XB1 (1 level)

**EMC** protection CISPR 25, Class 3

2XD 012 160-951 Surface mounting, amber, 1 level 2XD 012 160-901 Surface mounting, blue, 1 level 2XD 012 160-961 Bracket mounting, amber, 1 level 2XD 012 160-911 Bracket mounting, blue, 1 level



Bracket mounting





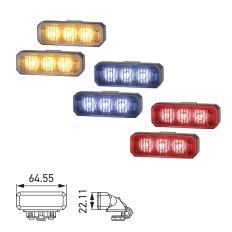
#### BST warning lamp (3 LED)

Auxiliary warning lamp for horizontal surface mounting, supplied as a set of 2

Light source3 LEDsRated voltageMulti-voltage (11 – 30 V)Protection classIP 5K4K, IP 9K, IP 6K9KType approvalECE-R65: XA1,XB1,XR1(1 level)

**EMC protection** CISPR 25, Class 3

2XD 014 561-201 Surface mounting, amber, 1 level
2XD 014 561-001 Surface mounting, blue, 1 level
2XD 014 561-601 Surface mounting, red, 1 level
2XD 014 561-401 Bracket mounting, amber, 1 level
2XD 014 561-101 Bracket mounting, blue, 1 level
2XD 014 561-701 Bracket mounting, red, 1 level



Bracket mounting









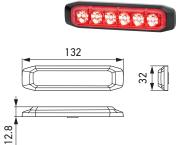








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#### BST-Slim warning lamp (6 LED)

Auxiliary warning lamp for horizontal surface mounting, supplied as a set of 2, equipped with day/ night mode as standard

Light source 6 LEDs

Rated voltage Multi-voltage (11 – 30 V)

Protection class IP X7, IP X9K

ECE R65: XA2, XB2, XR2 (day/night mode) Type approval

SAE J595

**EMC** protection CISPR 25, Class 5

2XD 014 562-001 ECE, blue, day/night mode 2XD 014 562-201 ECE, amber, day/night mode 2XD 014 562-601 ECE, red, day/night mode 2XD 014 562-101 SAE, blue, day/night mode 2XD 014 562-401 SAE, amber, day/night mode 2XD 014 562-701 SAE, red, day/night mode













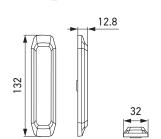












#### BST-V-Slim warning lamp (6 LED)

Auxiliary warning lamp for vertical surface mounting, supplied as a set of 2, equipped with day/ night mode as standard

6 LEDs Light source

Rated voltage Multi-voltage (11 – 30 V)

Protection class IP X7, IP X9K

ECE R65: XA2, XB2, XR2 (day/night mode) Type approval

SAE J595

**EMC** protection CISPR 25, Class 5

2XD 014 592-001 ECE, blue, day/night mode 2XD 014 592-201 ECE, amber, day/night mode 2XD 014 592-601 ECE, red, day/night mode 2XD 014 592-101 SAE, blue, day/night mode 2XD 014 592-401 SAE, amber, day/night mode 2XD 014 592-701 SAE, red, day/night mode





















#### BST-Slim warning lamp (3 LED)

Auxiliary warning lamp for horizontal surface mounting, supplied as a set of 2

**Light source** 3 LEDs

Rated voltage Multi-voltage (11 – 30 V)

Protection class IP X7, IP X9K

**Type approval** ECE-R65: XA1,XB1,XR1(1 level)

SAE J595

**EMC protection** CISPR 25, Class 5

2XD 014 563-001ECE, blue, 1 level2XD 014 563-201ECE, amber, 1 level2XD 014 563-601ECE, red, 1 level2XD 014 563-101SAE, blue, 1 level2XD 014 563-401SAE, amber, 1 level2XD 014 563-701SAE, red, 1 level



LED

























#### BST-Round warning lamp

Auxiliary warning lamp for integration into vehicle body, supplied as a pre-configured set consisting of 1 ballast unit, 2 light modules and 2 mounting rings

4 LEDs Light source

Rated voltage Multi-voltage (11 – 30 V) Protection class IP 6X, IP X4K, IP X9K

ECE-R65: XA2, XB2, XR2 (day/night mode) Type approval

SAE J595

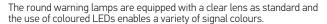
CISPR 25, Class 3 **EMC** protection

2XD 014 564-001 ECE, blue, clear lens, day/night mode 2XD 014 564-051 ECE, blue, dark lens, day/night mode 2XD 014 564-211 ECE, amber, day/night mode 2XD 014 564-601 ECE, red, day/night mode 2XD 014 564-101 SAE, blue, clear lens, day/night mode On request SAE, blue, dark lens, day/night mode

2XD 014 564-401 SAE, amber, day/night mode 2XD 014 564-701 SAE, red, day/night mode

#### Clear lens





#### Dark lens



On request, the BST-Round warning lamp is also available with a dark lens. This variant generates a blue warning signal. As the warning lamp with a dark lens is inconspicuous and not immediately recognisable, it is particularly suitable for undercover operations.

















