

## BRIEF INFORMATION

"COLUNA" full LED combination rear lamp 2VP 345 900-...

With 5 light functions for 12 V and 24 V towing vehicles and trailers

- Innovative and patent-registered flat LED light guides for tail lamp function, combined with reflex reflector
- Variants with rectangular reflex reflector = can be used horizontally and vertically / Variants with triangular reflex reflector = horizontal only
- Long design life, low life cycle costs as well as extremely robust
- Maintenance-free, fully sealed LED light
- Impact-resistant lens
- Fixing from the front (2 screws) or fixing from the rear with 2 x M8 fixing bolts

## PRODUCT FEATURES

All light functions of the full LED combination rear lamp (tail light, stop light, direction indicator, rear fog lamp and back-up lamp) exclusively feature LED technology. The tail light is produced by a ground-breaking patent-registered flat LED light guide in combination with the reflex reflector. And this light guide succeeds in producing illumination which is especially homogeneous. As a result, the tail light function, with its large surface area of around 145 cm<sup>2</sup>, is exceptionally visible in the dark and thus enhances road safety.

12 V and 24 V variants of this extremely flat surface-mounted full LED light are available for towing vehicles and trailers. A range of different applications on the vehicle are possible using EasyConn or AMP connectors and the front or rear fixing options.

# ADDITIONAL PRODUCT FEATURES

## LEDs for optimum signal pattern

The light combines high grade LEDs with precision optics to maximize light yield. The tail lamp is implemented as light curtain with 12 LEDs, and the stop, direction indicator, rear fog and back-up light respectively are implemented with 6 further LEDs.

## Protection class

Tested to IP 6K9K, this light is protected from dust and water ingress under constant immersion. This means they are also able to withstand high-pressure cleaning.

## Overvoltage protection

Overvoltage protection ensures that the lamp is also not damaged by voltage peaks according to ISO 7637.

## High resistance to vibration

Tested in accordance with FORVIA HELLA standard 67101 class 7.2, can also be used near heavy construction machinery.

## Reverse-polarity protected

If the contact to the pole is faulty, no damage will occur.

# LED LIGHTING TECHNOLOGY

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

## Extremely low energy consumption

With the combination of efficient light-emitting diodes (LEDs) and precision optics, FORVIA HELLA lights achieve the statutory light distribution with up to 84.6% less power consumption compared to bulbs!

## No light source replacement, no servicing and extremely long service life

As automotive (AECQ) quality LEDs are used in combination with optimum thermal management, the LEDs do not overheat. This thermal management maximizes the service life – even in adverse operating conditions.

## Direction indicator failure check

The direction indicator function is monitored by the electronics. It produces a current pulse to ISO 13207-1 (24 V vehicle) for the direction indicator input at a defined point in time. With each direction indicator pulse, the upstream flasher relay in the vehicle electric system requests the pulse after 100 ms – for at least 20 ms. If components or LEDs of the direction indicator function are defective, this is detected by the electronics: No pulse is sent. Therefore, the driver is definitely informed of the indicator failure. This is important for the legally prescribed direction indicator failure detection (in accordance with ECE regulation).

## The following variants are available for 24 V trailers on request:

- Cable, 2000 mm with 7-pole Easy-Conn plug
- Without pulse
- In trade or industrial packaging

## The following variants are available for 12 V trailers on request:

- With pulse

## Other frame colors available on request:

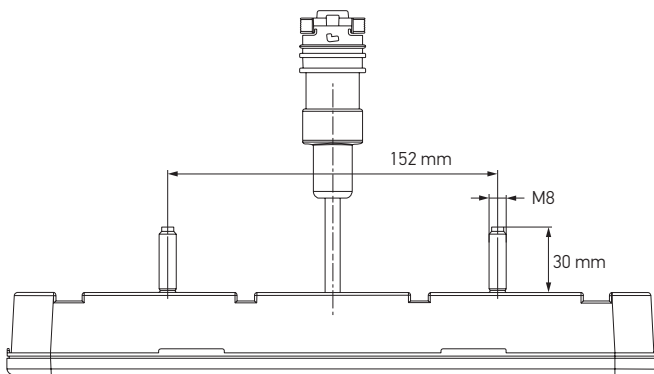
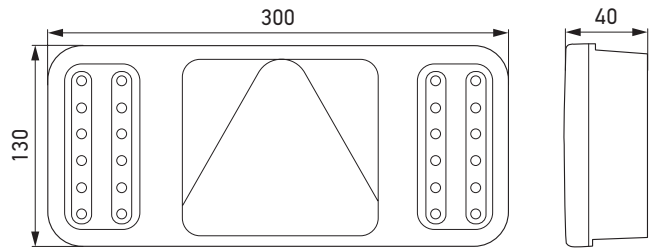


