



TSL - Trust Your Senses to a Proven Partner



LED SIGNAL
LIGHTING
SOLUTIONS



LED Signal Lighting Catalog

PUBLIC TRANSPORTATION
AND INDUSTRY



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SIGNAL LIGHTS

Buses and railway vehicles operate in many different climate zones every day. They often operate under rough conditions. TSL Signal Lights are built to endure extreme heat, air humidity, dust, and freezing temperatures.

Functional reliability of devices and passenger needs are high priority at TSL. Optimal brightness and perceptibility of signals allow for a comfortable passenger ride but more importantly for a safer commute in public transportation. Also, service personnel rely on optical signals to ensure good operation conditions.

With respect to industries, signaling is becoming more and more important. Color optical signals by TSL improve workplace safety and product quality. Potential hazards and process' status can be clearly indicated with color LEDs.

TSL-ESCHA developed a signal light program for different applications. The focus is on maximum efficiency, high light intensity, and robust housings.

Signal lights developed for public transportation meet the fire protection standard EN 45545-2 and all current established railway norms.



OUR SIGNAL LIGHTS FOR PUBLIC TRANSPORTATION



LED STRIP LIGHT LS

The LED strip light of the LS series boosts passenger safety with flexible, eye-catching door elements that indicate door opening and door closing. This product makes it possible to light the entire closing edge so that the danger of impact or being clamped is minimized.

This light is also suitable for indoor use, all-around the door, to indicate the door status, preventing potential danger.

Due to individual assembly situations of various door frameworks, every LS System is a customized product which offers the following advantages for door manufactures and operators:

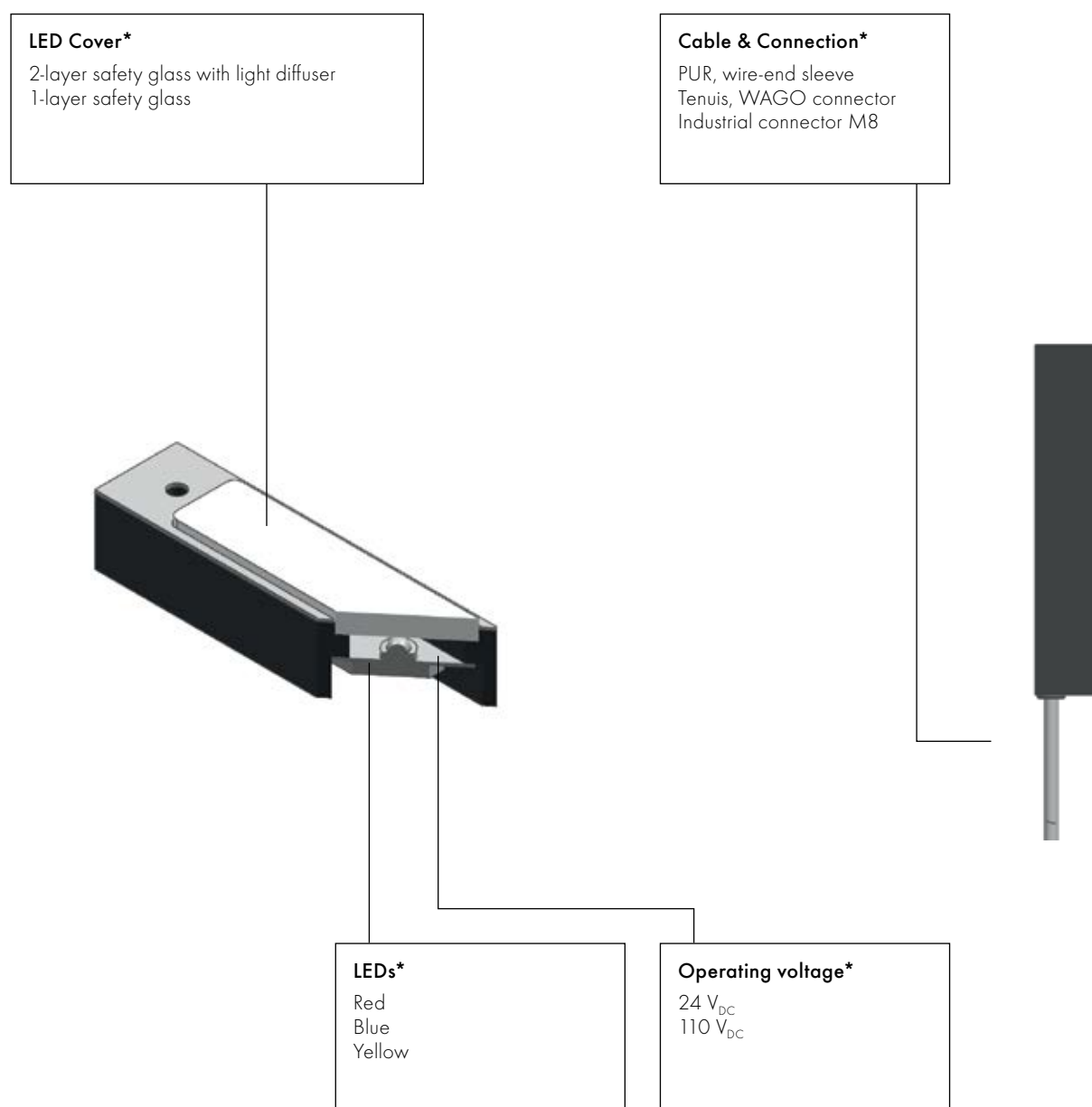
- Homogenous quality of light
- Four various LED colors (red, yellow, green, blue)
- Protection level IP67
- Resistance against cleaning chemicals and UV-light
- Customized development with optimal adjusted mounting possibilities
- Custom outline alignment



NEW – LS SERIES

ABOVE THE STANDARD!

As a flexible and customer-focused company, TSL offers the possibility to develop products to satisfy our customer requests, including those for specialized applications. Please notice on the diagram below customizable components.



*More alternatives by request

TL80 SERIES

The TL80 is a compact signal light for applications with limited mounting space. The lights function as warning display for slippery steps and ramps. In addition, they are suitable as orientation lighting on buildings and vehicles.

Variants with layer safety glass make the signal lights extra durable against vandalism damages. The housing is also proven against corrosion.

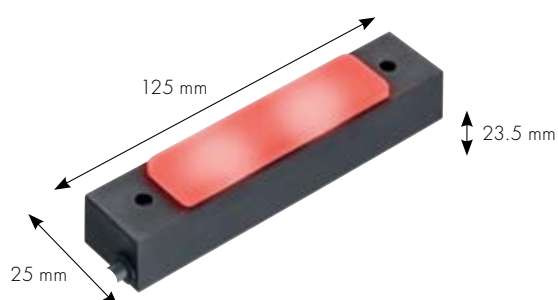
Operating voltage 24 V_{DC}
Nominal current 100mA
Nominal power 3W

Housing material PA6GF15
Operating temperature -40 to 50°C

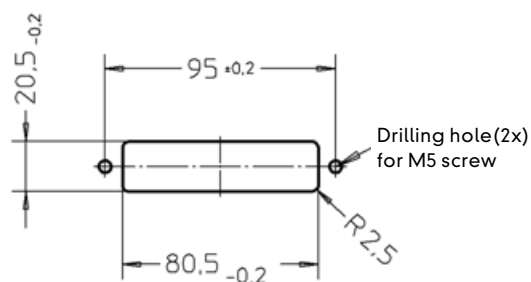


Article No.	Housing Color	LED Color	Connection	Features
8700511	Black	Yellow	2,000mm Tenuis Cable, wire-end sleeve	1-layer safety glass
8604709	Black	Blue	180mm Tenuis Cable, AMP-connector	1-layer safety glass
8604690	Black	Red	2,000mm Tenuis Cable, wire-end sleeve	1-layer safety glass
8604588	Black	Green	Without plug (2 x Strand 0.5mm ²)	1-layer safety glass

