LED2WORK
INTELLIGENCE IN LIGHT

LED MACHINERY LIGHTS

LED INDUSTRY LIGHTS

LED2WORK
INTELLIGENCE IN LIGHT

- is a climate-neutral company
- founded in 2007
- developed and produced in Germany
- has a subsidiary in the USA: LED2WORK Inc. Chicago
- always uses the latest LED technology
- produces more than 100,000 LED lights a year

Our LED machine lights:

- are powerful, bright and highly energy-efficient
- feature the latest high-performance LED technology
- come in robust, sealed housing
- have a high degree of protection and most are also CNC-compatible
- boast above-average durability and temperature resistance
- are shock- and vibration-resistant
- are easy to install or retrofit

Simply put: CONVINCING QUALITY!

Contents

TÜV AUSTRIA
ZERTIFIZIERT
EN ISO 9001
ZERTIFIKAT NR. 20100213011050
TÜV AUSTRIA CERT GMBH

c ETL us
LISTED
Intertek

ADVANCED LED TECHNOLOGY

IO-Link

HACCP
CERTIFIED

KLIMANEUTRALES UNTERNEHMEN
certified by Fokus Zukunft
Klimaneutral durch Kompensation
mit Klimaschutzzertifikaten

climate-neutral sign

CENALED SPOT Flexarm

The handy CENALED SPOT Flexarm lights up any work environment. It can be used on tooling machines as well as to illuminate workbenches. The die-cast aluminium LED light with articulated arm fitted with an oil-resistant sheath and light aperture protected by safety glass cuts a good figure, even under harsh production conditions. The CENALED SPOT is quick to install wherever light is needed.

Technology
- High-power LED chips for neutral white
- On/off and dimmable via pushbutton on light head
- High-quality 500 mm gooseneck – highly articulated, tested for 20,000 bending cycles and fitted with an oil-resistant sheath
- Available as a 24V DC variant or for direct connection to 100–305V AC, each with a 3 m power cord

Your benefits
- Compact light for powerful illumination in neutral white and with high detail sharpness
- Can be aligned precisely via the flexible articulated arm
- 30° beam angle for focused illumination

Areas of application
- Workstations at machines and installations without their own lighting, such as machine drills or cutting machines, if light is needed in specific areas or spontaneously
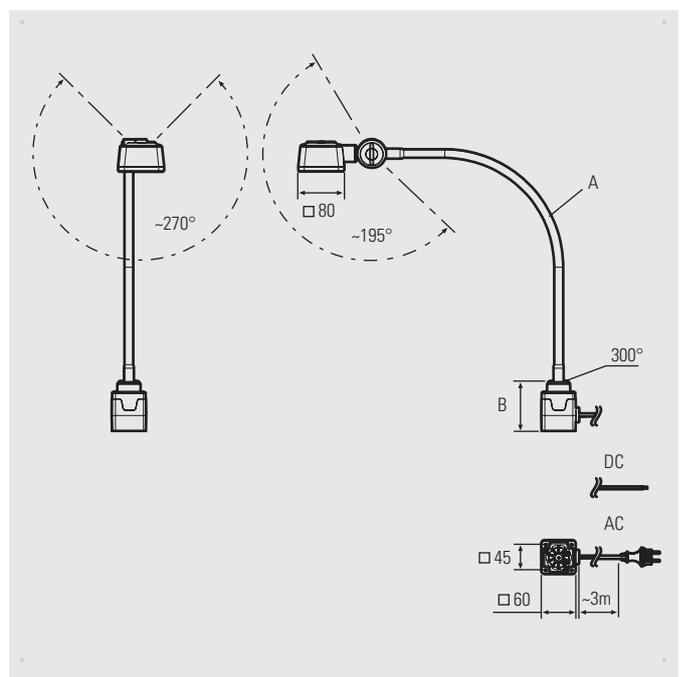
Pushbutton for ON/OFF and dimming

Infinitely repositionable gooseneck
fitted with sheath

Die-cast
aluminium

Shatterproof
single-pane safety glass

High-power
LED chips

CNC approved
geeignet

Screw-on base

Pre-fitted for additional mounting options, e.g. mag-
netic base (screws included in scope of delivery)