#### Intersection warning system BST-X

Auxiliary warning lamps for integration in vehicle body, for early warning of road users as a result of lamp positioning far to the front, especially useful when the vehicle is driving out of an area that is difficult to see (e.g. access roads, gateways), supplied as a set consisting of 6 light modules, 3 ballast units, 4 adjustable mounting rings (tilt angle 0 - 20°) and 2 standard mounting rings

LED Light source

Multi-voltage (11 - 30 V) Rated voltage Protection class IP 6X, IP X4K, IP X9K

Type approval ECE-R65: HTB2 (day/night mode)

**EMC** protection CISPR 25, Class 3

2XD 014 564-037 Set (6 light modules), blue, day/night mode

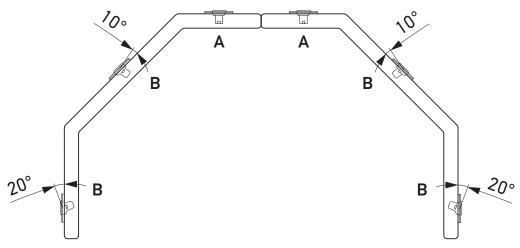
#### Adjustable mounting rings





The adjustable mounting rings of the intersection warning system can be aligned in 5° steps spanning a tilt angle from 0 to 20°. This makes them adaptable to a wide range of vehicle types.

#### Positioning on the vehicle



rings (Å), which point in the direction of travel and which do not allow a tilt angle. The other 4 adjustable mounting rings (B) are adjustable in 5° steps from 0 - 20°.









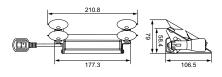




With universal connector for vehicle electrical system socket



With open cable end



#### FWL-LED front warning lamp

Auxiliary front signal directed accordingly, as a supplement to the beacon, ideal for undercover operations, 6 possible flash sequences, suction cups for quick attachment, 3.7 m long cable, no ECE approval: Use only to such an extent as is permitted by law

Light source42 LEDsRated voltageSingle volt (12 V)Type approvalSAE J595EMC protectionCISPR 25, Class 5

**2XD 014 053-001** Blue, with universal connector (2-pin) for vehicle electrical system

socket

**2XD 014 053-011** Blue, with open cable end















C-LED V1



C-LED V2

#### Corner-lamp system C-LED

Powerful corner-lamp system to safeguard rear of large vehicles, designed for installation in pairs: lateral-symmetrical design, specially developed optics for vertical mounting, 8 possible flash sequences, silver-coloured aluminium housing, scope of delivery: 1 piece

Light source LED

Rated voltage Multi-voltage (18 - 32 V)

Type approval ECE-R65 🗊 CISPR 25, Class 5 **EMC** protection

2XD 009 475-021 12 V, blue, C-LED V1 – especially suitable for fire-fighting vehicles

(2 pieces required)

2XD 009 475-001  $24\,\mathrm{V},\,\mathrm{blue},\,\mathrm{C\text{-}LED}\,\mathrm{V1}-\mathrm{especially}$  suitable for fire-fighting vehicles

(2 pieces required)

2XD 009 475-031 12 V, blue, C-LED V2 – especially suitable for turntable ladder vehicles

(2 pieces required)

2XD 009 475-011 24 V, blue, C-LED V2 - especially suitable for turntable ladder vehicles

(2 pieces required)

2XD 009 475-031 12 V, blue, C-LED module – for individual vehicle solutions

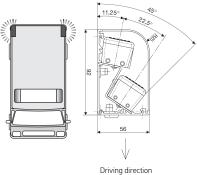
(4 pieces required)

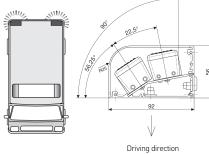
2XD 009 475-011 24 V, blue, C-LED module – for individual vehicle solutions

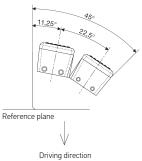
(4 pieces required)

C-LED module

C-LED Variante 1 C-LED Variante 2 C-LED module











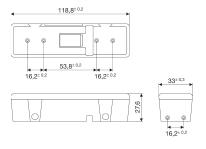


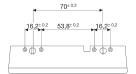












#### Warning lamps WL-LED

Auxiliary warning signal with multiple mounting options, 8 possible flashing sequences, apart from blue no ECE approval: Use only to such an extent as is permitted by law