Dimensions

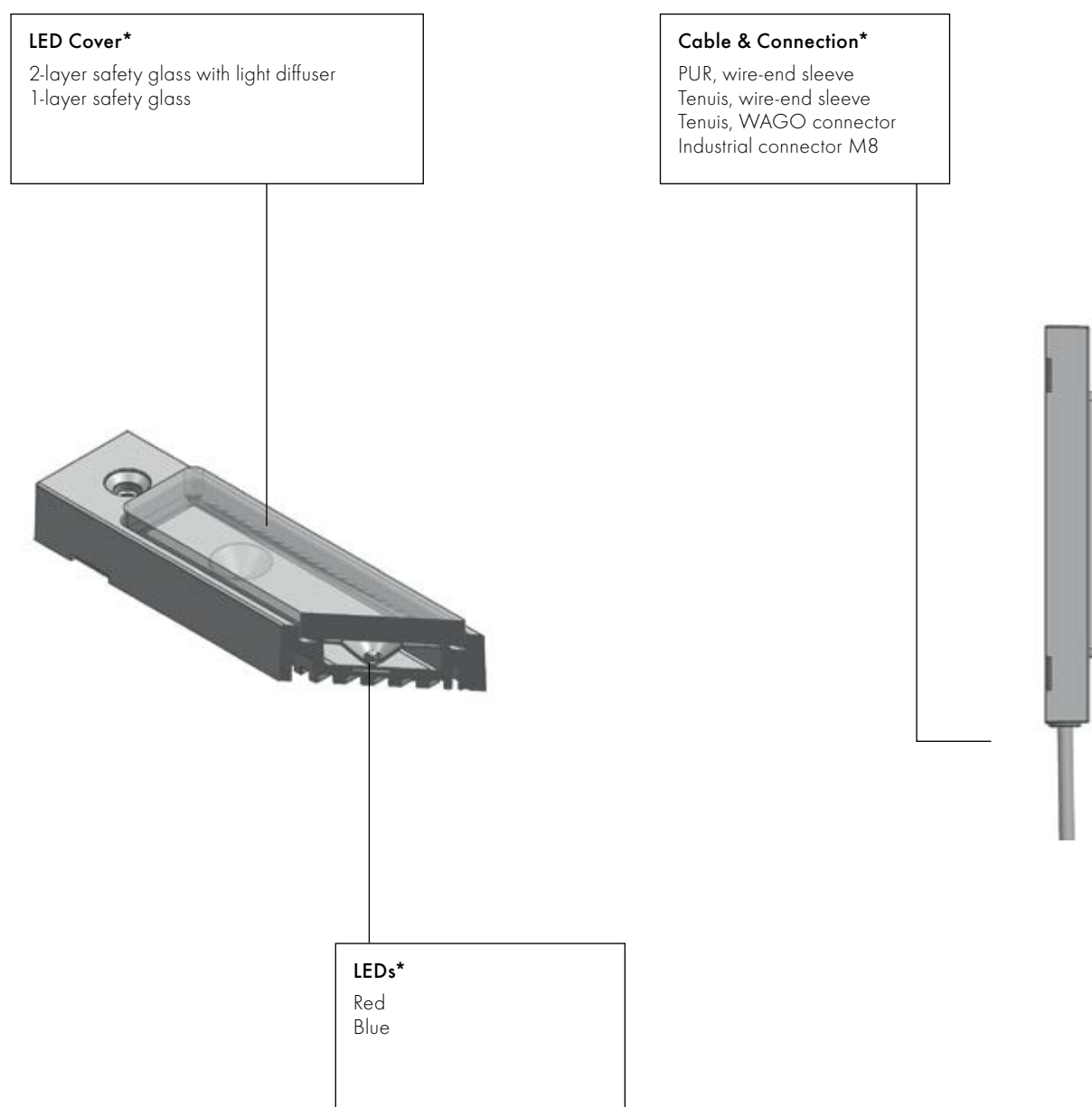


Mounting dimensions



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TL83 SERIES

The TL83 is used in rail vehicles as door signal light in the doorframe groove.

In special vehicles, such as firetrucks, it functions as stair light. Due to its flat housing design, this light is suitable for areas with narrow space. The protection level IP67 and the die-cast aluminum housing allow for applications in critical environments.

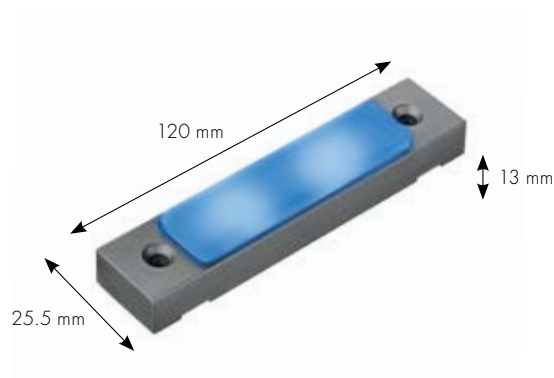


Operating voltage 24 V_{DC}
Nominal current 140mA
Nominal power 4W

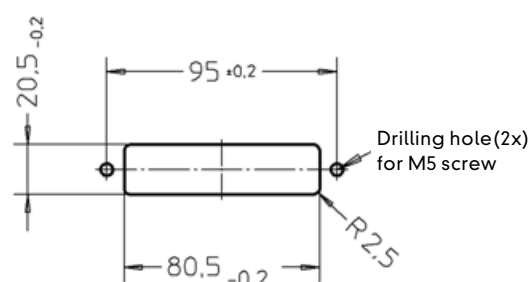
Housing material Aluminum
Operating temperature -40 to 50°C

Article No.	Housing Color	LED Color	Connection	Features
8702393	Gray	Blue	2,000mm PUR Cable, wire-end sleeve	2-layer safety glass with light diffuser
8702390	Gray	Blue	2,000mm PUR Cable, wire-end sleeve	1-layer safety glass
8703185	Gray	Red	2,000mm PUR Cable, wire-end sleeve	2-layer safety glass with light diffuser

