



# Continental LED Lighting

## Working and Driving Lights for Off-Highway and Commercial Vehicles

[www.continental-automotive.com](http://www.continental-automotive.com)

Vehicle Networking and Information (VNI)

# Continental LED Lighting

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# Continental LED Lighting

## Introduction & Overview



Agriculture



Construction



Material handling



Commercial vehicle



# LED Lighting Application Fields

## Working & Driving Lights

**4x4**



**ATV / quad**



**Truck**



**Commercial vehicles**



**Military**



**Forestry & agriculture**



**Construction vehicles**



**Emergency vehicles**



- › Large variety of variants for diverse applications
- › Increased off- & on-road safety – enhanced illumination
- › Comprehensive portfolio selection – portfolio can serve many fields of application



# High Quality Testing

## Accredited Laboratory Also for External Customers



**Water resistance**  
Protection class IP6K8/ IP6K9K



**Cold resistance**  
Tested under extreme temperature conditions



**Dust resistance**  
Resistant to the ingress of dust particles



**Heat resistance**  
Tested under extreme temperature conditions



**Corrosion resistance**  
Salt spray tested



**Vibration and shock resistance**  
Proven mechanical stability

**All products are tested in accredited laboratory**

- › **Working lights**  
Commercial vehicles and off-road requirements
- › **Driving lights**  
Automotive requirements

# Continental LED Lighting

## Product Portfolio



### Working lights

Designed for commercial vehicle & off-highway requirements

- › Ultra-wide (UW)
- › Wide (WD)
- › Flood (FL)
- › Spot (SP)
- › Accessories



### Driving lights

Designed for automotive requirements (on-road)

- › Lightbar series
- › Lightbar slim series
- › Multifunction series
- › Reversing series
- › Universal headlights

# Short, but Important Information...

## Effective Lumen

- › A driving or working light consists of many individual elements. If only the lumen indication of the individual LEDs, as stated by some manufacturers, are multiplied by the number of LEDs, only the theoretical light output is obtained, but not the effective light output
- › On-Road and off-road, however, you need the effective light output. Only this light output is decisive for the illumination and lights up your way

### Several light providers' lumen indication:

$$\begin{array}{ccccc} \text{Amount} & & & & \\ \text{of LEDs} & \times & \text{Lumen} & = & \text{Theoretical} \\ & & \text{per LED} & & \text{lumens} \end{array}$$

### Continental lumen Indication:

$$\begin{array}{ccccccccc} \text{Number} & & & & & & & & \\ \text{of LEDs} & \times & \text{Lumen} & - & \text{Clarity} & - & \text{Efficiency} & - & \text{Accuracy} & - & \text{Efficiency of driver and} & = & \text{Effective} \\ & & \text{per LED} & & \text{of lens} & & \text{of optic} & & \text{of regulator} & & \text{thermal management} & & \text{lumens} \end{array}$$

➡ Effective lumen = hot lumen



# Working Lights



# Continental LED Lighting – Working Lights

## Introduction & Overview

Designed for commercial vehicle & off-highway requirements



**Ultra-wide**

(1500 lm, 2500 lm, 3500 lm)



**Wide**

(1500 lm, 2500 lm, 3500 lm)



**Flood**

(1500 lm, 2500 lm, 3500 lm)



**Spot**

(1500 lm, 2500 lm, 3500 lm)

### Accessories



**Standard  
mounting kit**



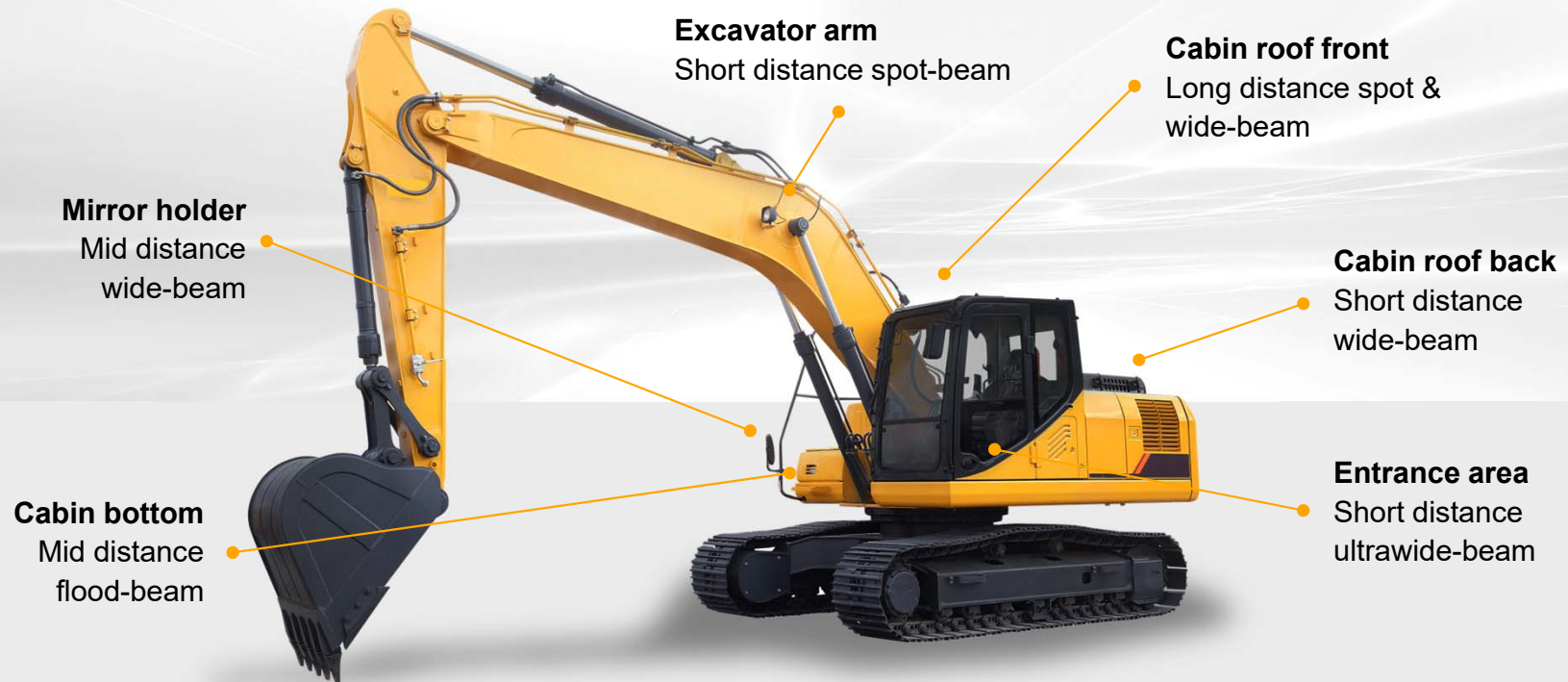
**Heavy duty  
mounting kit**



**3 m cable with Deutsch  
connector**

## Application Examples: Excavator

### Positions for Working Lights and Required Light Distribution



➔ Ø up to **14 positions for working lights** on an excavator

➔ Light with multiple **beam patterns** and different **performance levels** needed!



## Application Examples: Tractor

### Positions for Working Lights and Required Light Distribution

**Cabin roof front**  
Long distance spot-  
& wide-beam

**Cabin roof back**  
mid distance  
flood-beam

**Mirror holder**  
mid distance  
wide-beam

**Fender back**  
short distance  
wide-beam

**Headlights**  
Low- / high-beam

**Entrance area**  
short distance  
ultra-wide-beam

→ Ø up to 10 positions for working lights on a tractor

→ Light with multiple beam patterns and different performance levels needed!