CENALED SPOT Flexarm DC

DC version

| 24V DC | | IP67 | 3 m |

AC version

| 100V – 305V AC | | IP65 | 3 m |

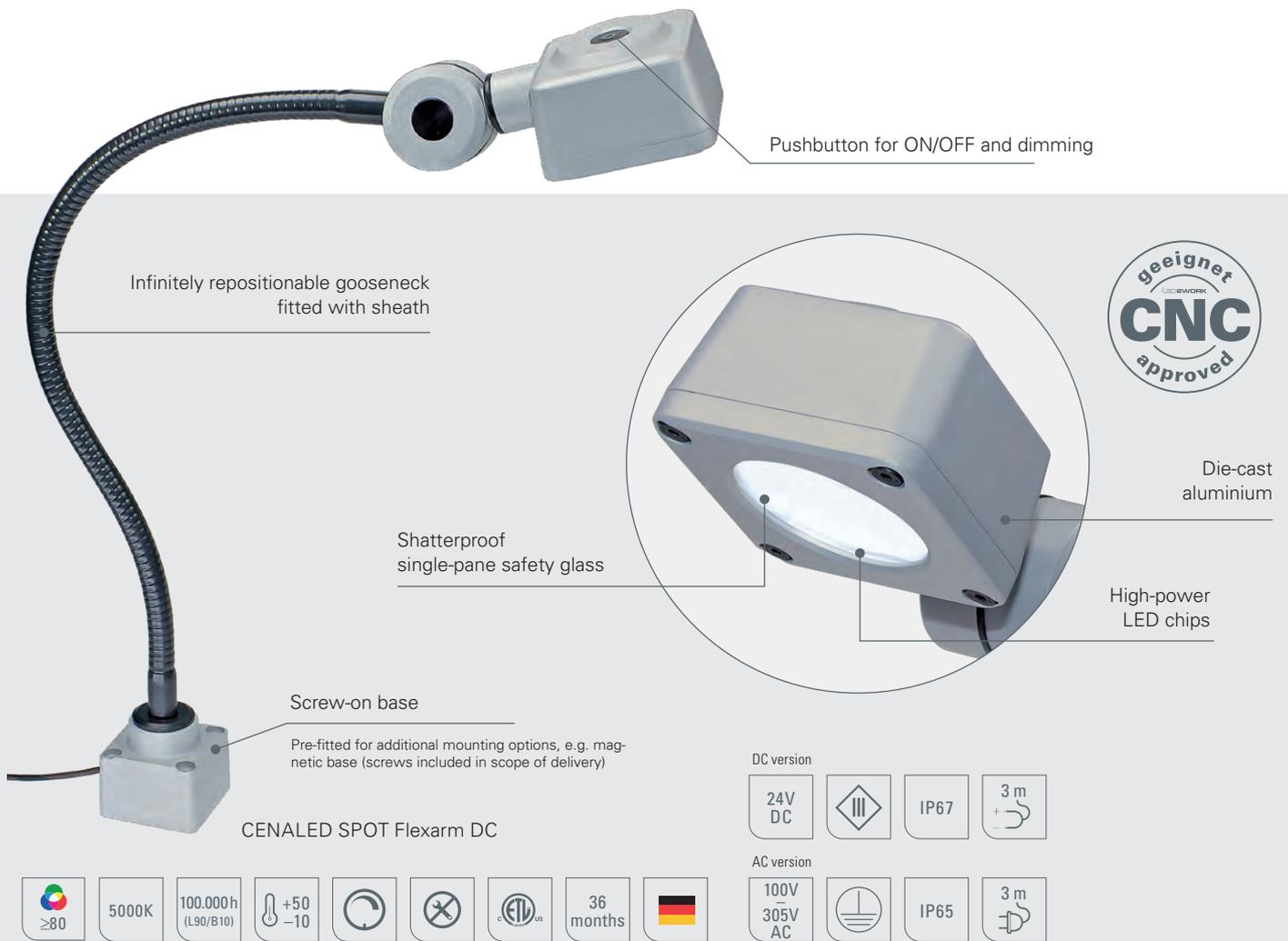| ≥80 | 5000K | 100.000 h (L90/B10) | +50 −10 | | | ETL | 36 months | |

LED light	Item no.	Arm length (A)	Base (B)	Optics	E_{max} *	Luminous flux	Power	Connection
CENALED SPOT Flexarm DC	121012-01	500 mm	59 mm	30°	8584 lx	1120 lm	~8.5 W	24V DC
CENALED SPOT Flexarm AC	121012-11	500 mm	88 mm	30°	8584 lx	1120 lm	~9 W	100–305V AC

For power supply units for 24V DC, see the Accessories page in the Annex

* maximum level of illuminance, measurement field 100 cm x 100 cm at distance of 50 cm

Accessories	Item no.
Magnetic clamp for CENALED screw-on base	220500-01
Table clamp for CENALED screw-on base	220500-02
Wall bracket for CENALED screw-on base	220500-03

220500-01

220500-02

The CENALED SPOT forms part of the CENALED modular system. The screw-on base for a 24V DC or 100–305V AC connection provides the basis for each light. The light is extended by an articulated arm, flex arm or directly mounted articulated head. The uniform light head features an on/off switch and brightness control (dimming). The screw-on base enables various mounting options, e.g. using a magnetic clamp or table clamp.