Dimensions

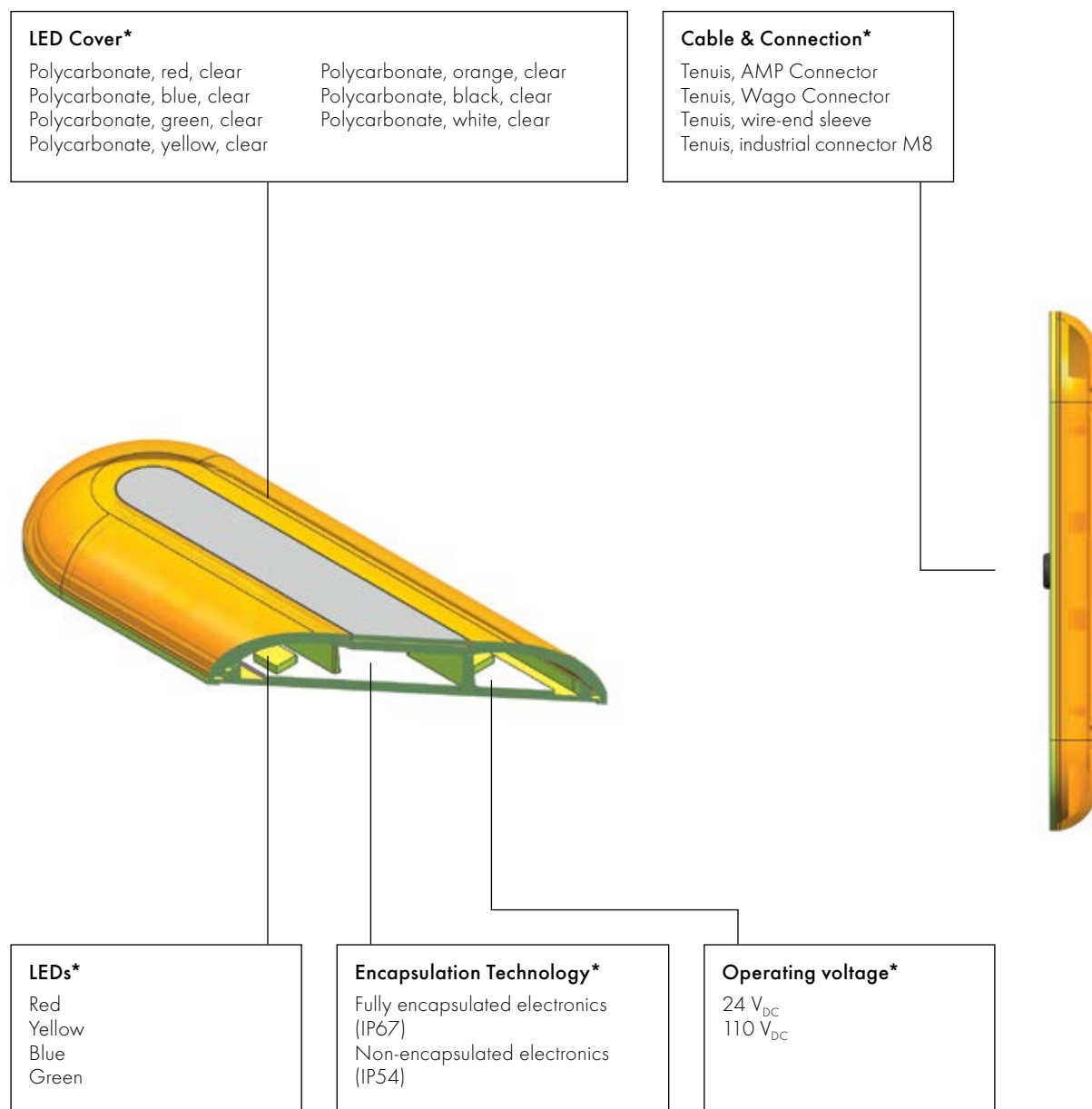


Mounting dimensions



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SLE160 SERIES

In vehicles, the SLE160 signals door status (door opening, door closing). In machine rooms, it signals process status, making it easier for machine operators to recognize the current process stage. It is also possible to utilize the SLE160 as route indicator for rail systems. The yellow variant is available with E1-certification.

As needed it is possible to upgrade previous lights to SLE160 lights with TSL adapter. The black-colored adapter ensures optimal sealing and high-contrast differentiation to the mounting position.

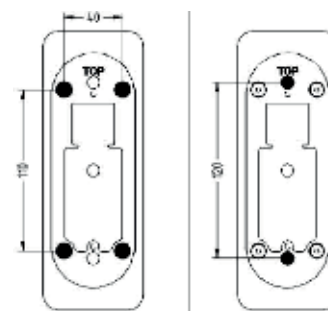
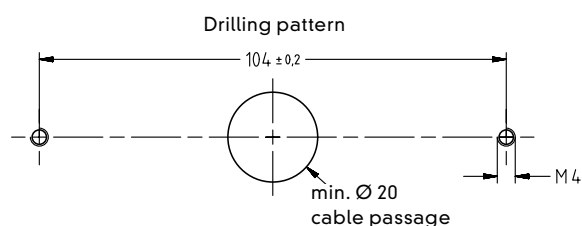
The rounded housing design guarantees optimal visibility of the warning signal from various perspectives, even with direct sunlight. The flat construction reduces potential damage by other road users.



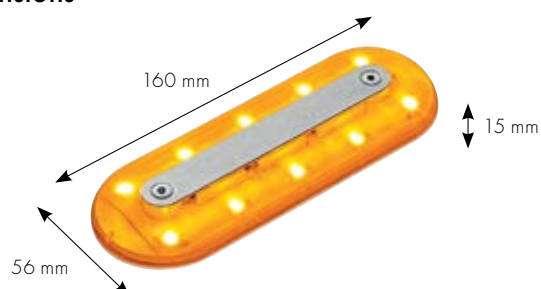
Operating voltage	24 V _{DC}	Housing material	PC UL94V0
Nominal current	130mA	Operating	
Nominal power	3W	temperature	-40 to 50°C

Article No.	Housing Color	LED Color	Connection	Features
8705384	Transparent	Blue	1m Tenuis cable, with wire-end sleeve	IP67
8705386	Transparent	Green	1m Tenuis cable, with wire-end sleeve	IP67
8704247	Transparent	Yellow	1m Tenuis cable, with wire-end sleeve	IP67
8702939	Transparent	Red	1m Tenuis cable, with wire-end sleeve	IP67
8704028	Transparent	Yellow	1m Tenuis cable, with wire-end sleeve	IP67, Route indicator for lightrail systems (ECE R6 K5)

Mounting dimensions



Dimensions

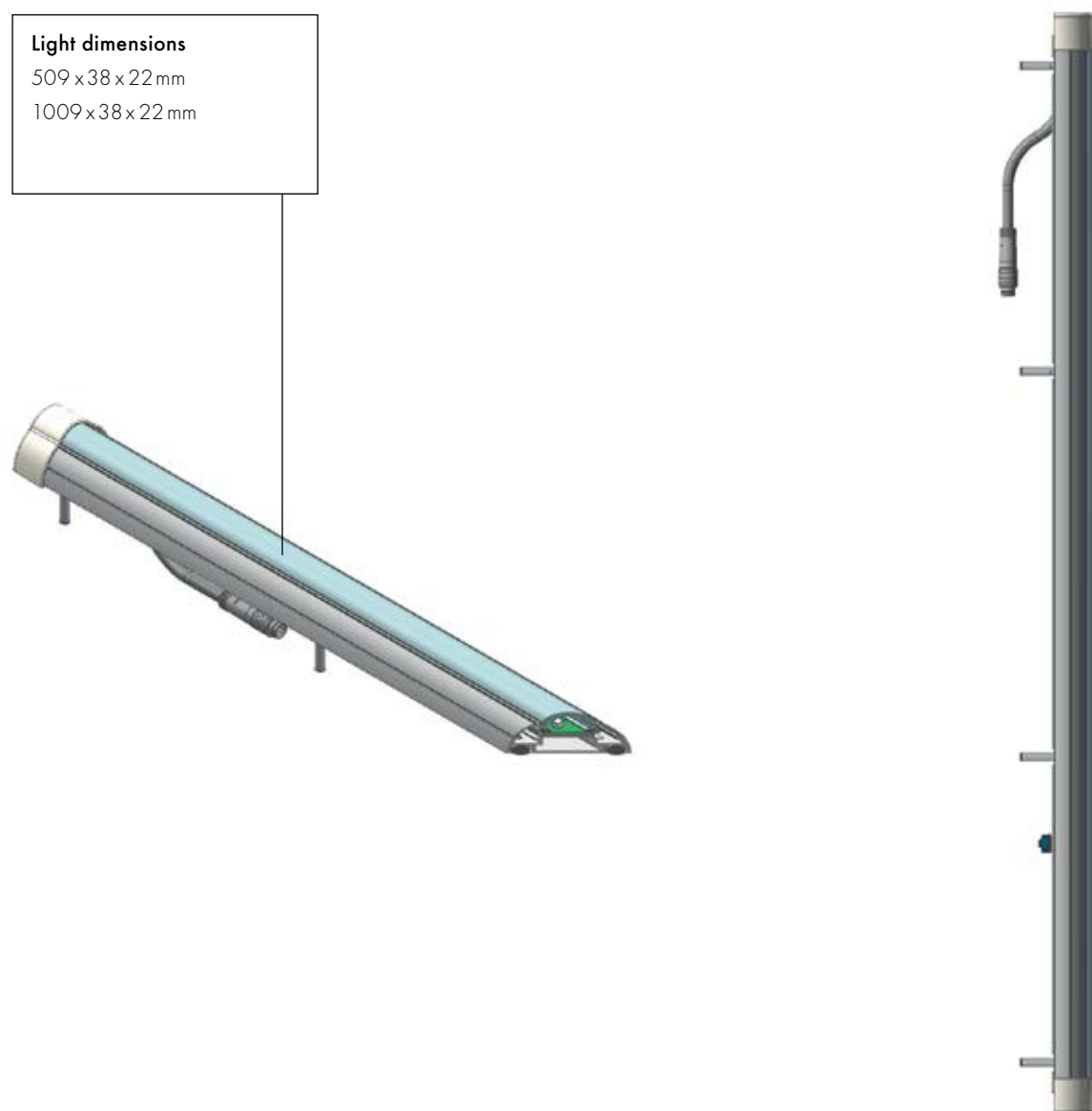


Adapter Article No. 8704421



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*More alternatives by request

PL13 PASSENGER INFORMATION LIGHT

The passenger information light is inserted inside vehicles in the doorframe groove. It serves as warning and signal light. It features four light signals. Blue indicates the stop request of people with special needs. Green indicates a stop request. Red indicates door warning, and yellow indicates defect door.