**Light source** 12 LEDs

**Rated voltage** Multi-voltage (12 / 24 V) **Protection class** IP 5K4K, IP 9K

**Type approval** K ~ 385 (only applies to blue)

**EMC protection** CISPR 25, Class 5

2XD 008 997-001 12 V, blue, without mounting frame 2XD 008 997-201 12 V, blue, with mounting frame 2XD 009 048-001 24 V, blue, without mounting frame 2XD 009 048-201 24 V, blue, with mounting frame 2XD 008 997-011 12 V, amber, without mounting frame 2XD 008 997-211 12 V, amber, with mounting frame 2XD 009 048-011 24 V, amber, without mounting frame 2XD 009 048-211 24 V, amber, with mounting frame 2XD 008 997-021 12 V, red, without mounting frame 2XD 008 997-221 12 V, red, with mounting frame 2XD 009 048-021 24 V, red, without mounting frame 2XD 009 048-221 24 V, red, with mounting frame

#### Accessories

9XD 863 533-001 Angle brackets, 2 pieces, optional for mounting, at the side or rear9XD 863 828-001 Mounting frame



LED



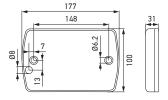












#### Warning lamp DURA LED

Auxiliary warning signal, compact design, 10 possible flashing sequences, easy mounting by means of concealed screw fastening, 2.5 m-long cable, no ECE approval: Use only to such an extent as is permitted by law

**Light source** 36 LEDs

Rated voltageMulti-voltage (9 – 33 V)Protection classIP 6K6, IP 6K7EMC protectionCISPR 25, Class 3

 2XD 965 429-001
 Blue

 2XD 965 429-021
 Amber

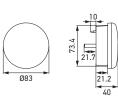
 2XD 965 429-011
 Red

 2XD 965 429-031
 Green









#### LED permanent signal lamps Ø 83 mm

Auxiliary warning signal, no ECE approval: Use only to such an extent as is permitted by law

**Light source** 12 LEDs

Rated voltage Multi-voltage (9 – 33 V)

Protection class IP 6K6, IP 6K7

EMC protection CISPR 25, Class 3

 On request
 Blue

 2XD 959 011-021
 Amber

 2XD 959 010-021
 Red

 2XD 959 010-721
 Green



#### ILLUMINATION OF THE WORKING AREA

At night or early in the morning when it is still dark, additional illumination all around the vehicle is vitally needed. The HELLA work lamps fulfil this purpose precisely and provide suitable illumination for various areas of application. They have been specifically developed to illuminate as large an area as possible with a soft transition area at the edge.



#### REVERSE LAMPS

Reverse lamps illuminate the area behind the vehicle. They are exposed to the harshest operating conditions on a daily basis as a result of their low mounting position. The equipment needs to be particularly well protected against water, salt and stone chippings so as to prevent corrosion from occurring. That is why HELLA LED reverse lamps with their aluminium housing have a special coating to ensure that they can provide reliable, good light even when subjected to harsh conditions.