ON/OFF and dimming switch

Positioning joint lock

CENALED base, DC version

CENALED base, AC version

220500-03

LED workplace light | IP54
CENALED LENS Flexarm

The CENALED LENS Flexarm brings out even tiny details in a big way! Magnifying light with lens for double magnification and an articulated gooseneck that keeps the light head firmly in place when aligned. The magnification area beneath the lens is perfectly illuminated. The magnifying light can also be used as simple workplace lighting thanks to its outstanding level of illuminance. A lens cover is provided for this purpose which can be conveniently attached to the articulated arm when used as a magnifier.

Technology
- High-power LED ring for daylight white
- 4 dpt glass lens, focal length 250 mm
- On/off and dimming switch on the light head
- High-quality 500 mm gooseneck – articulated, tested for 20,000 bending cycles and fitted with an oil-resistant sheath
- Available as a 24V DC variant or for direct connection to 100–305V AC, each with a 3 m power cord

Your benefits
- Compact magnifying light for object magnification and illumination of the magnification area with high detail sharpness
- Infinitely adjustable, articulated arm for precise positioning
- Beam angle of 120° and opal white glare control

Areas of application
- Manual and testing workstations
- Workstations at machines and installations
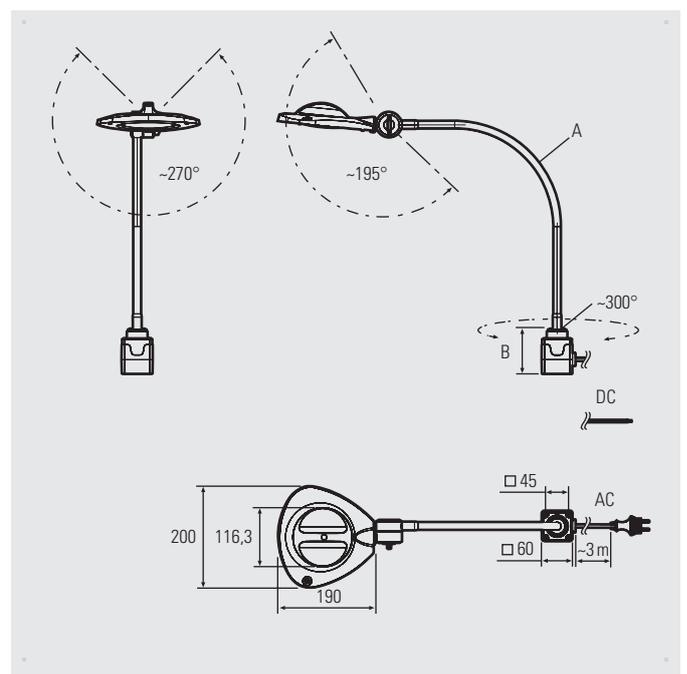
Magnetic lens cover

Real glass lens 4 dpt.

scratch-resistant

Die-cast aluminium

Switch for ON/OFF
and dimming

Lens cover

Screw-on base

Pre-fitted for additional mounting options, e.g. magnetic base (screws included in scope of delivery)

Lens and fire protection

CENALED LENS Flexarm DC

| IP54 | ⬤ ≥85 | 5600K | 100.000 h (L80/B10) | +50 −10 | | | ⒸETLus | 36 months | 🇩🇪 | DC version 24V DC | III | 3 m | AC version 100V ~ 305V AC | | 3 m |

LED light	Item no.	Arm length (A)	Base (B)	Optics	E_{max} *	Luminous flux	Power	Connection
CENALED LENS Flexarm DC	121110-01	500 mm	59 mm	120°	4051 lx	1277 lm	~8.4 W	24V DC
CENALED LENS Flexarm AC	121110-11	500 mm	88 mm	120°	4051 lx	1277 lm	~9 W	100–305V AC

For power supply units for 24V DC, see the Accessories page in the Annex

* maximum level of illuminance at distance of 250 mm

Accessories	Item no.
Magnetic clamp for CENALED screw-on base	220500-01
Table clamp for CENALED screw-on base	220500-02
Wall bracket for CENALED screw-on base	220500-03

220500-01

220500-02

220500-03

The CENALED LENS Flexarm forms part of the CENALED modular system. The basic module of every CENALED light is the screw-on base for a 24V DC or 100–305V AC connection. Here, the modular unit comes fitted with a light head and magnifier with a flexible gooseneck. The light head is equipped with an on/off switch and brightness control (dimming). The screw-on base enables a variety of mounting options. For instance, a strong magnetic clamp, table clamp or wall bracket can all be fitted.