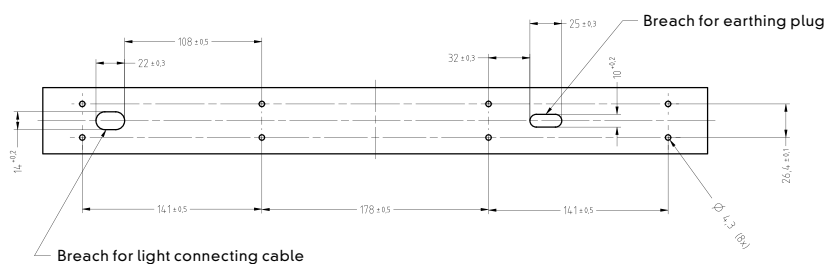
Due to the mechanical robustness, the passenger information light is shock and vibration resistant.



Operating voltage	24 V _{DC}	Housing material	Aluminum
Nominal current	Variant specific	Operating temperature	-25 to 55°C
Nominal power	Variant specific		

Article No.	Housing Color	LED Color	Connection	Features
8705680	Gray	Red, Yellow, Green, Blue	100mm Tenius Cabel, industrial connector M8	500x38x22 mm, typ. 3W
8705681	Gray	Red, Yellow, Green, Blue	100mm Tenius Cabel, industrial connector M8	1009x38x22 mm, typ. 6W

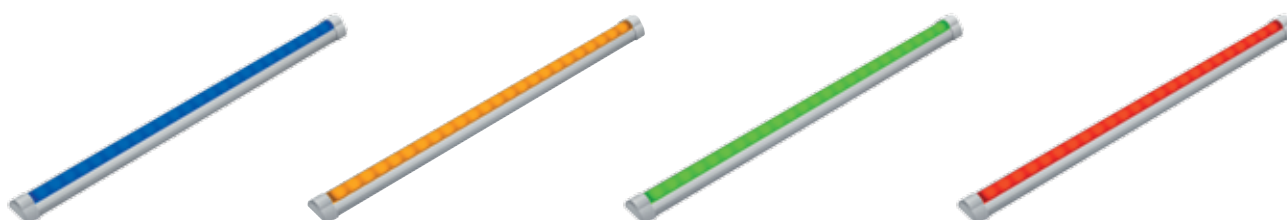
Mounting dimensions



Power supply Article No. 8705693

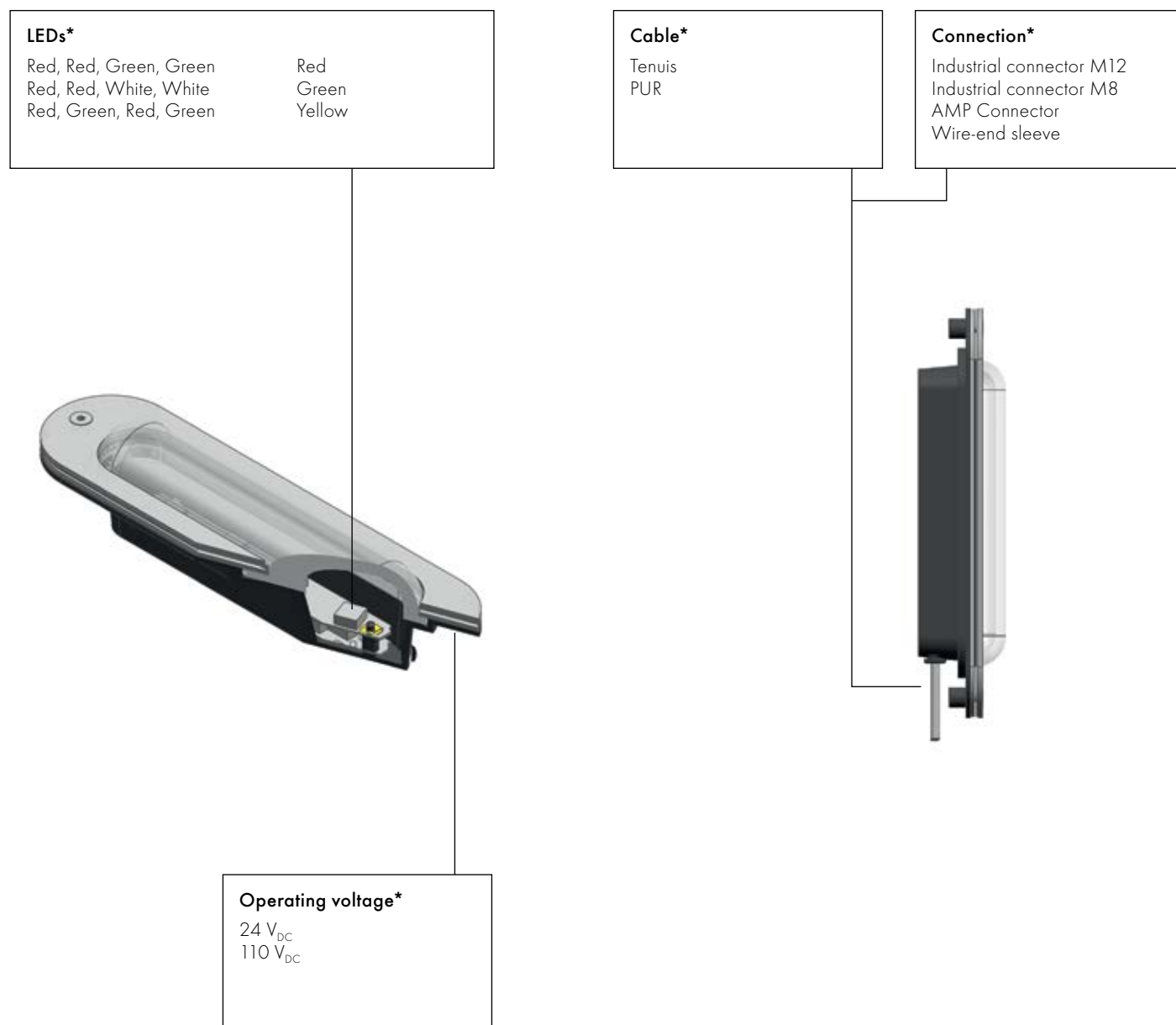


Product View



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*More alternatives by request

SLE150 SERIES

The SLE150 series is a very versatile light offered in an extensive variety for many different application areas, including but not limited to industrial applications as start/stop light or transportation applications as signal/warning light.

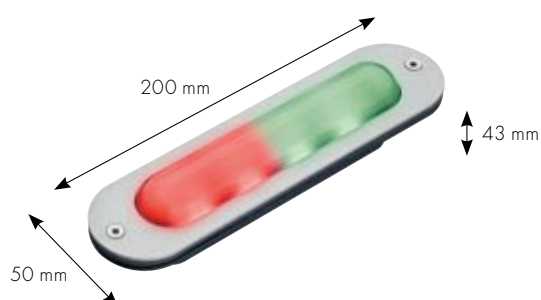
The color variant availability such as the separately controllable bicolor products have proved their worth, especially in train interiors. The SLE150 boosts safety in transportation vehicles.