#### FIRE DEPARTMENT LED WORK LAMPS

SELECTION GUIDE



RookLUME 381 N	Product picture	Description	Light distribution	Volt	Connection	Light	Part number
RookLUME 381 N			Close-range				1GA 996 197-031
Maparity   Maparity	222	RokLUME 380 N		24	DT connector	7,500 lm	1GA 996 197-021
HypaLUME 24/48 V DC	3333						1GA 996 197-041
Hypat_UME 24 / 48 V DC			·				1GJ 011 872-501
Extra-wide surface lighting   Extr							
Long-range   Close-range   C		HypaLUME 24 / 48 V DC		24 / 48	DT connector	25,000 lm	1GJ 011 872-521
Close-range			Close-range				1GA 995 606-001
Close-range   12/24   DT connector   4,400 lm   16A 995 606-1			Long-range				1GA 995 606-011
Ultra Beam LED Gen. 2			Spot				1GA 995 606-021
Ultra Beam LED Gen. 1   Close-range (with magnetic base)   12/24   DT connector   2,200 lm   16A 995 506-1		Ultra Beam LED Gen. 2	(pipe socket fastening,	12/24	DT connector	4,400 lm	1GA 995 606-141
Power Beam 1000 compact   Reverse lamps   12/24   DT connector   1,000 lm   2ZR 998 188-5	E		<b>ZER</b> OGLARE				1GA 995 606-171
Description		Ultra Beam LED Gen. 1	Close-range (with magnetic base)	12/24	DT connector	2,200 lm	1GA 995 506-111
Description	WE2/		Close-range				1GA 996 188-501
Power Beam 1000 compact   Reverse lamps   12/24   DT connector   1,000 lm   2ZR 998 188-5							
Reverse lamp (with mirror bracket)   12/24   DT connector   1,850 lm   16A 996 488-0   16A 996 588-0   16A 996 288-0   16A 9							
Power Beam 1800 compact   Close-range   12 / 24		Power Beam 1000 compact	Reverse lamps	12/24	DT connector	1,000 lm	2ZR 998 188-521
Power Beam 1800 compact							2ZR 996 188-557
Long-range		Power Peam 1900 compact	Close-range	12 / 2/	DT connector	1.950 lm	1GA 996 488-001
EC018 LED		1 ower beam 1000 compact	Long-range	12/24	D1 connector	1,030 111	1GA 996 488-011
EC018 LED			Close-range				1GA 996 479-001
ECO26 LED   Close-range   12/24   Cable   2,000 lm   16A 976 579-0   16A 976 589-0   16A 976	53/	ECO18 LED	Long-range	12/24	Cable	1,350 lm	1GA 996 479-011
ECO26 LED			Reverse lamps				2ZR 996 479-501
Close-range						1GA 996 579-001	
Close-range   Long-range   Long-range   Long-range   Long-range   Long-range   Long-range   16A 996 284-5	25	ECO26 LED	Long-range	12/24	Cable	2,000 lm	1GA 996 579-011
Long-range   Reverse lamps   12/24   Cable   1,200 lm   2ZR 996 284-5							
Reverse lamps   12/24   Cable   1,200 lm   2ZR 996 284-5							
Reverse lamp (with mirror bracket)  R120 S Close-range (with handle and switch)  Spot 12/24 Cable 1,500 lm 162 996 220-0  Module 70 LED hand-held searchlight  Spot 12/24 Cable 2,500 lm 160 996 476-1  Module 70 LED Gen. 4 Surface illumination (mounting)  SL60 LED Light strip 12/24 Cable Red  FMS Base Close-range 12/24 Cable 1,500 lm 16D 996 098-0  FMS Prime Close-range 12/24 Cable 2,500 lm 16D 996 098-0			Long-range			1,200 lm	1GA 996 284-U11
R120 S   Close-range (with handle and switch)   12/24   Cable   1,500 lm   162 996 220-0		Q90 LED compact	Q90 LED compact Reverse lamps 12/24	12/24	Cable		2ZR 996 284-501
Module 70 LED   Module 70 LED   Spot   12/24   Cable   1,500 lm   1H0 996 376-4	Na P						2ZR 996 284-527
Module 70 LED Gen. 4   Extra wide surface illumination (mounting)   12/24   Cable   2,500 lm   1G0 996 476-1		R120 S		12/24	Cable	1,500 lm	1G2 996 220-007
Suface illumination (mounting)   12/24   Cable   Education   160 976 476-17			Spot	12/24	Cigarette lighter	800 lm	1H0 996 376-491
FMS Prime Close-range 12/24 Cable 1,200 lm 1GD 996 098-0		Module 70 LED Gen. 4		12/24	Cable	2,500 lm	1G0 996 476-131
FMS Prime Close-range 12/24 Cable 1,200 lm 1GD 996 098-0		SL60 LED	Light strip	12/24	Cable -		1G0 996 210-001
FMS Prime Close-range 12/24 Cable 2,500 lm 1GD 996 098-0		FMS Base	FMS Base Close-range				1GD 996 098-001
	100			12/24	Cable		1GD 996 098-011
rtat bearn 1000 Close-range(45 (tutnination)) 12/24 Cable 1,000 tm 1GA 996 193-0		Flat Beam 1000	Close-range(45° illumination)	12/24	Cable	1,000 lm	1GA 996 193-051
LED Light Bar 350 Close-range 12/24 Cable 2,200 lm 16J 958 040-5		LED Light Bar 350	Close-range	12/24	Cable	2,200 lm	1GJ 958 040-501
LED Light Bar 470 Diffuse Flood Diffuse Flood 12/24 Cable 3,600 lm 1GJ 958 130-5		LED Light Bar //70 Diffuso Flood	Diffuse Flood	12 / 2/.	Cablo	3 400 lm	1GJ 958 130-521

Front cab	Side, top	Rear, top	Reversing light, rear	Mirror reversing light	Light tower	Mobile pump	Front water hose	Roof water hose	Danger Zones	Work illumination	Ladder park	Ladder basket	Searchlight
Fra	2 Sid	3 Re.	4 Rev	57 Mir	6 Lig	7 Mo	8	9 Roc	10 Dai	11 wo	12 Lac	13 Lac	14 Sea
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#### ILLUMINATION OF THE WORKING AREA



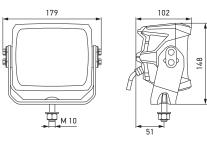












#### RokLUME 380 N

Die-cast aluminium housing, surface coating "NanoSafe non-stick easy to clean", 300 mm cable, DEUTSCH connector

Light source LED

Rated voltage Multi-voltage (20 – 32 V)
Protection class IP 6K9K, IP 6K8
Light output 7,500 lm