Positioning joint lock

CENALED base, DC version

CENALED base, AC version

CENALED FLOOD Flexarm

The CENALED FLOOD Flexarm is the LED workplace light for extensive lighting on tooling machines or workbenches. The screw-on base and light head are made of die-cast aluminium with safety glass over the light aperture. The flexible arm fitted with an oil-resistant sheath and head joint allow the light to be moved into any position and the light to be used where it is needed. For alternative mounting options, a magnetic clamp, table clamp or wall bracket are available for the screw-on base.

Technology
- High-power LED chips for daylight white
- On/off switch and dimming via pushbutton on light head
- High-quality 500 mm gooseneck – highly flexible, tested for 20,000 bending cycles and fitted with an oil-resistant sheath
- Available as a 24V DC variant or for direct connection to 100–305V AC, each with a 3 m power cord

Your benefits
- Compact, powerful light for extensive light with high contrast and detail sharpness
- Precise alignment thanks to large flexible arm

Areas of application
- Workstations at drilling, grinding and cutting machines or injection moulding machines without their own lighting, if stationary or temporary light is needed
- Workbenches and testing workstations

CENALED FLOOD DC

CENALED FLOOD AC

Die-cast aluminium

High-power LED chips

Shatterproof single-pane safety glass

Positioning joint lock

Screw-on base

Pre-fitted for additional mounting options, e.g. magnetic base (screws included in scope of delivery)