# Application Examples: Combine Harvester

## Positions for Working Lights and Required Light Distribution



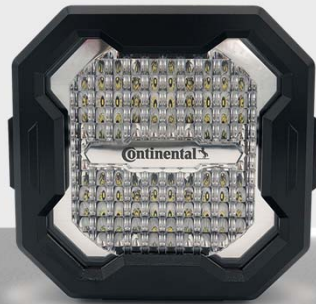
- ➔ Ø up to 16 positions for working lights on a combine harvester
- ➔ Light with multiple beam patterns and different performance levels needed!

# Continental LED Lighting

## Working Light – Variants



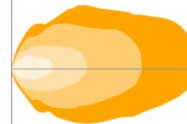
**Ultra-wide – UW**



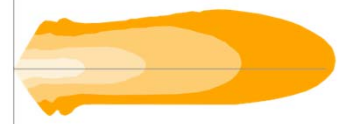
**Wide – WD**



**Flood – FL**



**Spot – SP**

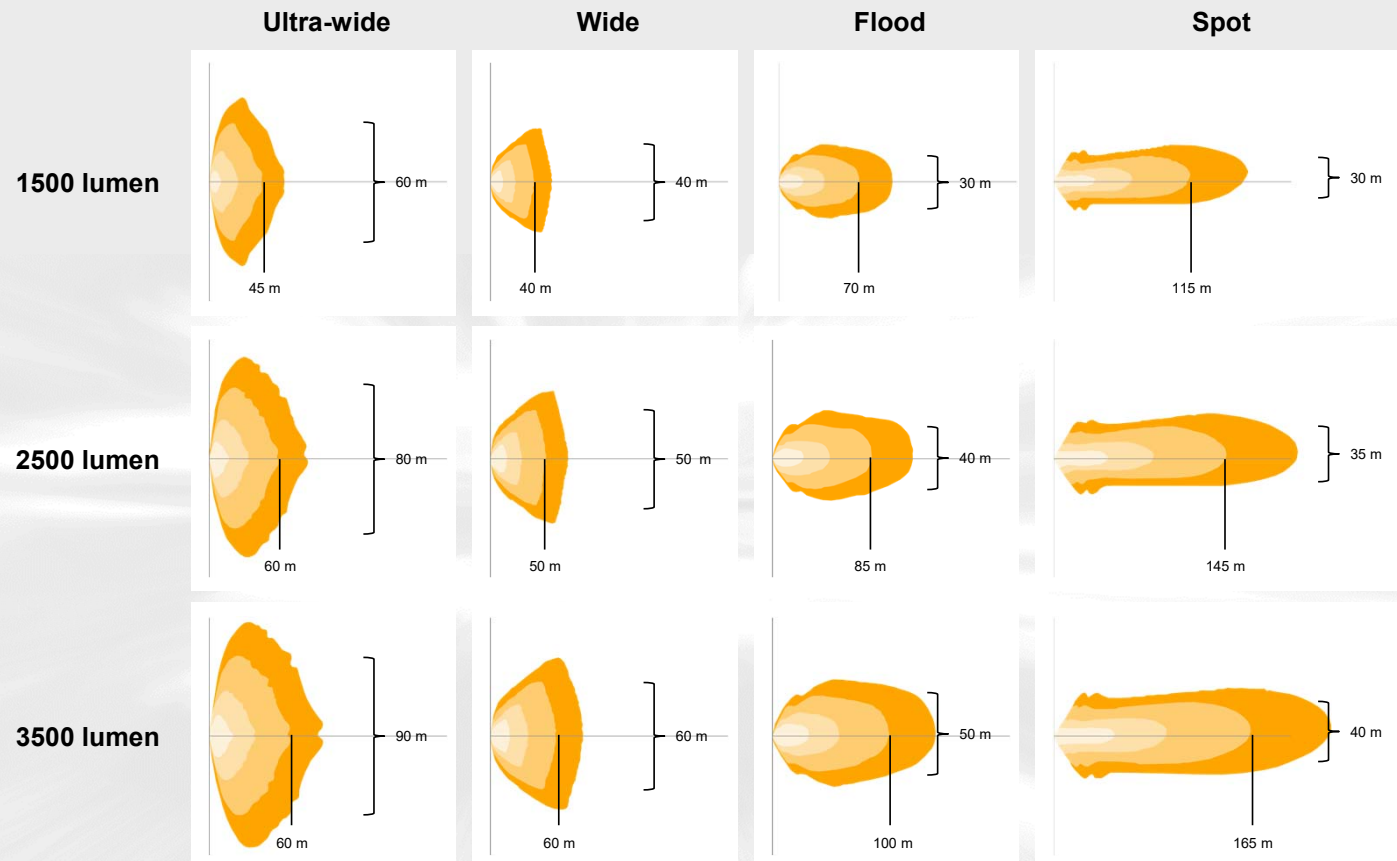




# The MATRIX Approach Overview

## Beam pattern

## Performance

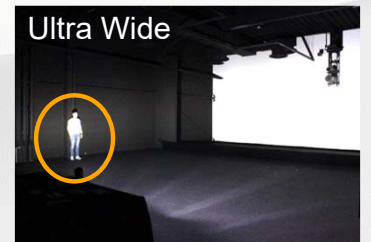
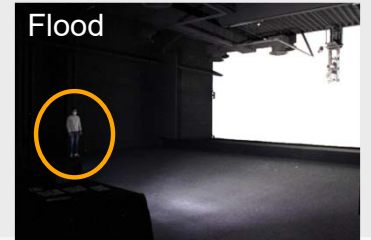
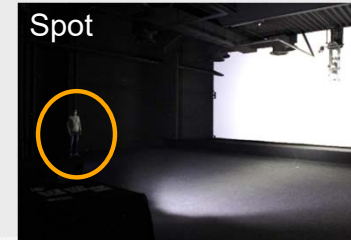
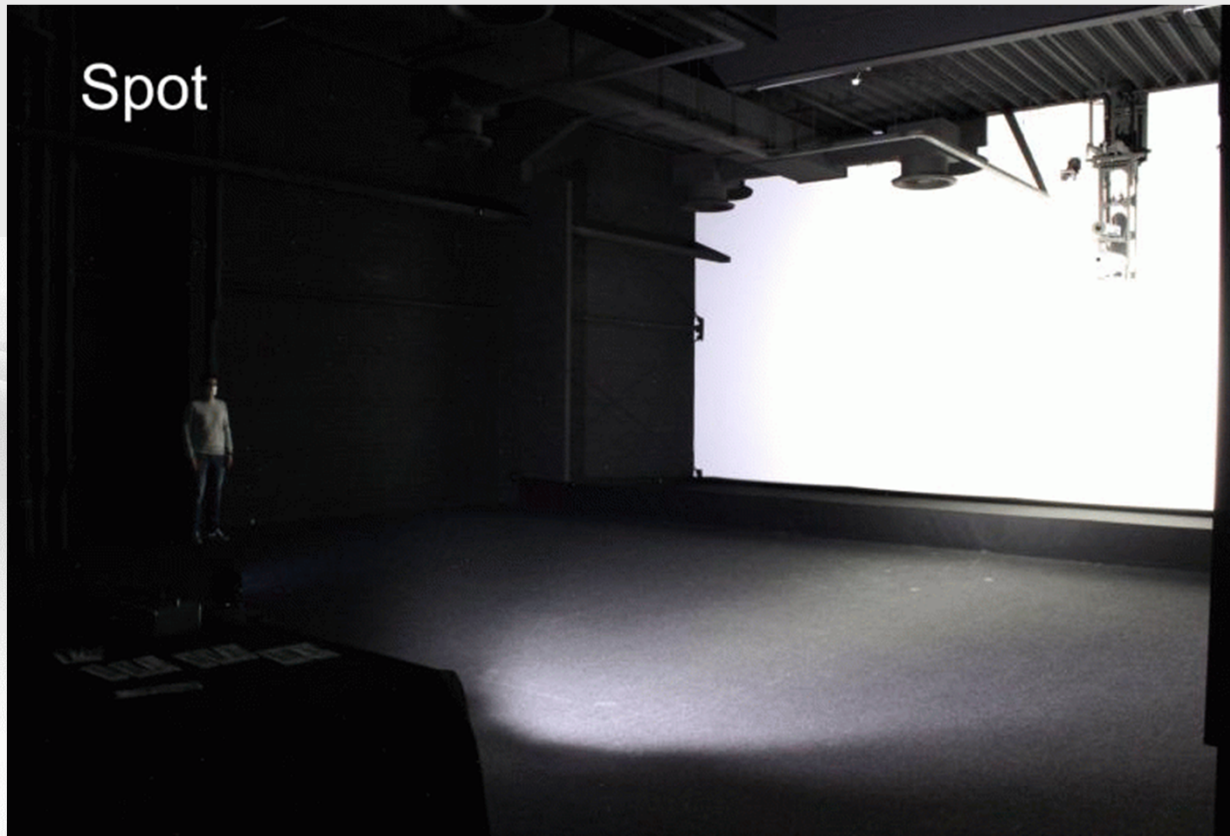