# TECHNICAL DETAILS

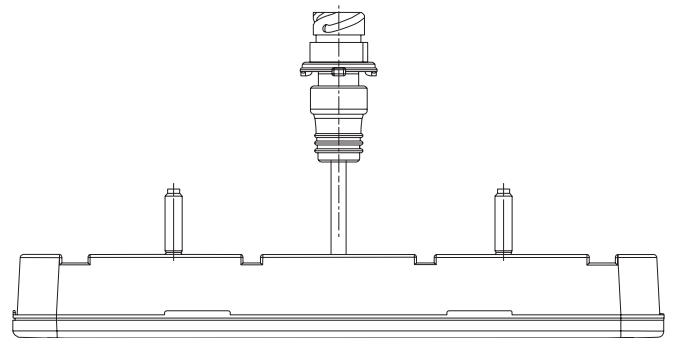
## Technical data

Operating voltage range	Single-voltage (9–16 V or 18–32 V)
Rated voltage	12 V or 24 V
Current consumption	Tail lamp: 0.2 A (12 V), 0.12 A (24 V) Stop light: 0.15 A (12 V), 0.08 A (24 V) Indicator: 0.28 A (12 V), 0.16 A (24 V) Rear fog light: 0.18 A (12 V), 0.1 A (24 V) Reversing light: 0.32 A (12 V), 0.23 A (24 V)
Power consumption	Tail lamp: 2.6 W (12 V), 2.8 W (24 V) Stop light: 1.8 W (12 V), 2 W (24 V) Indicator: 3.3 W (12 V), 3.8 W (24 V) Rear fog light: 2.2 W (12 V), 2.4 W (24 V) Reversing light: 3.8 W (12 V), 5.6 W (24 V)
Light function	1. Tail lamp with 12 red LEDs 2. Stop light with 6 red LEDs 3. Direction indicator with 6 amber LEDs 4. Rear fog light with 6 red LEDs 5. Back-up light with 6 white LEDs 6. Rectangular reflex reflector or triangular reflex reflector
Protection class	IP 6K9K
Approved	ECE-R148, ECE-R10, ADR / GGVSEB
Protection	Polarity reversal protection, overvoltage protection
Specification	FORVIA HELLA standard 67101 class 7.2 Agro Plus
Mounting	Front: with screws through the lenses (included in scope of delivery, distance between centers of fixing screws 152 mm)
	Rear: with fixing bolts from the rear (included in scope of delivery)
	Variants with triangular reflex reflector: horizontal only  Variants with rectangular reflex reflector: horizontal and vertical
Connection	Cable group with open ends Cable with 7-pole EasyConn connector Cable with 7-pole DIN-AMP connector

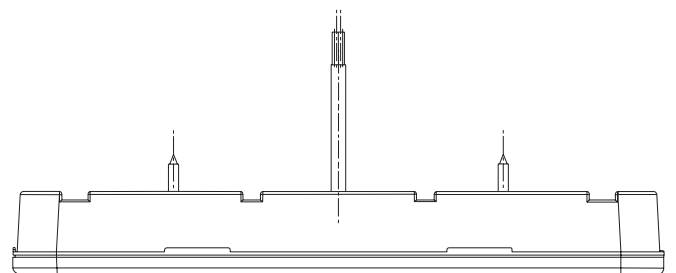
## Dimensional sketch



Mounting on vehicle with fixing screws from the rear, cable with EC connector



Fixing to vehicle with 7-pole DIN connector



Mounting on vehicle with fixing screws from the front, cable with open ends

# PROGRAM OVERVIEW

Article number 2VP 345 900	Triangular reflex reflector	Rectangular reflex reflector	Horizontal mounting position	Vertical mounting position	Fixing screws inserted from the front	Fixing bolts inserted from the rear	Cable, 500 mm with open ends	Cable, 3,000 mm with 6.3 mm flat receptacles	Cable, 1,000 mm with 7-pole Easy-Conn plug	Cable, 1,000 mm with 7-pole DIN-AMP bayonet connector	Left-hand variant	Right-hand variant	With pulse	Without pulse	Direction indicator failure control
<b>24 V Trailer</b>															
<b>Rated voltage 24 V</b>															
-011	x	-	x	-	-	x	-	-	x	-	x	-	x	-	x
-021	x	-	x	-	-	x	-	-	x	-	-	x	x	-	x
-091	x	-	x	-	-	x	-	-	-	x	x	-	x	-	x
-101	x	-	x	-	-	x	-	-	-	x	-	x	x	-	x
-131	x	-	x	-	-	x	-	x	-	-	x	-	x	-	x
-141	x	-	x	-	-	x	-	x	-	-	-	x	x	-	x
<b>24 V Towing vehicles</b>															
<b>Rated voltage 24 V</b>															
-201	-	x	x	x	x	-	x	-	-	-	x	x	x	-	x
-211	-	x	x	x	x	-	x	-	-	-	x	x	-	x	-
-221	-	x	x	x	-	x	x	-	-	-	x	x	x	-	x
-231	-	x	x	x	-	x	x	-	-	-	x	x	-	x	-
-241	-	x	x	x	x	-	-	x	-	-	x	x	x	-	x
-251	-	x	x	x	x	-	-	x	-	-	x	x	-	x	-
-261	-	x	x	x	-	x	-	x	-	-	x	x	x	-	x
-271	-	x	x	x	-	x	-	x	-	-	x	x	-	x	-
<b>12 V Trailer</b>															
<b>Rated voltage 12 V</b>															
-331	x	-	x	-	-	x	x	-	-	-	x	-	-	x	-
-341	x	-	x	-	-	x	x	-	-	-	-	x	-	x	-
<b>12 V Towing vehicles</b>															
<b>Rated voltage 12 V</b>															
-401	-	x	x	x	x	-	x	-	-	-	x	x	x	-	x
-411	-	x	x	x	x	-	x	-	-	-	x	x	-	x	-
-421	-	x	x	x	-	x	x	-	-	-	x	x	x	-	x
-431	-	x	x	x	-	x	x	-	-	-	x	x	-	x	-
-441	-	x	x	x	x	-	-	x	-	-	x	x	x	-	x
-451	-	x	x	x	x	-	-	x	-	-	x	x	-	x	-
-461	-	x	x	x	-	x	-	x	-	-	x	x	x	-	x
-471	-	x	x	x	-	x	-	x	-	-	x	x	-	x	-