Operating voltage	Variant specific	Operating temperature	-40 to 50°C
Nominal current	65mA, 24 V _{DC}	Protection level	IP67
Nominal power	2.5W	Weight	0.31 kg
Housing material	PA6GF15		

Article No.	Housing Color	LED Color	Connection	Electrical Data	Features
8705338	Silver	Red, Red, Green, Green	200mm Tenuis Cable, with wire-end sleeve	24 - 110 V _{DC}	Special glass, frosted, Stainless steel, shot blasted
8605191	Silver	Red, Red, White, White	160mm PUR Cable, with industrial connector M8	24 V _{DC}	Special glass, frosted, Stainless steel, shot blasted
8605099	Silver	Red, Green, Red, Green	100mm TENIUS Cable, with AMP-64 connector	24 - 110 V _{DC}	Special glass, frosted, Stainless steel, shot blasted
8606116	Silver	Red	450mm PUR Cable, with industrial connector M12	24 - 110 V _{DC}	Special glass, frosted, Stainless steel, shot blasted
8606145	Silver	Yellow	450mm PUR Cable, with industrial connector M12	24 - 110 V _{DC}	Special glass, frosted, Stainless steel, shot blasted
8606146	Silver	Green	450mm PUR Cable, with industrial connector M12	24 - 110 V _{DC}	Special glass, frosted, Stainless steel, shot blasted

Dimensions

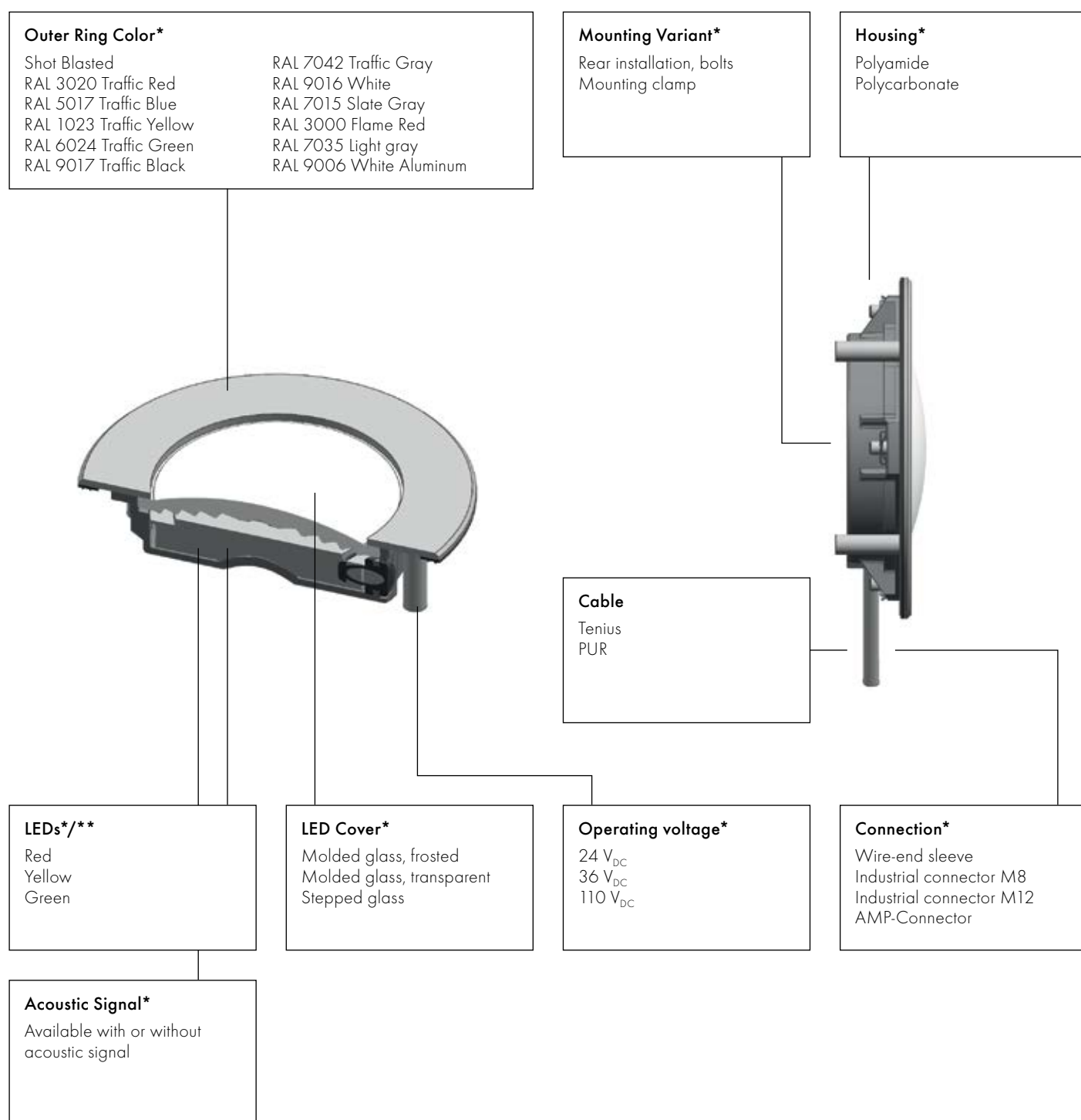


Mounting dimensions



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*More alternatives by request

**Circuit board with 3x High Power LED, or LEDs for diffuse power division (different colors)

SL63 SERIES

The SLE63 series guarantee constant brightness, also in the event of extreme voltage fluctuation. It is mounted in the door area of trains to warn commuters of opening or closing doors. Due to the rounded LED cover the lateral visibility is improved. Even when mounted over undersized door frames, the SL63 does not look disturbing.



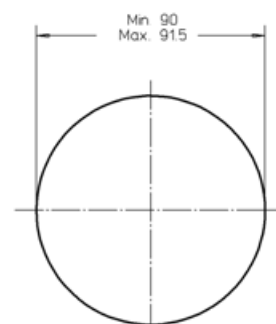
Operating voltage	24 V _{DC}	Housing material	Polyamide, Stainless steel
Nominal current	100mA	Operating temperature	-40 to 80°C
Nominal power	3W	Protection Level	IP67

Article No.	Housing Color	LED Color	Connection	Features
8605042	Shot Blasted	Yellow	Wire-end sleeve	40 yellow LEDs, mounting clamp
8600622	Shot Blasted	Green	Wire-end sleeve	40 green LEDs, mounting clamp
8602502	Shot Blasted	Red	Wire-end sleeve	40 red LEDs, mounting clamp
8603819	Shot Blasted	Red + Green	Wire-end sleeve	40 red LEDs+ 40 green LEDs, mounting clamp

