



BRIEF INFORMATION

LED reversing spotlights Repulse and Repulse Pro

- Compact design and optimal illumination
- Multi-voltage design for flexible use in 12 V and 24 V systems
- Highly efficient electronic set-up – minimum energy consumption
- ADR-certified for dangerous goods transport

PRODUCT FEATURES

Innovative design, top functionality, and maximum flexibility

The new LED reversing spotlights Repulse and Repulse Pro are specially designed to provide an auxiliary reversing function. Its exceptionally wide light dispersion makes this lamp special, as this eliminates areas behind and next to the vehicle which would otherwise not be illuminated. This light output is integrated in a sleek design with various attachment options to ensure the highest possible level of flexibility.

Light colour that turns the night into day

The colour temperature of the headlamp which is around 5,900° kelvins is the same as natural daylight. This makes the perception of different silhouettes and objects permanently easier and significantly reduces eye fatigue.

Sealed to withstand high-pressure cleaning

The light is tested in accordance with HELLA Norm 67101 and meets the highest automotive requirements. It also satisfies IP 6K9K and can therefore withstand high-pressure and steam cleaning.

Fail-safe, true to the 'Fit & Forget' principle

The LED technology ensures outstanding reliability and vibration resistance. The light therefore has an exceptionally long lifetime.

PRODUCT FEATURES

Versatile connector and attachment options

The LED reversing spotlight is available with all common plug connections and therefore allows for easy connection to the vehicle system. In addition, the LED reversing spotlight can be upright, pendant or rear-mounted which represents outstanding flexibility.

Functionality with all vehicle electric system voltages

The electronics have a multi-voltage set-up, so that even changing to a towing vehicle with a different vehicle electric system voltage is no problem.

LED LIGHTING TECHNOLOGY

As a leading innovator in the field of automotive original equipment, HELLA sets standards:

Extremely low energy consumption

With the combination of efficient light emitting diodes (LEDs) and precision lenses, HELLA lights achieve the statutory light distribution with 85% less power consumption compared to bulbs!

No change of light source, no maintenance and an extremely long operating time thanks to optimal thermal management.

To increase the light's lifetime, the components are arranged optimised for temperature. This prevents overheating of the LEDs at extremely high temperatures. This thermal management maximises the lifetime. The lifetime of the LEDs corresponds to that of the vehicle (depending on the operating temperature).

THE VERY LATEST PRODUCTION TECHNOLOGY

Quality by conviction

We work on our processes and technologies every day. This is effectively ensured by continuous further development of our manufacturing processes and production methods. Our HELLA standards reflect our underlying quality-oriented approach. This expectation is therefore reflected in every product.

Process reliability

Integrated production guarantees outstanding quality in terms of leak tightness and fault rate. Our standards have been established across the entire production process. Our experience demonstrates: "only those who have their processes under control can guarantee high performance at all times".

APPLICATION EXAMPLES

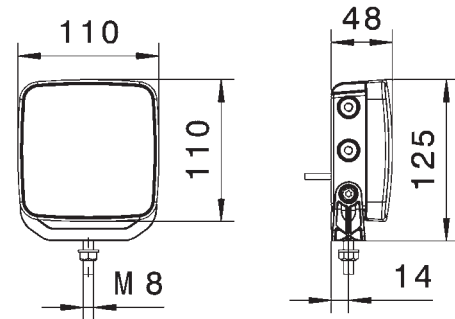


TECHNICAL DETAILS

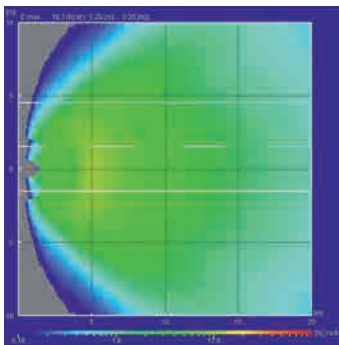
Technical Data

Functions	LED auxiliary reversing spotlight	
Dimensions	109.7 x 109.7 x 47.5 mm (L x H x W)	
Number of LEDs	1 LED	3 LEDs
Operating voltage	Multivolt 9–32 V	
Current consumption	0.6 A	1.25 A
Power consumption	8 W	17 W
Operating temperature	-40 °C to +80 °C	
Contacting	<ul style="list-style-type: none"> • 2-pin AMP-SUPERSEAL connector with 2,000 mm connecting lead • 2-pin EasyConn connector (angled 90 degrees) with 1,000 mm connecting lead • 6.3 mm flat receptacles with 3,500 mm connecting lead 	
Mounting	Upright, pendant, or rear-mount integration	
Degree of protection	IP 6K9K	
EMC class	3	
Specification	HN 67101 Class 5.1	
Fuse	Integrated short-circuit protection	
Polarity reversal protection	Yes	

Dimensional sketch

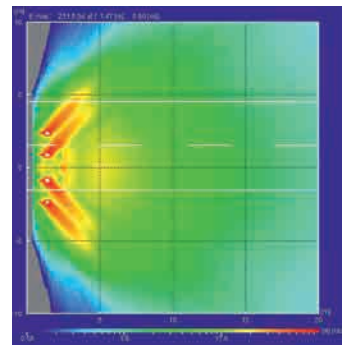


Light distribution



LED reversing spotlight, Repulse (1 LED)

Broadly spread light cone with optimised light performance for better visibility of obstructions behind and adjacent to the trailer.