The matrix portfolio  
can cover **all possible  
lighting scenarios**  
around the vehicle



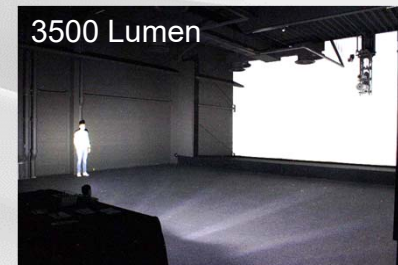
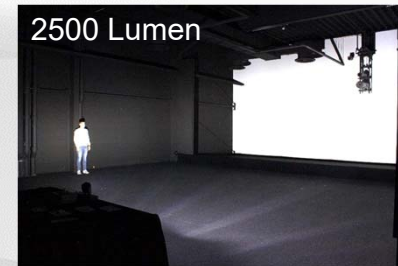
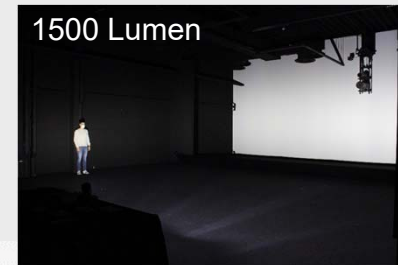
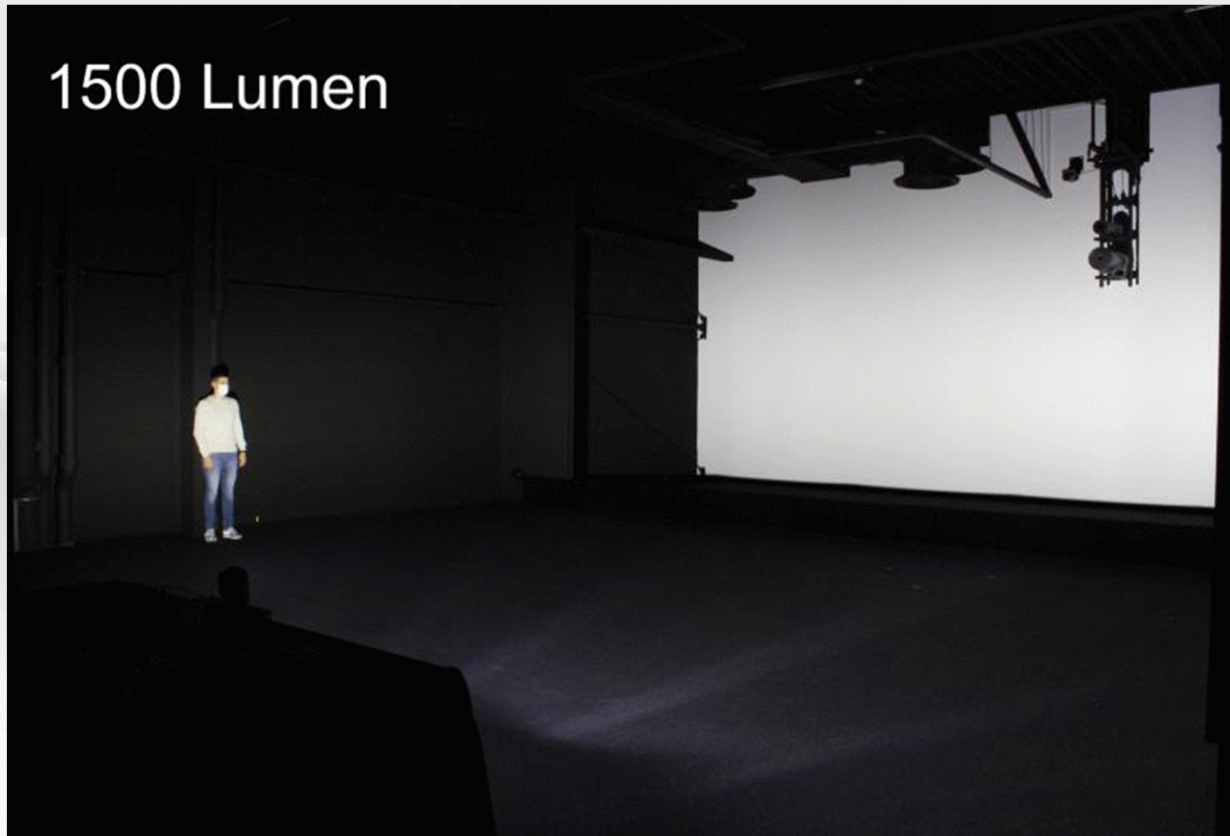
# The MATRIX Approach with Different Beam Pattern