(measured)

**Power requirement** 84 W **Colour temperature** 5,000 K

 1GA 996 197-011
 Close-range illumination

 1GA 996 197-021
 Long-range illumination

 1GA 996 197-031
 Extra wide illumination

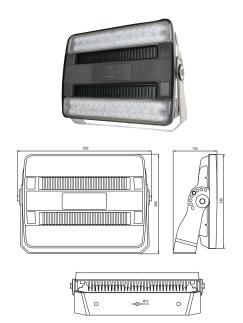
 1GA 996 197-041
 Spot illumination

 1GA 996 197-001
 ZEROGLARE\*

#### \*ZEROGLARE

**ZERO**GLARE variants boast illumination with special lens optics. The **ZERO**GLARE system ensures that drivers in oncoming vehicles are not dazzled. The cut-off line is very sharp and the light of the **ZERO**GLARE headlamp is directed specifically at the area in front of the vehicle.

#### ILLUMINATION OF THE WORKING AREA



#### HypaLUME 24/48 V DC

Intensive illumination, 1,800 mm cable, DEUTSCH connector

Light source LED

Rated voltage Multi-voltage (22 – 52 V)

Protection class IP 6K9K, IP 6K7

Light output 25,000 lm

Light output (measured)

**Power requirement** 260 W **Colour temperature** 5,700 K

1GJ 011 872-501Close-range illumination1GJ 011 872-511Long-range illumination1GJ 011 872-521Extra wide illumination



#### ILLUMINATION OF THE WORKING AREA





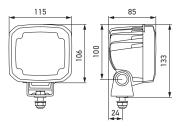












#### Ultra Beam LED Gen. 1

Ideal for light masts, high-quality aluminium housing, with handle for easy setting of the angle, DEUTSCH connector

Light source LED

Multi-voltage (9 – 32 V) Rated voltage Protection class IP 6K9K, IP 6K8 Light output 2,200 lm

(measured)

30 W Power requirement Colour temperature 6,500 K

1GA 995 506-111 Magnetic base, close-range illumination 1GA 995 506-091 Pipe socket mounting, close-range illumination



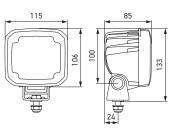












#### Ultra Beam LED Gen. 2

Ideal for light masts, high-quality aluminium housing, DEUTSCH connector

Light source LED

Rated voltage Multi-voltage (9 - 32 V) Protection class IP 6K9K, IP 6K8 Light output 4,400 lm

(measured)

50 W Power requirement Colour temperature 6,500 K

1GA 995 606-001 Close-range illumination

Pipe socket mounting, close-range illumination, heavy duty surrounding bracket 1GA 995 606-141

1GA 995 606-011 Long-range illumination

1GA 995 606-021 Spot illumination 1GA 995 606-171 **ZERO**GLARE\*

#### ILLUMINATION OF THE WORKING AREA



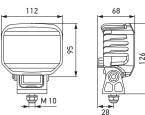












#### Power Beam 1800 compact

Thermally conductive plastic housing, DEUTSCH connector

LED Light source

Multi-voltage (10.5 – 32 V) Rated voltage

Protection class IP 6K9K, IP 6K8 Light output 1,850 lm

(measured)

Power requirement 26 W 6,500 K Colour temperature

1GA 996 488-001 Close-range illumination 1GA 996 488-011 Long-range illumination





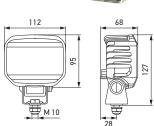












#### Power Beam 1000 compact

Thermally conductive plastic housing, DEUTSCH connector

Light source LED

Multi-voltage (10.5 – 32 V) Rated voltage

Protection class IP 6K9K, IP 6K7 Light output 1,000 lm

(measured)

12 W Power requirement Colour temperature 6,500 K

1GA 996 188-501 Close-range illumination 1GA 996 188-511 Long-range illumination

Reverse lamps

2ZR 996 188-521 5,000 K, DT connector 2ZR 996 188-557 5,000 K, with mirror bracket

#### ILLUMINATION OF THE WORKING AREA













#### ECO18 LED

High-quality aluminium housing, some with DEUTSCH connector

Light source

Rated voltage Multi-voltage (10.5 – 32 V)

Protection class IP 6K9K, IP 6K7 1,350 lm

Light output (measured)

18 W

Power requirement Colour temperature

6,500 K

1GA 996 479-001 Close-range illumination, 500 mm cable 1GA 996 479-021 Close-range illumination, DT connector 1GA 996 479-011 Long-range illumination, 500 mm cable 1GA 996 479-031 Long-range illumination, DT connector