Dimensions

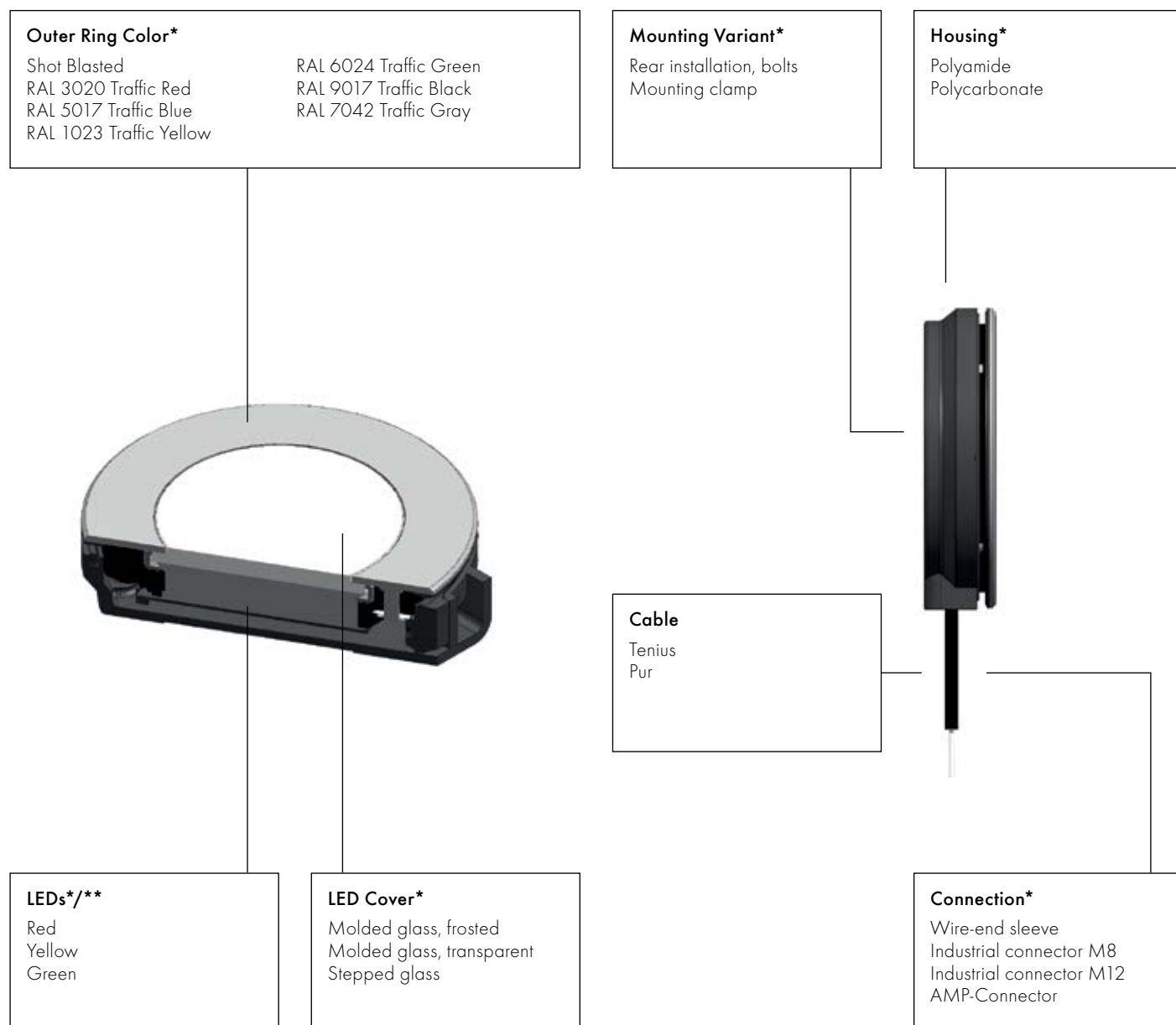


Mounting dimensions



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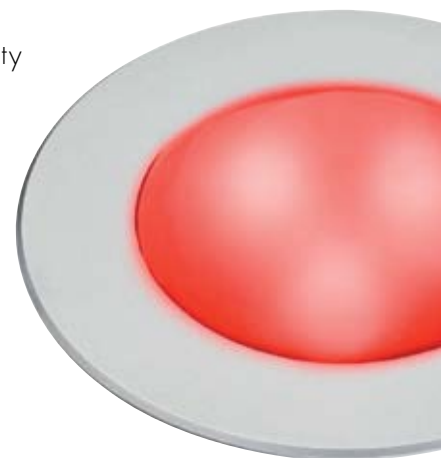
*More alternatives by request

**Circuit board with 3x High Power LED, or LEDs for diffuse power division (different colors)

SLF63 SERIES

The SLF63 can be used as ramp light in boarding areas of rail vehicles. It enhances safety for passengers with special needs. The light guarantees constant brightness, even in the event of extreme voltage fluctuations.

The SL63 is also used in trains as exterior level indicator of sand containers. The sand causes an additional braking effect in case of certain weather and track conditions.



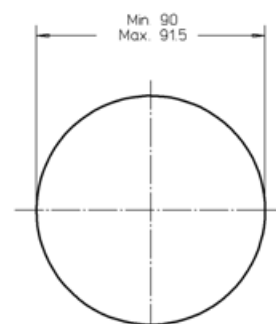
Operating voltage	110 V _{DC}	Housing material	Polyamide, Stainless steel
Nominal current	14.5mA	Operating temperature	-40 to 50°C
Nominal power	2W	Protection Level	IP67

Article No.	Housing Color	LED Color	Connection	Features
8703527	Shot Blasted	Yellow / Red	1m Tenuis wire, wire-end sleeve	Rear mounting, bolts

Dimensions

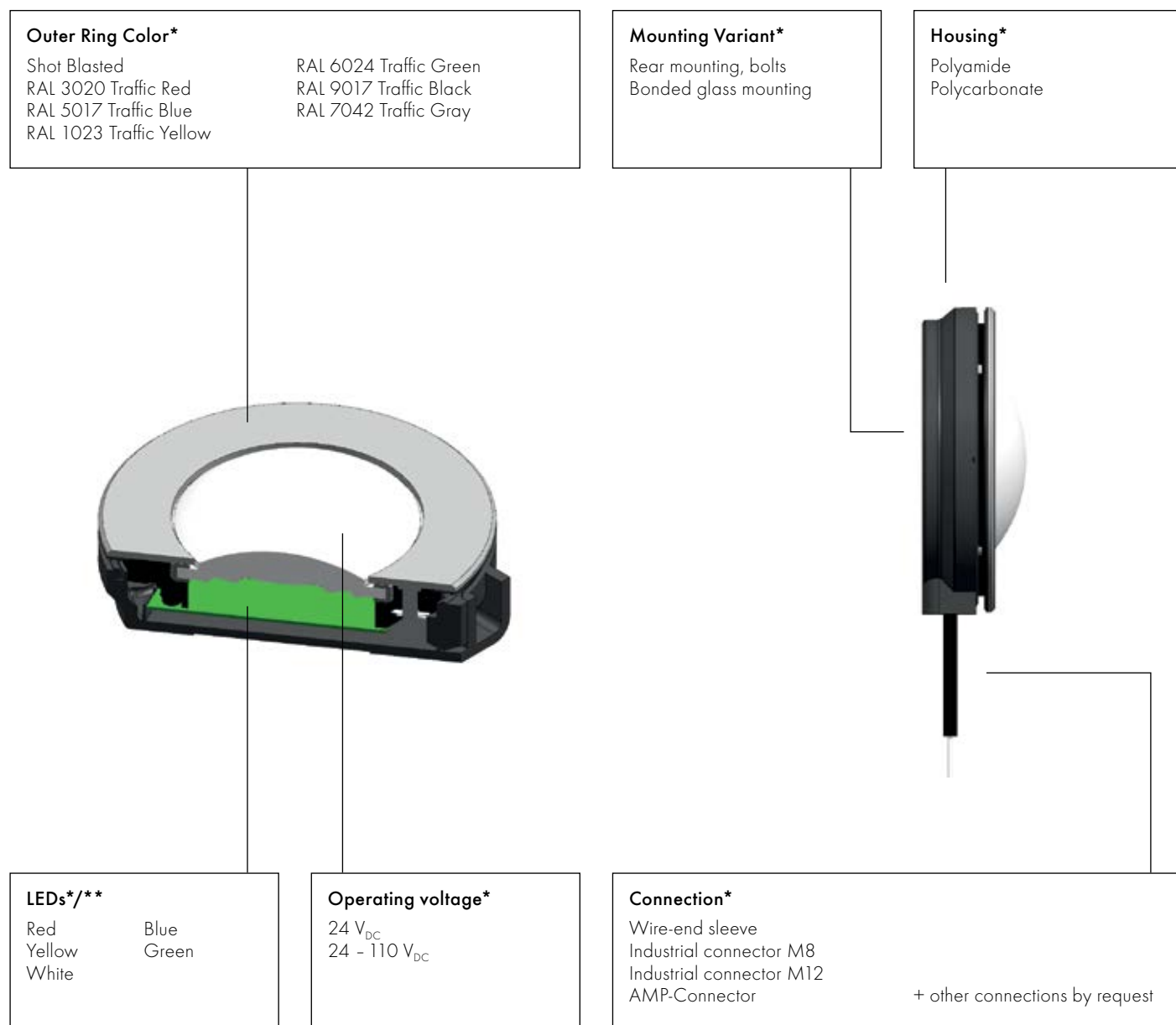


Mounting dimensions



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*More alternatives by request

**Circuit board with 3x High Power LED, or LEDs for diffuse power division (different colors)

SLE63 SERIES

The SLE63 light is inserted in rail vehicles in the doorframe groove as signal light or ramp light. It is also suitable for machine rooms or for admission control.

This light features a robust housing and guarantees constant brightness even in the event of extreme voltage fluctuations. Different from similar products, the SLE63 features a precision glass molding cover in stepped pattern. The stepped cover enables optimal lateral visibility.