## Real Pictures from the Light Laboratory



# The MATRIX Approach with Different Lumen

## Real Pictures from the Light Laboratory





# With the MATRIX Approach a Number Reduction of the of Lights is Possible

## Current combination possibilities

## Continental MATRIX approach

### Example 1:

2 x same beam pattern  
in different direction



=



1x Wide-beam

### Example 2:

4 x / 6 x different beam  
pattern in different  
directions



=



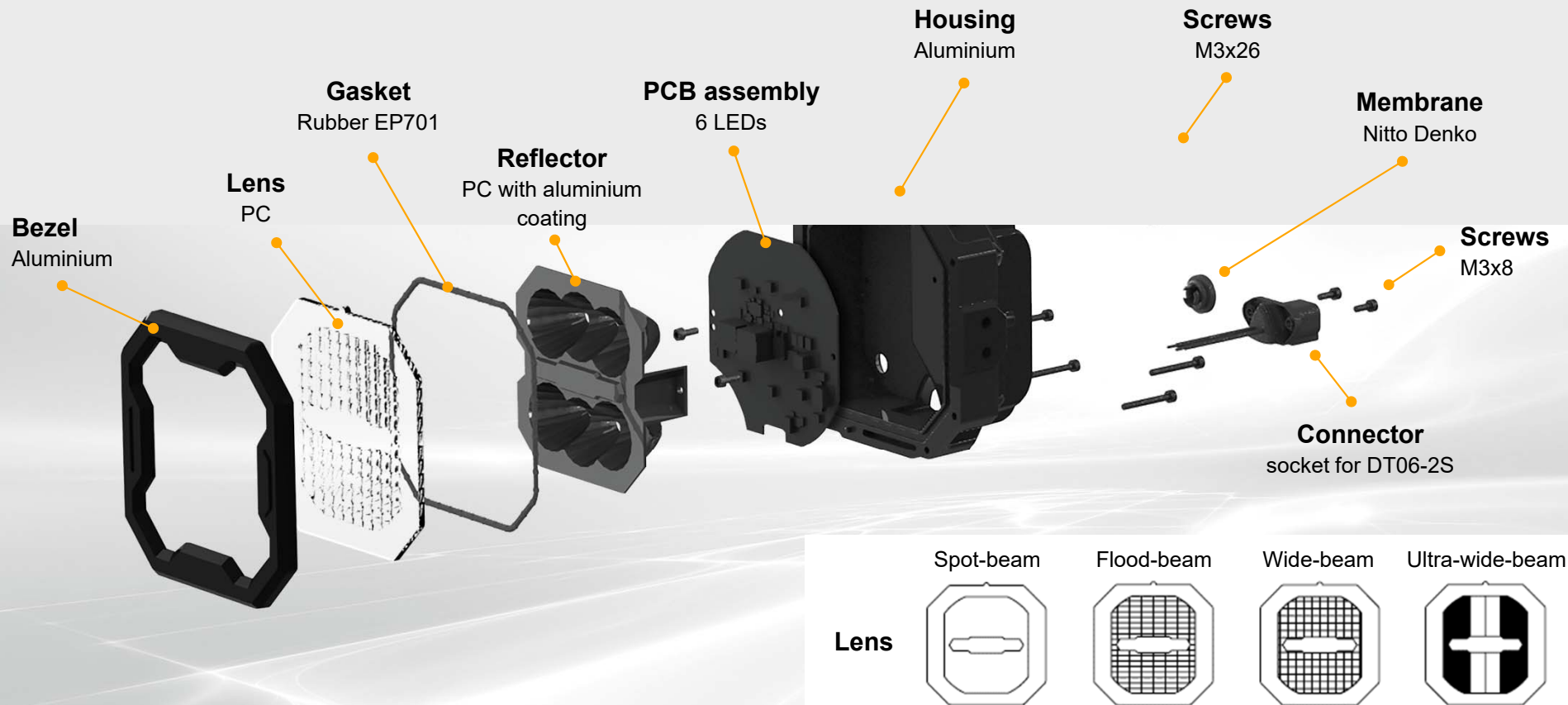
1x Ultra-wide-beam  
1x Flood-beam



Reduction of the amount of lights possible, all beam pattern can be covered, cost savings

# Continental LED Lighting

## Working Light – Exploded View



# Continental LED Lighting

## Basics Working Lights – Accessories

### Direct mounting

- › Usage of existing screw holes on side and bottom
- › Withstand 8 g rms

### Standard mounting kit

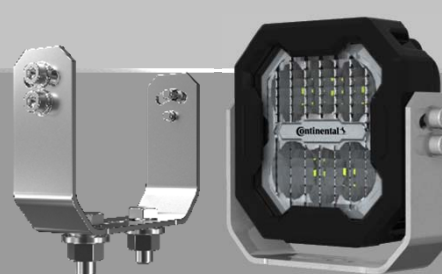
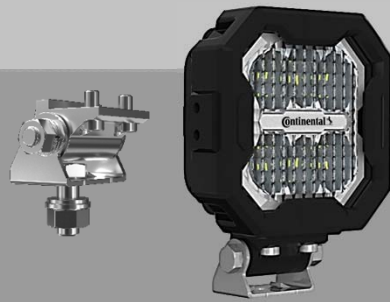
- › Separately available
- › Mounting with one central screw
- › Adjustable  $\pm 15^\circ$
- › Withstand 8 g rms

### Heavy duty mounting kit

- › Separately available
- › Mounting with one central screw
- › Adjustable  $\pm 15^\circ$
- › Withstand 12 g rms

### Connector cable kit

- › Separately available
- › 3 m cable
- › Deutsch DT06-2P

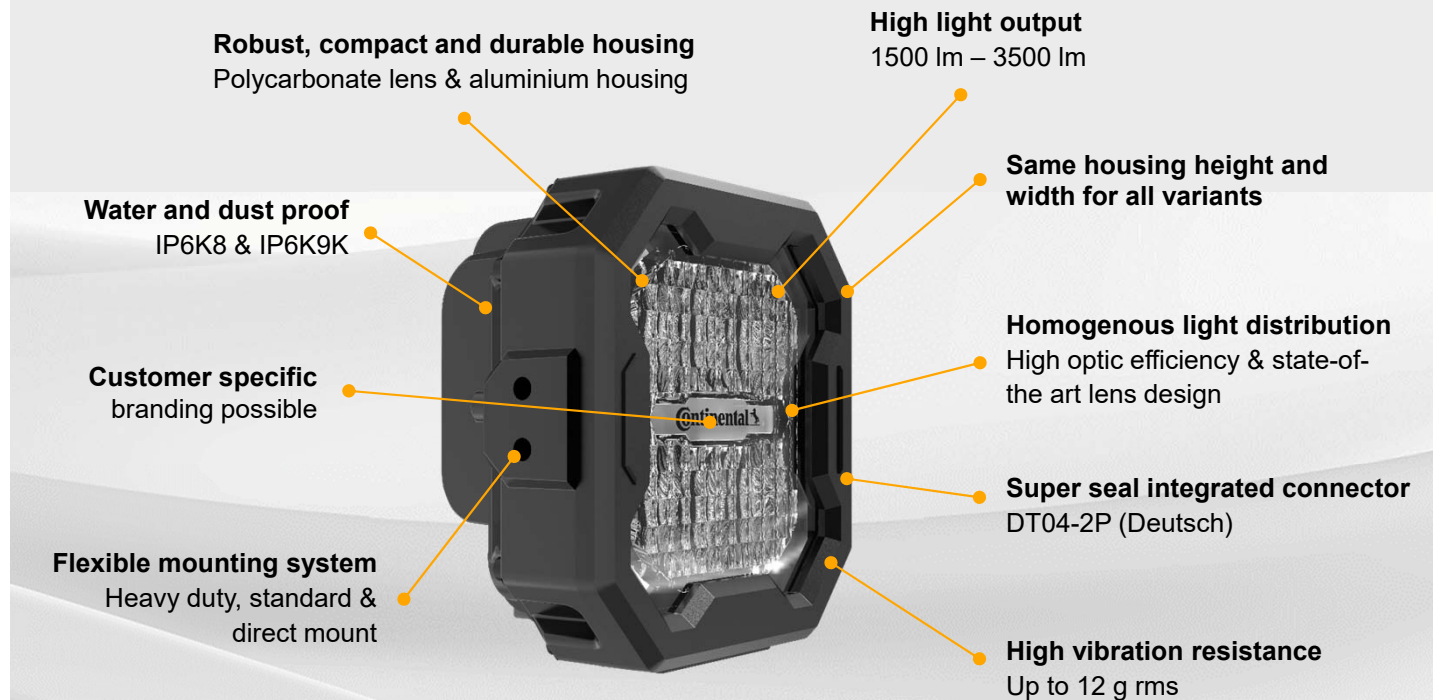




# Benefits

## Continental Working Lights

- › **Low power consumption**  
High energy efficiency
- › **Long lifetime**  
Min. 5000 h
- › **Low maintenance**  
Integrated driver and thermal management (LED overheat protection, no shut down)
- › **Multi-volt 12 V & 24 V**  
Wide range of vehicles
- › **Hot & cold temperatures**  
(– 40 °C to +90 °C)
- › **Fulfil the highest EMC / EMI and CISPR 25 Class 5 requirements**
- › Ultra wide beam pattern is **best in class**