#### Reverse lamps

2ZR 996 479-501 5,000 K, 2,000 mm cable 2ZR 996 479-511 5,000 K, DT connector



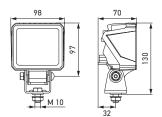












#### ECO26 LED

High-quality aluminium housing, some with DEUTSCH connector

LED Light source

Rated voltage Multi-voltage (10.5 – 32 V)

IP 6K9K, IP 6K7 Protection class 2,000 lm

Light output (measured)

Power requirement 26 W 6,500 K Colour temperature

1GA 996 579-001 Close-range illumination, 500 mm cable 1GA 996 579-021 Close-range illumination, DT connector 1GA 996 579-011 Long-range illumination, 500 mm cable 1GA 996 579-031 Long-range illumination, DT connector

#### ILLUMINATION OF THE WORKING AREA



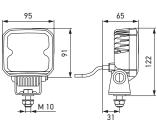












#### Q90 LED compact

Thermally conductive plastic housing, some with DEUTSCH plug

Light source LED

Rated voltage Multi-voltage (9 – 32 V)

Protection class IP 6K9K, IP 6K8

Light output 1,200 lm

(measured)

Power requirement 15 W Colour temperature 6,500 K

1GA 996 284-001 Close-range illumination, 200 mm cable

1GA 996 284-081 Close-range illumination, 150 mm cable and DT connector

1GA 996 284-011 Long-range illumination, 200 mm cable

Reverse lamps

**2ZR 996 284-501** 1,000 lm, 5,000 K, 2,000 mm cable

**2ZR 996 284-511** 1,000 lm, 5,000 K, 500 mm cable and DT connector

**2ZR 996 284-527** 1,000 lm, 5,000 K, with mirror bracket



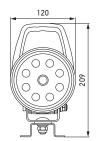














#### R120 S

 $\label{thm:continuous} \mbox{Die-cast aluminium housing, optimal illumination for work all around the vehicle, practical handle, easy-to-operate on and off switch$ 

Light source LED

**Rated voltage** Multi-voltage (10 – 30 V) **Protection class** IP 6K7, IP 6K9K

Light output (measured)

Power requirement 23 W Colour temperature 6,500 K

**1G2 996 220-007** Close-range illumination, 3,000 mm cable

1,500 lm

#### ILLUMINATION OF THE WORKING AREA





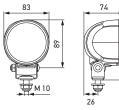


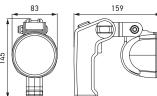












#### Module 70 LED Gen. 3

High-quality aluminium housing, some with DEUTSCH connector

Light source

Rated voltage Multi-voltage (9 – 32 V) Protection class IP 6K9K, IP 6K7 Light output 800 lm

(measured)

13 W Power requirement Colour temperature 6,500 K

1G0 996 276-481 Close-range illumination, 200 mm cable and DT connector 1G0 996 376-501 Close-range illumination, 2,000 mm cable, swivel joint 1G0 996 376-001 Long-range illumination, 2,000 mm cable

1G0 996 276-701 Spot illumination, 2,000 mm cable, blue lens to penetrate,

for example, spray and mist

1H0 996 376-491 Spot illumination, hand-held searchlight

Reverse lamps

2ZR 996 376-091 6,500 K, 2,000 mm cable



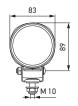


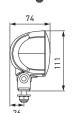












#### Module 70 LED Gen. 3.2

Ideal for mounting positions in confined spaces, high-quality aluminium housing, some with DEUTSCH connector

LED Light source

Rated voltage Multi-voltage (9 – 32 V) Protection class IP 6K9K, IP 6K8 Light output 1,800 lm

(measured)

Power requirement 20 W Colour temperature 6,500 K

1G0 996 576-031 Close-range illumination, 2,000 mm cable 1G0 996 576-041 Close-range illumination, DT connector 1G0 996 576-001 Long-range illumination, 2,000 mm cable 1G0 996 576-011 Long-range illumination, DT connector

#### ILLUMINATION OF THE WORKING AREA



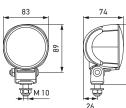












#### Module 70 LED Gen. 4

Ideal for mounting positions in confined spaces, high-quality aluminium housing

Light source LED

Rated voltage Multi-voltage (9 – 32 V)

Protection class IP 6K9K, IP 6K8

Light output 2,500 lm

(measured)

Power requirement 30 W Colour temperature 6,500 K

 1G0 996 476-001
 Close-range illumination, 2,000 mm cable

 1G0 996 476-011
 Long-range illumination, 2,000 mm cable

 1G0 996 476-031
 Extra wide illumination, 2,000 mm cable

**1G0 996 476-131** Extra wide illumination, flush mounting, 2,000 mm cable















Ideal for object illumination in confined spaces, with DEUTSCH connector

Light source LED

800 lm

Light output (measured)