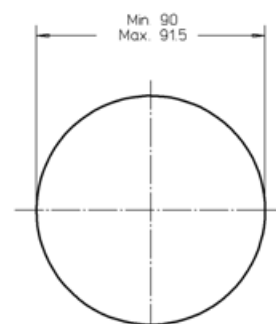
Operating voltage	Variant specific	Housing material	Polyamide, Stainless steel
Nominal current	100mA to 24 V _{DC}	Operating temperature	-40 to 50°C
Nominal power	2.5W	Protection Level	IP67

Article No.	Housing Color	LED Color	Connection	Electrical Data	Features
8602157	Silver	Red	Wire-end sleeve	24 – 110 V _{DC}	LED Cover, stepped
8603380	Silver	Yellow	Wire-end sleeve	24 – 110 V _{DC}	LED Cover frosted and stepped
8607394	Silver	Blue	AMP 180901-0 (1)	24 V _{DC}	LED Cover frosted and stepped
8702705	Silver	Green	Wire-end sleeve	24 V _{DC}	LED Cover, stepped

Dimensions

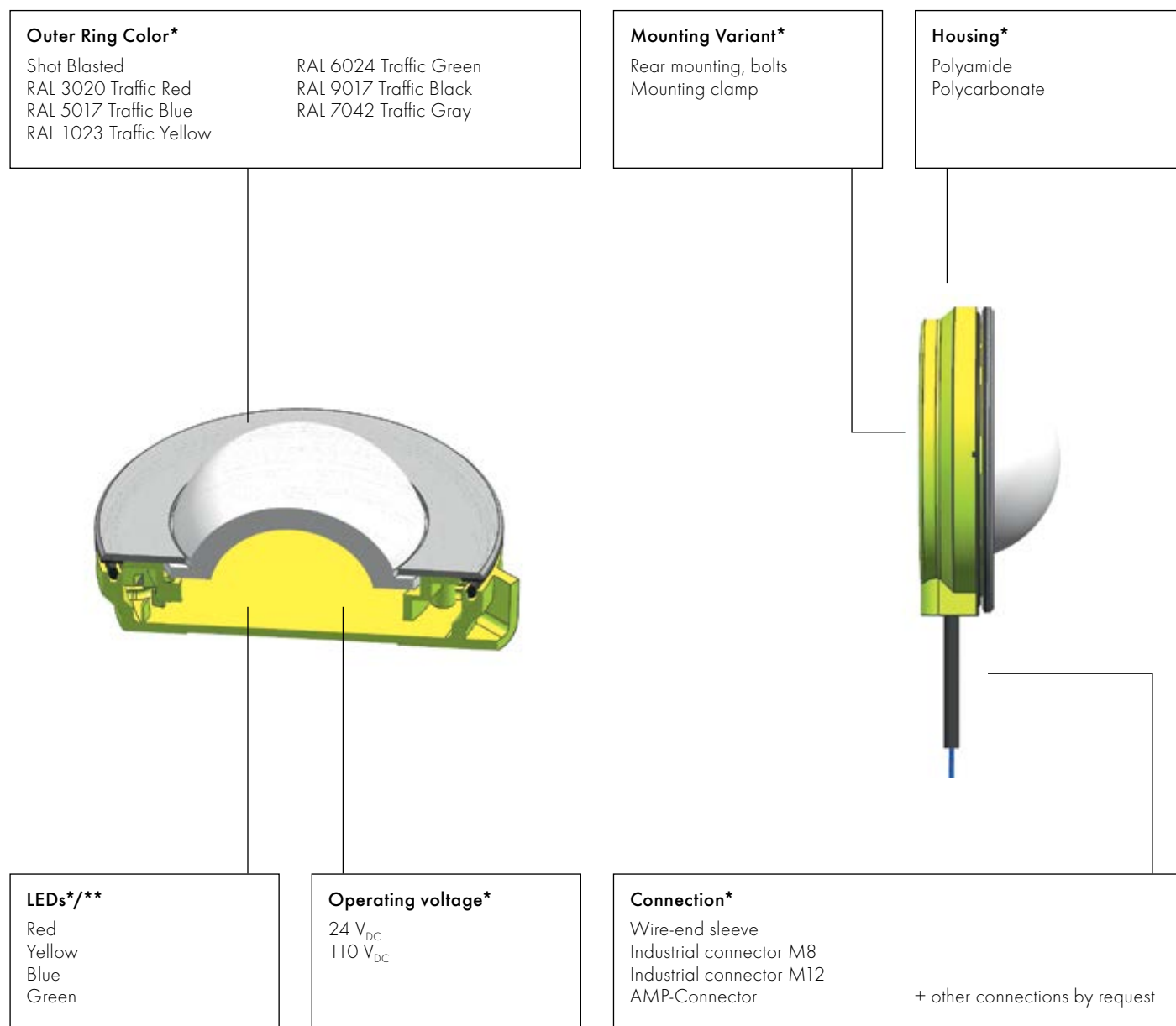


Mounting dimensions



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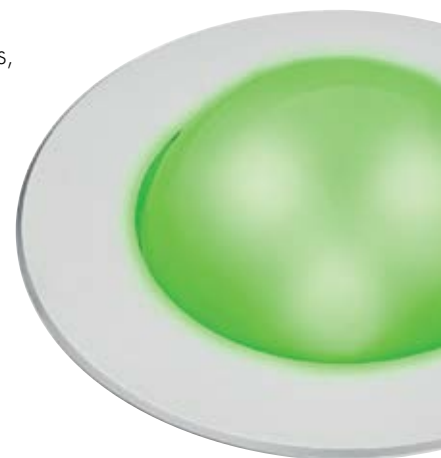


*More alternatives by request

**Circuit board with 3x High Power LED, or LEDs for diffuse power division (different colors)

SLK63 SERIES

The SLK63 series serves as signal light for boarding areas. Different from similar products, the SLK63 features a raised glass dome to improve lateral visibility.



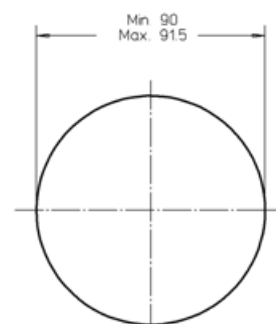
Operating voltage	Variant specific	Housing material	Polyamide, Stainless steel
Nominal current	100mA to 24 V _{DC}	Operating temperature	-40 to 50°C
Nominal power	2.5W	Protection Level	IP67

Article No.	Housing Color	LED Color	Connection	Electrical Data	Features
8605999	Blank Shot Blasted	Yellow	2m Tenuis wire, wire-end sleeve	24 – 110 V _{DC}	LED Cover frosted
8605089	Blank Shot Blasted	Blue	2m HPUR wire, wire-end sleeve	24 V _{DC}	LED Cover frosted
8603744	Blank Shot Blasted	Green	2m HPUR wire, wire-end sleeve	24 V _{DC}	LED Cover frosted
8601064	Blank Shot Blasted	Red	2m HPUR wire, wire-end sleeve	24 V _{DC}	LED Cover frosted