# Driving Lights



# Continental LED Lighting – Driving Lights

## Introduction & Overview

Designed for automotive requirements (on-road)



**Lightbar Series**  
(different lumen and light distances)



**Lightbar Slim Series**  
(slim housing, different beam pattern, lumen and light distances)



**Multifunction Series**  
(different lumen and light distances)



**Reversing Series**  
(different housing shapes)



**Universal Headlights**  
(two different variants available)



## Application Examples: Truck

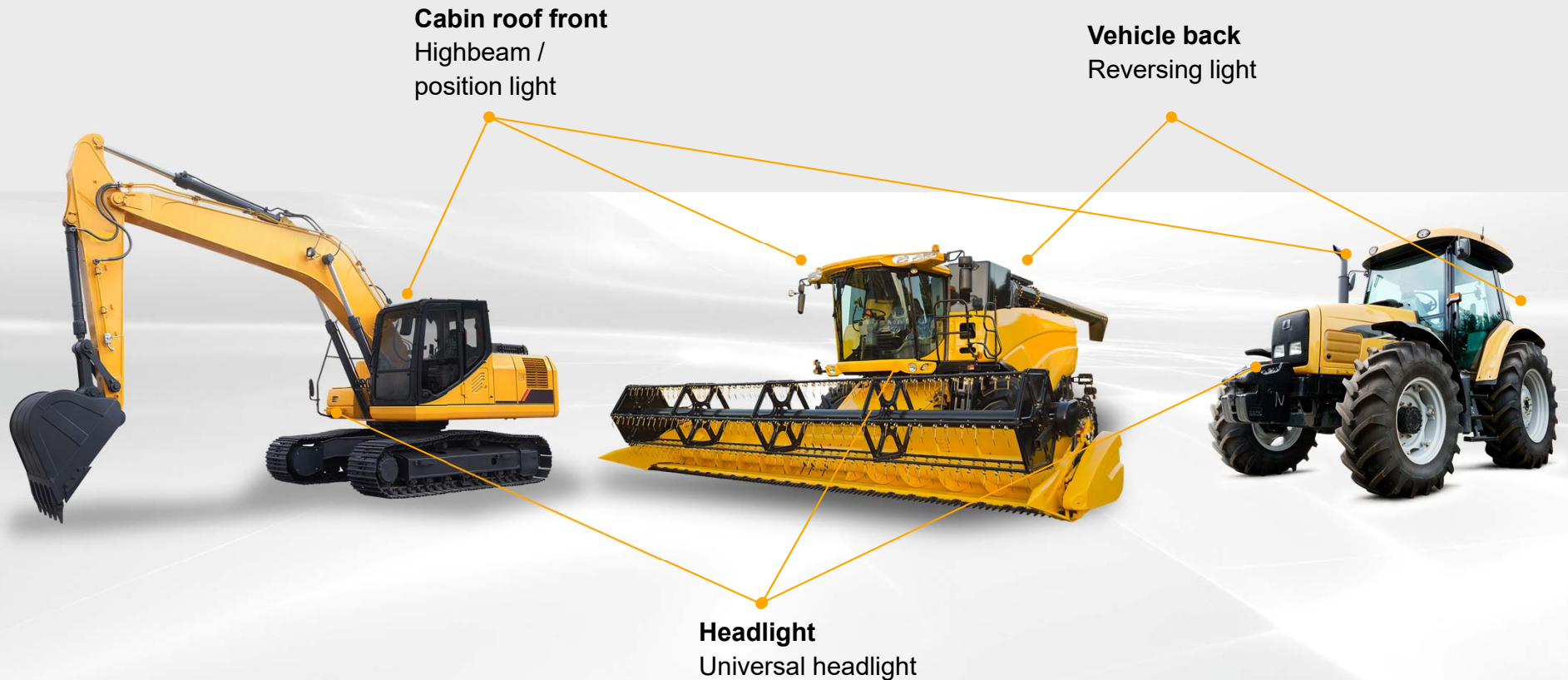
### Positions for Driving Lights and Required Light Function



- ➔ Lights must fulfill **on-road** requirements and regulations
- ➔ Driving lights cover **all** possible **light functions**: highbeam, position light, reversing light

# Application Examples: Off-Highway Vehicles

## Positions for Driving Lights and Required Light Function



# Driving Lights

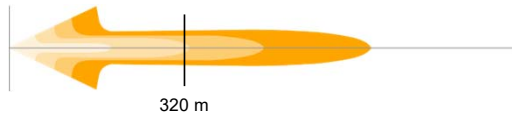
## Lightbar and Slim Lightbar

### Lightbar

#### Variant 1

Lumen: 2700 lm

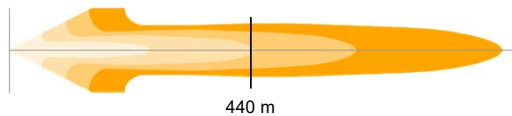
Light distance @1 lx: ~320 m



#### Variant 2

Lumen: 5500 lm

Light distance @1 lx: ~440 m

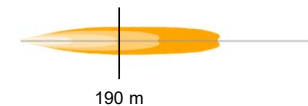


### Slim lightbar

#### Variant 1

Lumen: 1300 lm

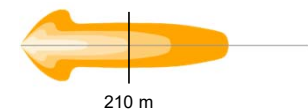
Light distance @1 lx: ~ 190 m



#### Variant 2

Lumen: 2600 lm

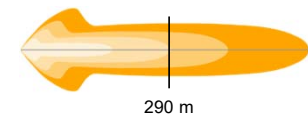
Light distance @1 lx: 210 m



#### Variant 3

Lumen: 3900 lm

Light distance @1 lx: 290 m



@3 lx   @1 lx   @0,5 lx   @0,25 lx



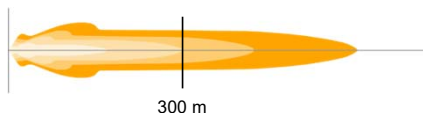
# Driving Lights

## Multifunctional and Reversing

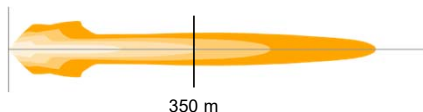
### Multifunctional



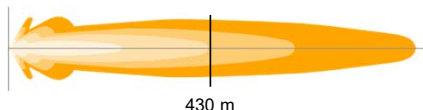
Lumen: 3000 lm  
Light distance @1 lx: 300 m