Power requirement 15 W Colour temperature 6,500 K

1G0 995 050-001Close-range illumination, surface-mounting, upright1G0 995 050-021Long-range illumination, surface-mounting, upright







#### ILLUMINATION OF THE WORKING AREA



















#### Module 50 LED Spot

Projection of a warning point on the ground, various light colours available, with  $\ensuremath{\mathsf{DEUTSCH}}$  connector

Light source LED

Power requirement 15 W

 1G0 995 050-051
 White warning point

 1G0 995 050-061
 Blue warning point

 1G0 995 050-071
 Green warning point

 1G0 995 050-081
 Red warning point







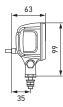












#### SL60 LED

Projection of a warning line, blue or red light colour, 500 mm cable

Light source LED

**Rated voltage** Multi-voltage (10 – 80 V) **Protection class** IP 6K9K, IP 6K8

Power requirement 15 W

**1G0 996 210-001** Blue warning line **1G0 996 210-011** Red warning line

Module 50 LED Spot







#### ILLUMINATION OF THE WORKING AREA





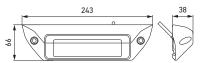












#### FMS Base/Prime

Work lamp for flat mounting on the vehicle wall, perfect close-range illumination all around the vehicle, homogeneous light distribution, impact-resistant plastic housing in various colours, 500 mm cable

Light source LED

 Rated voltage
 Multi-voltage (9 – 32 V)

 Protection class
 IP 6K9K, IP 6K8

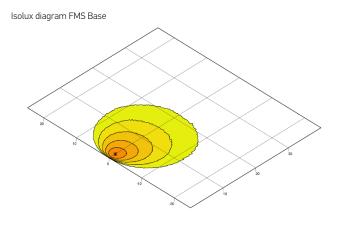
 Light output (measured)
 1,200 lm (Base)

 Power requirement
 14 W (Base)

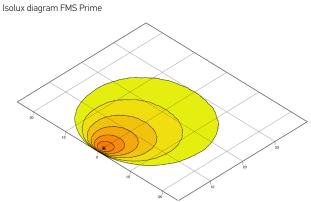
 28 W (Prime)

Colour temperature 6,500 K

1GD 996 098-001Base, black housing, close-range illumination1GD 996 098-501Base, white housing, close-range illumination1GD 996 098-301Base, red housing, close-range illumination1GD 996 098-011Prime, black housing, close-range illumination1GD 996 098-511Prime, white housing, close-range illumination1GD 996 098-311Prime, red housing, close-range illumination



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#### ILLUMINATION OF THE WORKING AREA



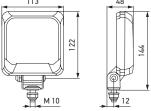












#### Flat Beam 500

Impact-resistant plastic housing, good close-range illumination even with flat wall mounting,  $45^\circ$  illumination as standard, 2,000 mm cable

LED Light source

Rated voltage Multi-voltage (9 – 32 V) IP 6K9K, IP 6K7 Protection class 550 lm

Light output (measured)

7 W Power requirement Colour temperature 6,500 K

1GA 995 193-001 Surrounding bracket, close-range illumination 1GA 995 193-021 Wall mounting, close-range illumination



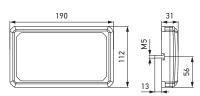












#### Flat Beam 1000

Impact-resistant plastic housing, 2,000 mm cable

Light source LED

Multi-voltage (9 – 32 V) Rated voltage Protection class IP 6K9K, IP 6K7 1,000 lm

Light output (measured)

11 W Power requirement Colour temperature 6,500 K

1GA 996 193-001 Surrounding bracket, close-range illumination 1GA 996 193-011 Wall mounting, close-range illumination

1GA 996 193-051 Wall mounting, 45° illumination, close-range illumination

#### ILLUMINATION OF THE WORKING AREA

















#### LED Light Bar 350

Particularly corrosion-resistant thanks to plastic housing, offers very wide light distribution, modular mounting concept, 2,500 mm cable

LED Light source

Multi-voltage (9 – 32 V) Rated voltage Protection class IP 6K9K, IP 6K7 Light output 2,200 lm

(measured)

Power requirement 25 W Colour temperature 5,000 K

1GJ 958 040-501 Close-range illumination



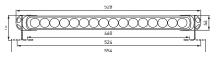














#### LED Light Bar 470

Light source LED

Rated voltage Multi-voltage (9 – 32 V) IP 6K9K, IP 6K7 Protection class Light output 2,800 lm

(measured)

36 W Power requirement Colour temperature 5,000 K

1GJ 958 130-621 Close-range illumination 1GJ 958 130-651 Long-range illumination



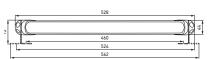














#### LED Light Bar 470 Diffuse Flood

Light source LED

Multi-voltage (9 – 32 V) Rated voltage IP 6K9K, IP 6K8 Protection class Light output 3,600 lm (measured)