LED reversing spotlight, Repulse Pro (3 LEDs)

Light cone with a very broad spread behind and adjacent to the vehicle with exceptional light performance.

Illumination comparison



Illumination without additional reversing spotlights



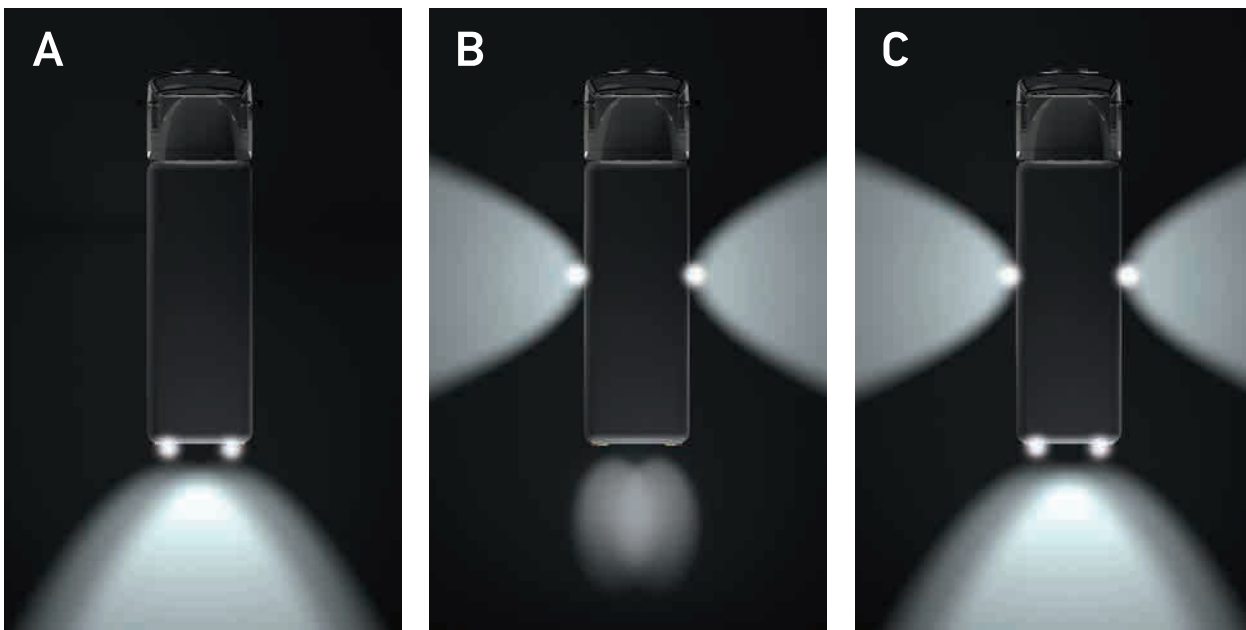
Illumination with additional reversing spotlights

RANGE OVERVIEW



Plug connection	Part number	Version	Description	PU
	ZZR 012 456-001 ZZR 012 456-007	Repulse 1 LED	2-pin AMP-SUPERSEAL connector with 2,000 mm connecting lead	1 12
	ZZR 012 456-011 ZZR 012 456-017	Repulse 1 LED	2-pin EasyConn connector (angled 90 degrees) with 1,000 mm connecting lead	1 12
	ZZR 012 456-021 ZZR 012 456-027	Repulse 1 LED	6.3 mm flat receptacles with 3,500 mm connecting lead	1 12
	ZZR 012 456-201 ZZR 012 456-207	Repulse Pro 3 LEDs	2-pin AMP-SUPERSEAL connector with 2,000 mm connecting lead	1 12
	ZZR 012 456-211 ZZR 012 456-217	Repulse Pro 3 LEDs	2-pin EasyConn connector (angled 90m degrees) with 1,000 mm connecting lead	1 12
	ZZR 012 456-221 ZZR 012 456-227	Repulse Pro 3 LEDs	6.3 mm flat receptacles with 3,500 mm connecting lead	1 12

HOMOLOGATION OVERVIEW AND INSTALLATION INSTRUCTIONS



Variant A: Two additional reversing spotlights at the rear.

Variant B: One additional headlamp on each side (manoeuvring light).

Variant C: Two additional reversing spotlights at the rear plus one additional reversing spotlight on each side.