Lumen: 3500 lm  
Light distance @1 lx: 350 m



Lumen: 4000 lm  
Light distance @1 lx: 430 m



### Reversing



Lumen: 1100 lm  
Light distance @1 lx: ~36 m



Lumen: 1100 lm  
Light distance @1 lx: ~36 m



@3 lx   @1 lx   @0,5 lx   @0,25 lx

# Universal Headlights

## Special Category



**Off**



**Position / Day Running Light**



**Low- and high-beam +  
position light**

Lumen (low-beam): 781 lm  
Lumen (high-beam): 1330 lm

Light distance (low-beam) @1 lx: 200 m  
Light distance (high-beam) @1 lx: 230 m

**Low- and high-beam, Day Running Light \* and  
Position Light\* are regulated by ECE R7, R10,  
R87, R112 (prescribed beam pattern).**

\*only applicable for 4-function version

# Benefits

## Continental Driving Lights



### General benefits

- › **Cable & connector** Deutsch connector
- › Integrated **driver and thermal management system**
- › **Shutter proof polycarbonate lens** to endure heavy duty application
- › Over and under **voltage protection**
- › **ECE-compliant** lighting function for on-road use (ECE R10)
- › **IP class** IP6K7 / IP6K9K
- › **Long-life high-performance LEDs** for extremely high optic efficiency
- › **Free-form curved reflector** for enhanced performance and reduced glare
- › Combo beam pattern



# Benefits

## Continental Driving Lights



### Lightbar

- › Fully ECE compliant auxiliary high-beam (R112)
- › Combo beam pattern: combined near field & far field illumination
- › Ultra-robust **aluminum housing**



### Slim lightbar

- › Fully ECE compliant auxiliary high-beam (ECE R112)
- › Ultra-robust **aluminum housing**



### Reversing lights

- › Fully ECE compliant reversing light function (ECE R23)
- › Improved rear view: Up to 36 m light beam with 45 ° beam angle
- › Light weight design: Thermal plastic housing with unbreakable polycarbonate lens



### Multifunction lights

- › Fully ECE compliant auxiliary high-beam and position light ECE R112 / R7)
- › Light range: up to 300 m
- › Combo beam (CB) pattern: improved far & near field illumination
- › Ultra-robust **aluminum housing**

## Benefits

### Continental Universal Headlight

- › Fully ECE compliant LED high- & low-beam projector with optional position light and day running light function (sealed)
- › Universal mounting plate for several applications
- › 12 V / 24 V compatible
- › Separate super seal AMP male connector
- › Robust & resistant: Shatter proof polycarbonate lens to endure heavy duty application
- › Integrated driver and thermal management system



# Summary



# Continental LED Lighting

## Summary Working Lights



- › Cover near-, mid- & far-field illumination with one design approach
- › Homogeneous light distribution
- › Robust, compact and durable housing – long lifetime with low maintenance
- › Flexible mounting system and reduction of the total amount of installed products
- › Product & components fulfil the highest automotive standards
- › Low power consumption - high energy efficiency
- › High product quality (made in Europe) – tested and certified for extreme external influences - highest IP class



# Continental LED Lighting

## Summary Driving Lights

- › Fully ECE compliant (street legal) – fulfill automotive standards (ECE R10, R23, R112)
- › 3 different beam patterns available – effective lumens
- › Free-form curved reflector for enhanced performance and reduced glare
- › Robust, compact and durable housing – long lifetime with low maintenance
- › Flexible mounting system for all products
- › High product quality – tested and certified for extreme external influences

Official mounting regulations need to be considered by end customer according to light function



# Continental LED Lighting

The background of the slide is a dark, high-contrast photograph of a construction site at night. A large crane is visible in the upper center, its arm extending upwards. In the lower right, a road or path is illuminated, possibly by the very LED lighting being advertised. The sky is dark with some clouds, and the overall scene is industrial and dramatic.

## What Can You Expect?

- › Continental premium lighting products cover a wide range of applications for on-road and off-highway
- › Meets automotive requirements by using automotive components
- › Meets Continental's high requirements in terms of quality, robustness and system integration
- › Continental working light fulfil the highest EMC / EMI and several advantages regarding competitors e.g. illumination angle, power consumption, robustness...

**Try it out by our samples!**

# Product Details

## Working Lights



Ultra-wide-beam



1500 lm  
2500 lm  
3500 lm



Wide-beam



1500 lm  
2500 lm  
3500 lm



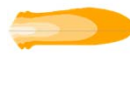
Flood-beam



1500 lm  
2500 lm  
3500 lm



Spot-beam



1500 lm  
2500 lm  
3500 lm

### Features

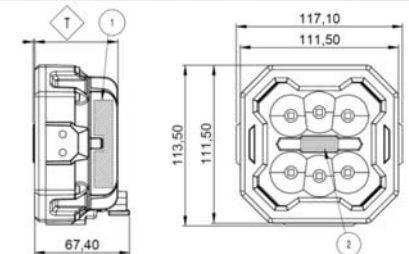
- › **Low portfolio complexity** (one design approach) and **high application diversity**: Easy matrix system with four beam pattern und three performance level **1500 lm – 3500 lm** (optional 4500 lm) for all applications
- › Efficient **reflector lens** design with **6 powerful LEDs & 4 cover lenses**
- › **3 mounting possibilities** – standard, heavy duty, basic / direct mount
- › **Connector**: integrated fitting for **DT-06-2P** male
- › Robust & resistant: Shatter proof polycarbonate lens to endure heavy duty application
- › Integrated driver and thermal management system
- › **Made in Europe**

### Fields of application

- › Commercial / construction vehicles
- › Agriculture
- › Trucks / Bus
- › Cars
- › ATV
- › Caravans

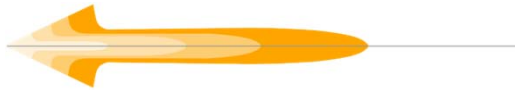
### Technical specifications

- › 12 V / 24 V compatible
- › **Ambient temperature**: -40 °C - + 90 °C
- › **EMC**: ECE R10, CISPR25 Class 5
- › **Highest IP-class**: IP6K8 & IP6K9K
- › **Aluminium** die-cast housing with special black coating (cataphoretic painting)



# Product Details

## Driving Lights – Lightbar (Variant 1)



### Features

- › Fully ECE compliant auxiliary high-beam
- › Combo beam pattern: combined near field & far field illumination
- › Increased road safety: Up to 320 m light beam with 5° beam angle
- › Compact and robust: Unbreakable polycarbonate lens to endure heavy duty application, over and under voltage protection
- › Integrated driver and thermal management system for a superior lifetime
- › 10 high performance LEDs

### Technical specifications

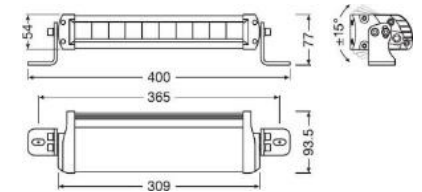
- › Light distance @1lx: ~320 m
- › Lumen: 2700 lm
- › Color temperature: 6000 K
- › Beam angle: 5 °
- › Rated input power: 35 W
- › Input voltage: 12 V / 24 V
- › IP Protection: IP6K7
- › ECE: R112 (ECE Ref. 27,5)
- › EMC / EMI: ECE R10
- › Polarity protection
- › Cable length: 100 cm
- › Weight: 1450 g