Power requirement 36 W 5,000 K Colour temperature

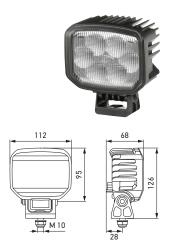
1GJ 958 130-521 Diffuse Flood

# WORK LAMPS REVERSE LAMPS



#### Q90 LED compact

2ZR 996 284-501	Reverse lamp, 1,000 lm, 5,000 K, 2,000 mm cable
2ZR 996 284-511	Reverse lamp, 1,000 lm, 5,000 K, 500 mm cable and DT connector
2ZR 996 284-527	Reverse lamp, 1,000 lm, 5,000 K, with mirror bracket



#### Power Beam 1000 compact

 2ZR 996 188-521
 Reverse lamp, 1,000 lm, 5,000 K, DT connector

 2ZR 996 188-557
 Reverse lamp, 1,000 lm, 5,000 K, with mirror bracket



#### Module 70 LED Gen. 3.2 compact

**2ZR 996 576-621** Reverse lamp, 1,000 lm, 5,000 K, 2,000 mm cable

# WORK LAMPS REVERSE LAMPS



#### Module 70 LED Gen. 3

**2ZR 996 376-091** Reverse lamp, 6,500 K, 2,000 mm cable



#### ECO18 LED

**2ZR 996 479-501** Reverse lamp, 5,000 K, 2,000 mm cable **2ZR 996 479-511** Reverse lamp, 5,000 K, DT connector



# WORK LAMPS ACCESSORIES

Product picture	Description	Part number
<u> </u>	<b>Tubular steel tripod</b> Telescopic from 1,263 up to 2,200 mm, with push-on attachment pin Ø 30 mm, welded to vehicle body or fixed using clamps	8XT 002 120-001
	<b>Tubular steel tripod</b> Telescopic from 1,051 to 1,650 mm, with push-on attachment pin Ø 30 mm	8XT 002 117-001
	Roof plinth For mounting work lamps on vehicle roof or other horizontal body surfaces, with push-on attachment pin $\emptyset$ 30 mm	8XT 002 121-001
	Joint adapter/reducer adapter Lower part fits on push-on attachment pin Ø 30 mm, upper part with push-on attachment pin Ø 24 mm	9XS 027 639-001
	<b>Universal brackets</b> For work lamps, can be used with push-on attachment pins Ø 30 mm	8HG 159 455-001
	<b>Universal brackets</b> For work lamps, can be used for beacon socket pipe Ø 24 mm, DT connector	8HG 990 320-011
	Connector in accordance with DIN 14690, 2-pin, with union nut	8JA 001 925-001
	<b>Socket</b> in accordance with DIN 14690, 2-pin, with screw cap, base Ø 63 mm	8JB 002 281-001

#### ACCESSORIES

Product picture	Description	Part number
	<b>Mounting bracket</b> For four-point mounting of work lamps and surface-mounted headlamps with M 10 fastening screw	9XD 130 261-001
	Magnetic mounting bracket For mounting bracket 9XD 130 261-001 consisting of 2 magnets	8HG 004 806-001
	Rotating universal bracket For mounting on pipes (diameter: 15 – 25 mm). For replacement on work lamps with 36 mm or 42 mm bracket width.	
	<b>36 mm bracket width</b> Model series: Oval 90, Module 70, PowerXen and Flat Beam 500	8HG 990 263-111
	<b>42 mm bracket width</b> Model series: Ultra Beam, Mega Beam, Oval 100, Double Beam, AS 200, Power Beam, Module 90, Q90 LED and AP 1200 LED	8HG 990 263-131

More accessories can be found on page 38/39.



#### **Energy management**



Intelligent battery sensors

#### Environmental and medium sensors



Rain-light sensors

#### Position sensors



Accelerator pedal sensors



Angular position sensors



Steering torque and angle sensors (TAS / TOS)

#### Actuators



Actuators (Low Force)



Actuators (Medium Force)



Actuators (High Force)



Actuators (Smart URA)



Universal Turbo Actuators (UTA)

#### Operating systems - vehicle/driver interface



Rocker switches



Electronic immobiliser

#### Lighting electronics



LED lamp control unit



Control unit for flashing side marker lamps



Simulation device for cold check



Control unit for current monitoring

#### Acoustic signal devices



Reversing and warning alarm



#### Electronics tool

The electronics tool informs you quickly and clearly about which electronic products HELLA offers for special original equipment. First of all, select the relevant vehicle or area of application (drivetrain or cab). After selecting the appropriate product via mouse click, you will receive further information and also PDFs with important details and technical data for downloading. Furthermore, the tool provides clear animations showing how the products work.

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