



BRIEF INFORMATION

LED rear lamp 122 mm round

- › Optimum luminous efficiency thanks to the combination of high-performance LEDs and precision optics in the reflectors
- › High lifetime with low current consumption
- › With direction indicator failure control and active thermal management

PRODUCT FEATURES

Power Top LED

Optimum light output through the combination of high power LEDs and precision optics in reflectors.

For use on both sides

Due to the symmetric construction of the lamp, only one version is required for mounting to the left or right side of the vehicle.

Long service life and low energy consumption

A long light service life is achieved due to the innovative LED technology and active thermal management. Low energy consumption and no maintenance costs are other important features. "Fit and forget" make this product an environmentally-friendly light.

High water resistance

Tested according to the FORVIA HELLA norm IP 6K9K, the light is guaranteed to be fully waterproof.

Overvoltage protection

The overvoltage protection makes sure that the light is not damaged; even by voltage peaks up to 100 V.

Reverse polarity protection

If the contact to the pole is reversed accidentally, the light does not suffer any damage.

Indicator failure check

Due to FORVIA HELLA's patented system for monitoring indicators, the light can be used according to the requirements of ECE-R 48.

LED LIGHTING TECHNOLOGY

As an innovative leader in original automobile equipment, FORVIA HELLA sets standards with LED lighting electronic products.

An overview of the advantages of modern LED lighting technology:

Extremely low energy consumption

With the combination of efficient lighting diodes (LEDs) and precision optics, the FORVIA HELLA signal lights achieve the light distributed specified by law - and all of this with 90% less power in comparison with bulb lighting.

No light source replacement, no maintenance and extremely long service life thanks to proficient thermal management

To increase light service life, all components are perfectly aligned with each other optimised for temperature. LED overload is therefore avoided in extremely high environmental temperatures. Due to the use of quality LEDs and good thermal management, these products are constructed to last for the life span of the vehicle and are therefore a convincing, economic and environmentally-friendly "Fit and forget" solution.

LED multi-volt technology

Multi-volt circuits stabilise the light output keeping it constant at a voltage range of 9 to 32 volts. This makes it possible to use the same FORVIA HELLA signal lights for

both 12 and 24 volt applications. In addition, multi-volt also compensates for voltage fluctuations that are created by the use of longer cables and connections within the on-board power supply. FORVIA HELLA multi-volt circuits are also protected against reverse polarity and voltage peaks; even with low battery voltages.

Indicator failure check

The indicator function is monitored by the electronics. This generates a current pulse at a defined time for the indicator input. For every flashing pulse, the flasher unit ballast in the vehicle electric system demands this pulse for at least 107 ms every 100 ms. If components or LEDs in the indicator function are faulty, this is detected by the electronics: the pulse is not emitted. This way, the driver is always informed about the indicator failure. This meets the legal requirement for indicator failure detection (according to ECE regulation).

The following three ballasts cover almost all application cases:

5 DS 009 552- ...

5 DS 009 602- ...

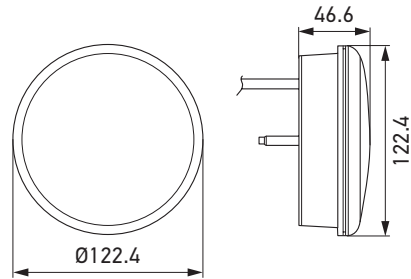
4 DW 009 492- ...

TECHNICAL DETAILS

Technical data

Operating voltage range	Multi-voltage (9 – 32 V)	
Rated voltage	12 V and 24 V	
Power consumption	TSDI	Tail light: 1 W Stop light: 2 W Direction indicator light: 2 W
	TS	Tail light: 1 W Stop light: 3 W
	DI	Direction indicator light: 3 W
	R	Reverse light: 3 W
	RF	Rear fog light: 2 W
	Light function	12 red LEDs
12 yellow LEDs		Tail light (reduced light power), stop light
24 red LEDs		Direction indicator light
24 yellow LEDs		Reverse light
24 white LEDs		Rear fog light
Light source	LED	
Temperature range	- 40 °C to + 60 °C	
Protection class	IP 6K9K	
Approved	ECE, ADR / GGVSEB	
Specification	FORVIA HELLA Norm 67001 Class 10 Construction machinery	
Mounting	2 x M6 x 25 screws	

Dimensional sketch











Cable colours

Design	Function	Colour
Tail light, stop light, direction indicator light (TSDI)	Direction indicator light	yellow
	Stop light	red
	Tail light	black
	Ground	white
Tail light, stop light (TS)	Stop light	red
	Tail light	black
	Ground	white
Direction indicator light (DI)	Direction indicator light	yellow
	Ground	white
Rear fog light (RF)	Rear fog light	yellow
Reverse light (R)	Ground	white

APPLICATION EXAMPLES



PROGRAM OVERVIEW

Product picture	Specification	Approved	Part number	VPE*
	Tail light, stop light, indicator, mounted on the left or right of the vehicle, 500 mm electric cable with open end, with clear lens, 12 red and 12 yellow LEDs	ECE-R7, ECE-R6	2SD 344 200-001	1
			2SD 344 200-007	24
	Combined tail/stop light, mounted on the left or right of the vehicle, 500 mm electric cable with open end, with clear lens, with 24 red LEDs	ECE-R7	2SB 344 200-027	24
	Indicator, mounted on the left or right of the vehicle, 500 mm electric cable with open end, with clear lens, with 24 yellow LEDs	ECE-R6	2BA 344 200-037	24
	Reverse light, mounted on the left or right of the vehicle, 500 mm electric cable with open end, with clear lens, with 24 white LEDs	ECE-R23	2ZR 344 200-051	1
			2ZR 344 200-057	24
	Rear fog light, mounted on the left or right of the vehicle, 500 mm electric cable with open end, with clear lens, with 16 red LEDs	ECE-R38	2NE 344 200-061	1
			2NE 344 200-067	24
	Tail light, stop light, indicator, mounted on the left or right of the vehicle, 500 mm electric cable with open end, with red/clear lens, with 12 red and 12 yellow LEDs	ECE-R7, ECE-R6	2SD 344 200-071	1
			2SD 344 200-077	24
	Tail light, stop light, mounted on the left or right of the vehicle, 500 mm electric cable with open end, with red lens, with 24 red LEDs	ECE-R7	2SB 344 200-081	1
			2SB 344 200-087	24
	Rear fog light, mounted on the left or right of the vehicle, 500 mm electric cable with open end, with red lens, with 16 red LEDs	ECE-R38	2NE 344 200-091	1
			2NE 344 200-097	24

* Packaging unit

The individual functions of the light must only be operated using a vehicle-mounted fuse of max. 3 A.