### Legal information

- › Driving lights must be installed in pairs for 12 V / 24 V vehicles

### Fields of application

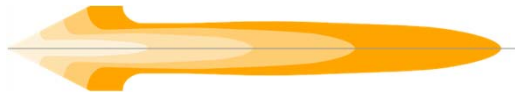
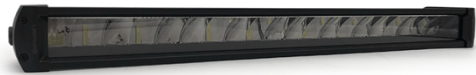
- › 4 x 4
- › ATV
- › Commercial / construction vehicles
- › Agriculture
- › Caravans





# Product Details

## Driving Lights – Lightbar (Variant 2)



### Features

- › Fully ECE compliant auxiliary high beam
- › Combo beam pattern: combined near field & far field illumination
- › Increased road safety: Up to 440m light beam with 5° beam angle
- › Compact and robust: Unbreakable polycarbonate lens to endure heavy duty application, over and under voltage protection
- › Integrated driver and thermal management system for a superior lifetime
- › 20 high performance LEDs

### Technical specifications

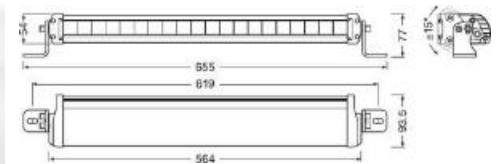
- › Light distance @1lx: ~440m
- › Lumen: 5500lm
- › Color temperature: 6000K
- › Beam angle: 5°
- › Rated input power: 68W
- › Input voltage: 12/24V
- › IP Protection: IP6K7
- › ECE: R112 (ECE Ref. 45)
- › EMC/EMI: ECE R10
- › Polarity protection
- › Cable length: 100cm
- › Weight: 2250g

### Legal information

- › Driving lights must be installed in pairs for 12 V / 24 V vehicles

### Fields of application

- › 4 x 4
- › ATV
- › Commercial / construction vehicles
- › Agriculture
- › Caravans



# Product Details

## Driving Lights – Slim Lightbar (Variant 1)



### Features

- › Fully ECE compliant auxiliary high beam
- › Increased road safety: Up to 190m light beam with 8° beam angle
- › Multifunctional application: compact mounting dimensions
- › Compact and robust: Unbreakable polycarbonate lens to endure heavy duty application, over and under voltage protection
- › Integrated driver and thermal management system for a superior lifetime
- › 6 high performance LEDs

### Technical specifications

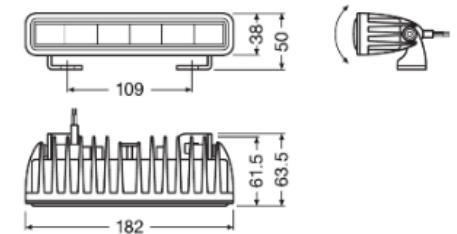
- › Lumen: 1300lm
- › Light distance @1lx: ~190m
- › Color temperature: 6000K
- › Beam angle: 8°
- › Rated input power: 14W
- › Input voltage: 12/24V
- › Lifetime: 5.000h
- › IP Protection: IP6K9K
- › ECE: R112 (ECE Ref. 10)
- › EMC/EMI: ECE R10
- › Vibration certificate: IEC 60068-2-6
- › Ambient temperature: -30 to 60° C
- › Cable length: 45cm; Weight: 450g

### Legal information

- › Driving lights must be installed in pairs for 12 V / 24 V vehicles

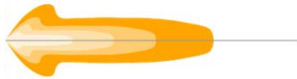
### Fields of application

- › 4 x 4
- › ATV
- › Commercial / construction vehicles
- › Agriculture
- › Caravans



# Product Details

## Driving Lights – Slim Lightbar (Variant 2)



### Features

- › Fully ECE compliant auxiliary high beam: ECE R112
- › Light range: up to 210m
- › Multifunctional application
- › Compact mounting dimensions
- › Robust & Resistant: Shatter proof polycarbonate lens to endure heavy duty application
- › Over and under voltage protection
- › Integrated driver and thermal management system
- › 12 long-life high-performance LEDs

### Technical specifications

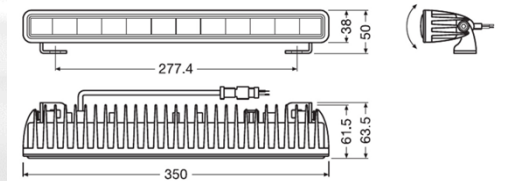
- › Light distance @1lx: 210m
- › Lumen: 2600lm
- › Color temperature: 6000K
- › Rated input power: 29W
- › Input voltage: 12/24V
- › Lifetime: 5.000h
- › IP Protection: IP6K9K
- › ECE: R112 (ECE Ref. 10)
- › EMC/EMI: ECE R10
- › Vibration certificate: IEC 60068-2-6
- › Ambient temperature: -30° C to 60° C
- › Cable length: 45cm
- › Weight: 703g

### Legal information

- › Driving lights must be installed in pairs for 12 V / 24 V vehicles

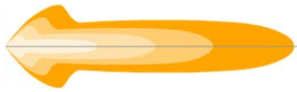
### Fields of application

- › 4 x 4
- › ATV
- › Commercial / construction vehicles
- › Agriculture
- › Caravans
- › Cars



# Product Details

## Driving Lights – Slim Lightbar (Variant 3)



### Features

- › Fully ECE compliant auxiliary high beam ECE R112
- › Light range: up to 300m
- › Multifunctional application
- › Compact mounting dimensions
- › Robust & Resistant: Shatter proof polycarbonate lens to endure heavy duty application
- › Over and under voltage protection
- › Integrated driver and thermal management system
- › 18 long-life high-performance LEDs

### Technical specifications

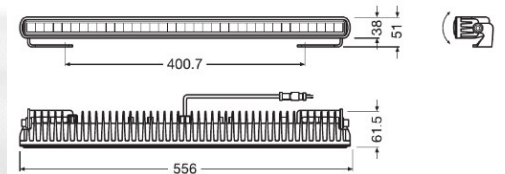
- › Light distance @1lx: 290m
- › Lumen: 3900lm
- › Color temperature: 6000K
- › Rated input power: 44W
- › Input voltage: 12/24V
- › Lifetime: 5.000h
- › IP Protection: IP6K9K
- › ECE: R112 (ECE Ref. 20)
- › EMC/EMI: ECE R10
- › Vibration certificate: IEC 60068-2-6
- › Ambient temperature: -30° C to 60° C
- › Cable length: 45cm
- › Weight: 1200g

### Legal information

- › Driving lights must be installed in pairs for 12 V / 24 V vehicles

### Fields of application

- |                                      |               |
|--------------------------------------|---------------|
| › 4 x 4                              | › Agriculture |
| › ATV                                | › Caravans    |
| › Commercial / construction vehicles | › Cars        |





# Product Details

## Driving Lights – Multifunctional (Variant 1)



### Features

- › Fully ECE compliant auxiliary high beam and position light ECE R112/ R7
- › Light range: up to 300m
- › Combo beam (CB) pattern: improved far & near field illumination
- › Robust & Resistant: Shatter proof polycarbonate lens to endure heavy duty application
- › Over and under voltage protection
- › Integrated driver and thermal management system
- › Long-life high-performance LEDs

### Technical specifications

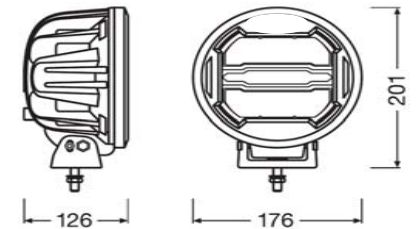
- › Light distance @1lx: 300m
- › Lumen: 3000lm
- › Color temperature: 6000K
- › Rated input power: 39/1W
- › Input voltage: 12/24V
- › Lifetime: 5.000h
- › IP Protection: IP6K9K
- › ECE: R7, R112 (Ref. No. 25)
- › EMC/EMI: ECE R10
- › Ambient temperature: -40° C to 85° C
- › Cable length: 100cm
- › Weight: 2300g