Dimensions

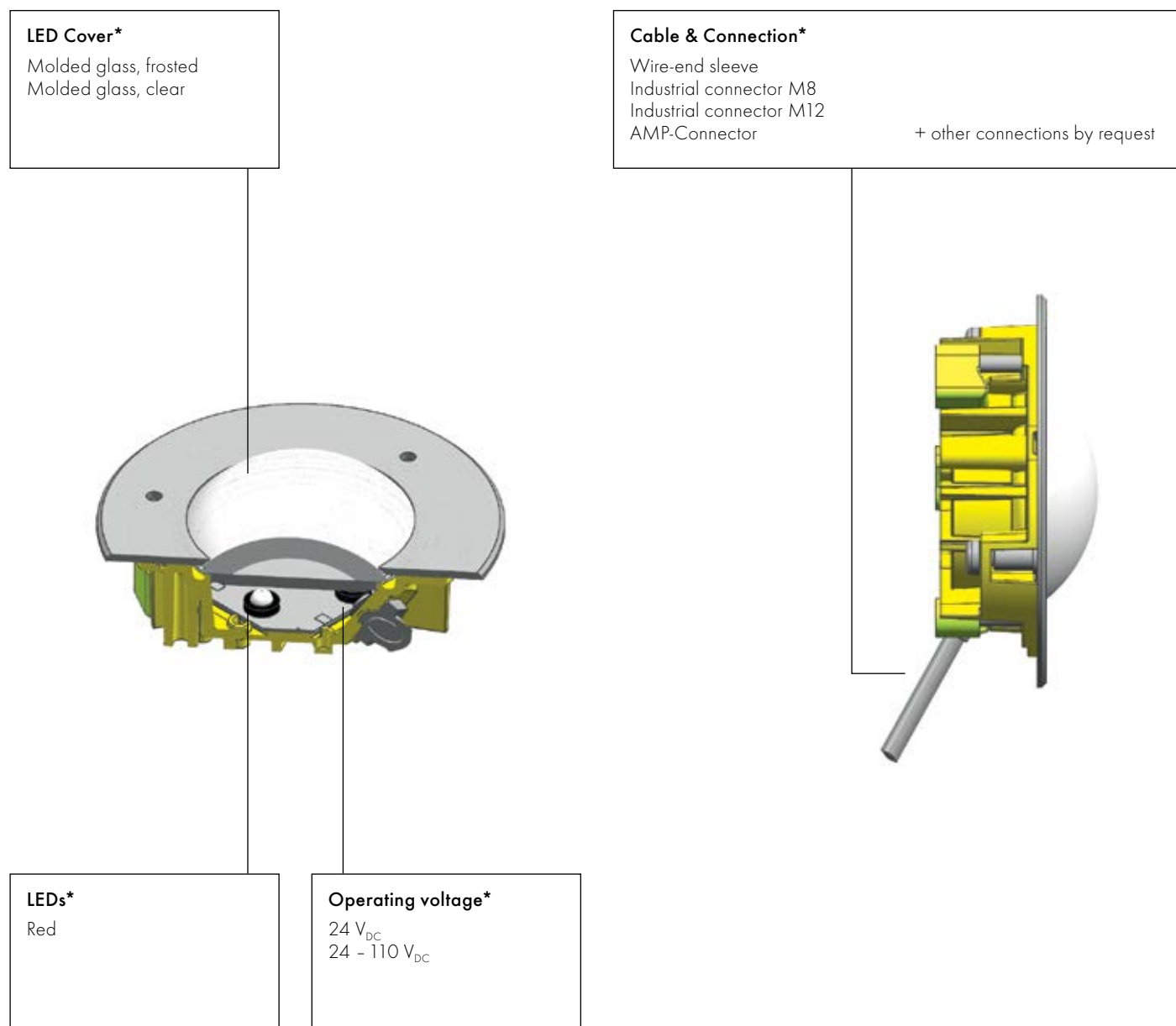


Mounting dimensions



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*More alternatives by request

SLK50 SERIES

Thanks to the compact housing construction made of die-cast aluminum, the SLK50 is the optimal choice for challenging applications with limited space.

Some variants have an integrated wide-range power supply which compensates for voltage fluctuations. This makes the light suitable for vehicle interiors. Moreover, it features a raised glass dome to improve lateral visibility.



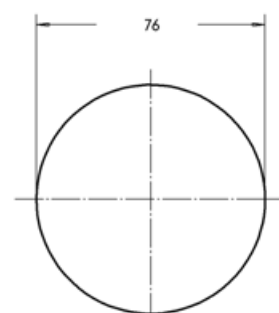
Operating voltage	24/36 V _{DC}	Housing material	Die-cast aluminum, Stainless steel matte shot blasted
Nominal current	85mA	Operating temperature	-40 to 50°C
Nominal power	2W	Protection Level	IP67

Article No.	Housing Color	LED Color	Connection	Features
8703026	Silver	Red	180mm Tenuis Cable, WAGO-Connector	Mounting clamp

Dimensions

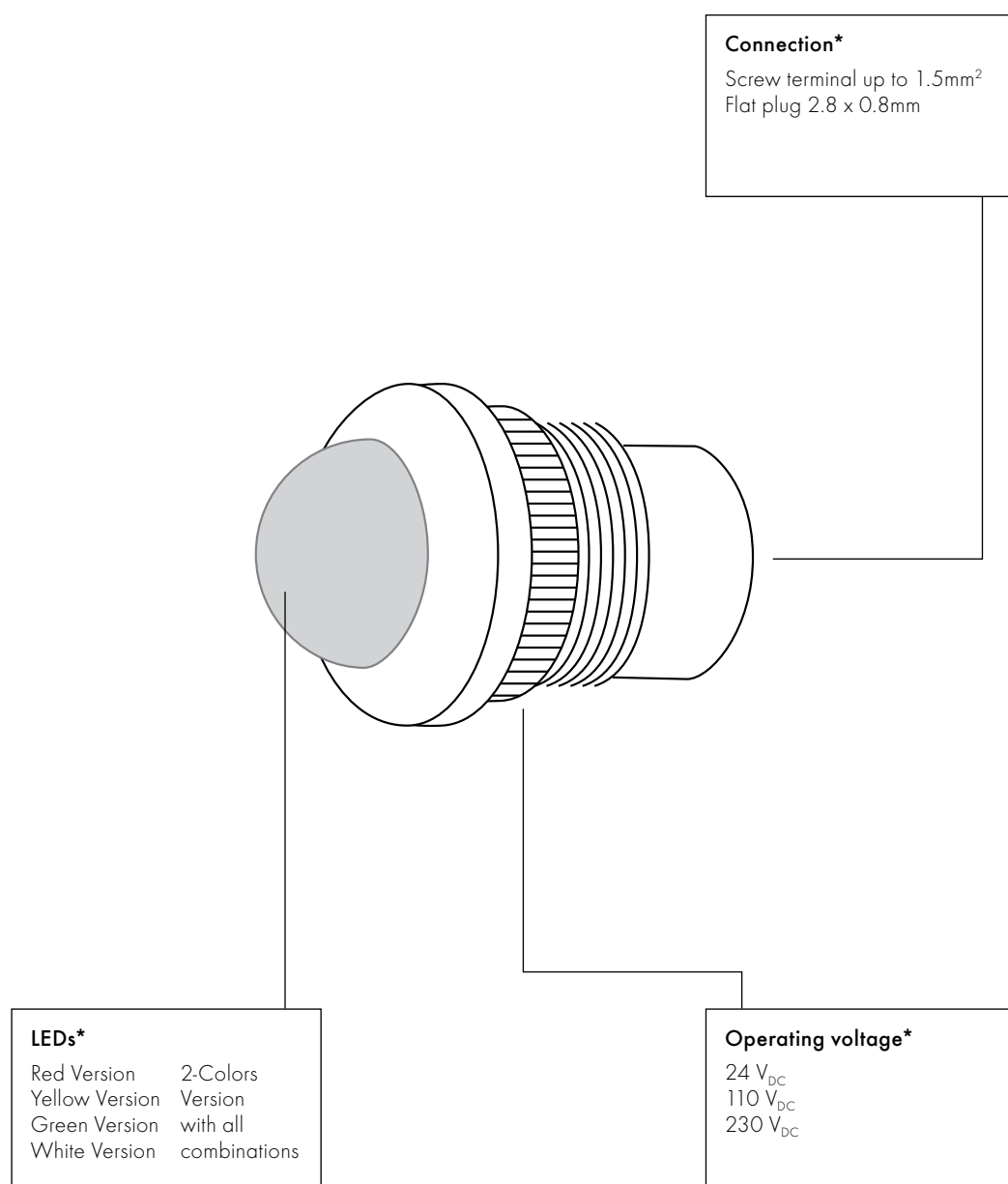


Mounting dimensions



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*More alternatives by request

SM22 SERIES

The signal light SM22 makes it possible to install light in the narrowest space due to the small housing diameter of 30 millimeters. It features a standard thread fastening with a 22mm diameter.



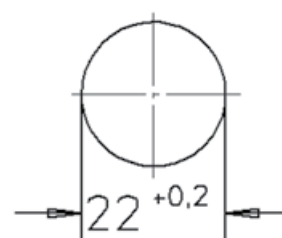
Operating voltage	24 V _{DC}	Housing material	Aluminum
Nominal current	15mA	Operating temperature	-40 to 70°C
Nominal power	0.5W	Protection Level	IP67

Article No.	Housing Color	LED Color	Connection	Features
8604834	matte chrome	Red	Screw terminal up to 1.5mm ²	22mm thread fastening
8605613	matte chrome	Green	Screw terminal up to 1.5mm ²	22mm thread fastening
8604835	matte chrome	Yellow	Screw terminal up to 1.5mm ²	22mm thread fastening
8604833	matte chrome	White	Screw terminal up to 1.5mm ²	22mm thread fastening

Dimensions



Mounting dimensions





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