### Legal information

- › Driving lights must be installed in pairs for 12 V / 24 V vehicles

### Fields of application

- › 4 x 4
- › ATV
- › Commercial / construction vehicles
- › Agriculture
- › Caravans
- › Cars



# Product Details

## Driving Lights – Multifunctional (Variant 2)



### Features

- › Fully ECE compliant auxiliary high beam and position light ECE R112/ R7
- › Light range: up to 350m
- › Combo beam pattern: improved far & near field illumination
- › Robust & Resistant: Shatter proof polycarbonate lens to endure heavy duty application
- › Over and under voltage protection
- › Integrated driver and thermal management system
- › Long-life high-performance LEDs

### Technical specifications

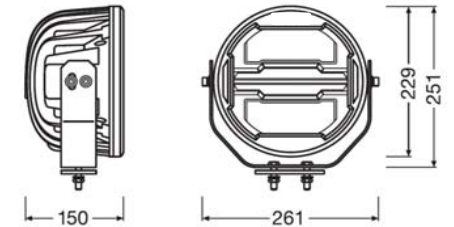
- › Light distance @1lx: 350m
- › Lumen: 3500lm
- › Color temperature: 6000K
- › Rated input power: 60/2,5W
- › Input voltage: 12/24V
- › Lifetime: 5.000h
- › IP Protection: IP6K9K
- › ECE: R7, R112 (Ref. No. 50)
- › EMC/EMI: ECE R10
- › Ambient temperature: -40° C to 85° C
- › Cable length: 100cm
- › Weight: 4441g

### Legal information

- › Driving lights must be installed in pairs for 12 V / 24 V vehicles

### Fields of application

- |                                      |               |
|--------------------------------------|---------------|
| › 4 x 4                              | › Agriculture |
| › ATV                                | › Caravans    |
| › Commercial / construction vehicles | › Cars        |



# Product Details

## Driving Lights – Multifunctional (Variant 3)



### Features

- › Fully ECE compliant auxiliary high beam and position light ECE R112/ R7
- › Light range: up to 430m
- › Combo beam pattern: improved far & near field illumination
- › Robust & Resistant: Shatter proof polycarbonate lens to endure heavy duty application
- › Over and under voltage protection
- › Integrated driver and thermal management system
- › Long-life high-performance LEDs

### Technical specifications

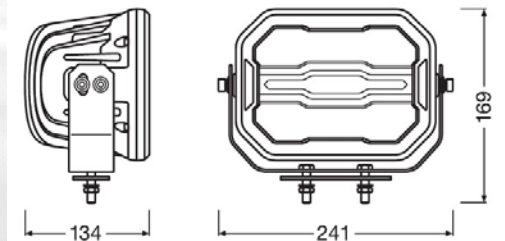
- › Light distance @1lx: 430m
- › Lumen: 4000lm
- › Color temperature: 6000K
- › Rated input power: 70/1,5W
- › Input voltage: 12/24V
- › Lifetime: 5.000h
- › IP Protection: IP6K9K
- › ECE: R7, R112 (Ref. No. 50)
- › EMC/EMI: ECE R10
- › Ambient temperature: -40° C to 85° C
- › Cable length: 100cm
- › Weight: 3346g

### Legal information

- › Driving lights must be installed in pairs for 12 V / 24 V vehicles

### Fields of application

- › 4 x 4
- › ATV
- › Commercial / construction vehicles
- › Agriculture
- › Caravans
- › Cars



# Product Details

## Driving Lights – Reversing (Variant 1)



### Features

- › Fully ECE compliant reversing light function (ECE R23)
- › Improved rear view: Up to 36m light beam with 45° beam angle
- › Light weight design: Thermal plastic housing with unbreakable polycarbonate lens
- › Integrated driver and thermal management system for a superior lifetime
- › 13 high performance LEDs

### Technical specifications

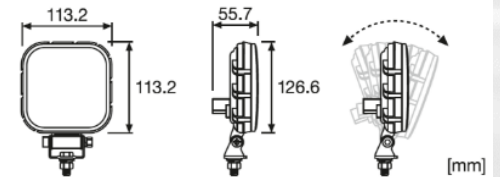
- › Light distance @1lx: ~36m
- › Lumen: 1100lm
- › Color temperature: 6000K
- › Beam angle: 45°
- › Rated input power: 15W
- › Input voltage: 12/24V
- › IP Protection: IP6K9K
- › ECE: R23
- › EMC/EMI: ECE R10
- › Polarity protection
- › Weight: 375g

### Legal information

- › Driving lights must be installed in pairs for 12 V / 24 V vehicles
- › The maximum amount of reversing lights on a car or truck must not exceed 2

### Fields of application

- › Trucks & Cars
- › Agriculture
- › ATV
- › Caravans
- › Commercial / construction vehicles





# Product Details

## Driving Lights – Reversing (Variant 2)



### Features

- › Fully ECE compliant reversing light function (ECE R23)
- › Improved rear view: Up to 36m light beam with 45° beam angle
- › Light weight design: Thermal plastic housing with unbreakable polycarbonate lens
- › Integrated driver and thermal management system for a superior lifetime
- › 14 high performance LEDs

### Technical specifications

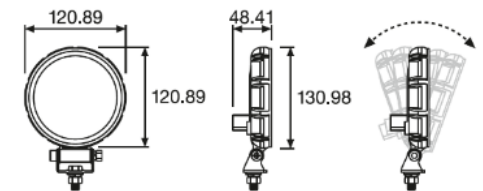
- › Light distance @1lx: ~36m
- › Lumen: 1100lm
- › Color temperature: 6000K
- › Beam angle: 45°
- › Rated input power: 15W
- › Input voltage: 12/24V
- › IP Protection: IP6K9K
- › ECE: R23
- › EMC/EMI: ECE R10
- › Polarity protection
- › Weight: 343g

### Legal information

- › The maximum amount of reversing lights on a car or truck must not exceed 2

### Fields of application

- › Trucks & Cars
- › Agriculture
- › ATV
- › Caravans
- › Commercial / construction vehicles



# Product Details

## Driving Lights – Universal Headlight



### Features

- › Fully ECE compliant LED high & low beam projector with optional Position Light and Day Running Light function
- › Universal mounting plate for several applications
- › 12V/24V compatible
- › Separate super seal AMP male connector
- › Robust & Resistant: Shatter proof polycarbonate lens to endure heavy duty application
- › Integrated driver and thermal management system

### Technical specifications

- › Light distance (Low Beam) @1x: 200m
- › Light distance (High Beam) @1x: 230m
- › Lumen (Low Beam): 781lm
- › Lumen (High Beam): 1330lm
- › Rated input power: 27 W / 29W
- › Input voltage: 12/24V
- › IP Protection: IP6K9K
- › ECE: ECE R112, R87, R7, R10
- › Operation temperature: -40° C - +85° C (derating integrated for higher temperatures)
- › Dimensions: 141 mm x 130 mm x 110 mm
- › Weight: 1170 g

### Legal information

- › The maximum amount of reversing lights on a car or truck must not exceed 2

### Fields of application

- › Tractor
- › Caravans
- › Bus
- › Truck