DC version

| 24V DC | | IP67 | 3 m |

AC version

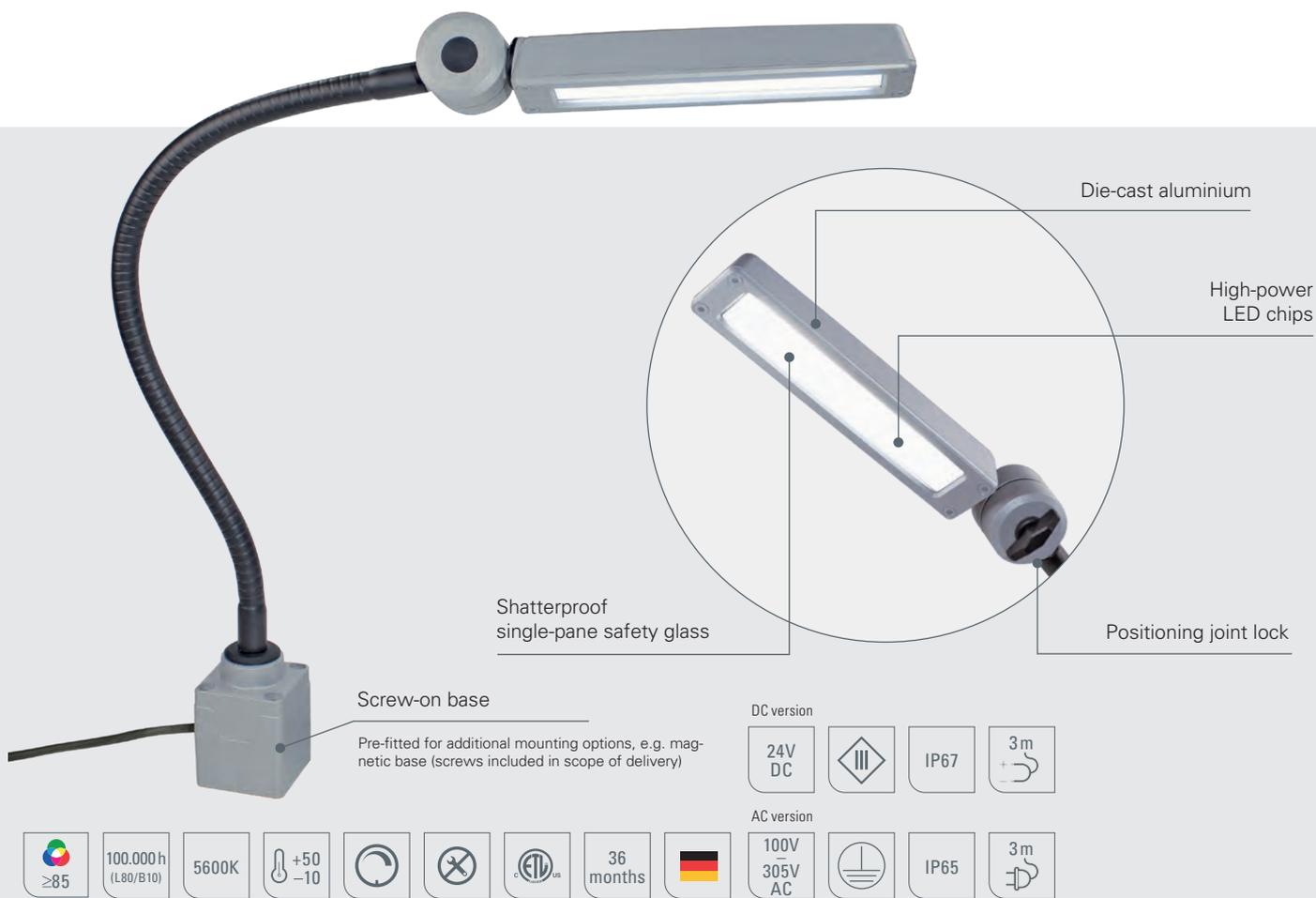| 100V – 305V AC | | IP65 | 3 m |

≥85 | 100.000 h (L80/B10) | 5600K | +50 −10 | | | | 36 months | |
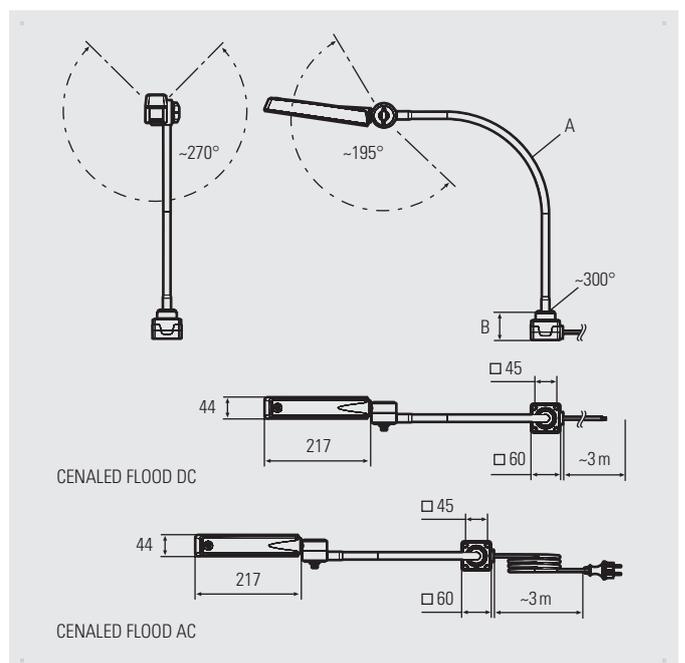
LED light	Item no.	Arm length (A)	Base (B)	Optics**	E_{max}*	Luminous flux	Power	Connection
CENALED FLOOD Flexarm DC	121210-01	500 mm	59 mm	118°	1641 lx	1260 lm	~8.4 W	24V DC
CENALED FLOOD Flexarm AC	121210-11	500 mm	88 mm	118°	1641 lx	1260 lm	~9 W	100–305V AC

For power supply units for 24V DC, see the Accessories page in the Annex

* maximum level of illuminance, measurement field 100 cm x 100 cm at distance of 50 cm

Accessories	Item no.
Magnetic clamp for CENALED screw-on base	220500-01
Table clamp for CENALED screw-on base	220500-02
Wall bracket for CENALED screw-on base	220500-03

220500-01

220500-02

220500-03

The CENALED FLOOD forms part of the CENALED modular system. The screw-on base for a 24V DC or 100–305V AC connection provides the basis for each light. The light is extended by an articulated arm, flex arm or directly mounted articulated head. The uniform light head features an on/off switch and brightness control (dimming). The screw-on base enables various mounting options, e.g. using a magnetic clamp or table clamp.

ON/OFF and dimming switch

CENALED base, DC version

CENALED base, AC version

LED workplace light | IP65 | IP67

CENALED SPOT Articulated arm

The CENALED SPOT Articulated arm is the LED arm-mounted light for manual workstations and tooling machines alike. The generously sized aluminium articulated arm and otherwise seemingly delicate light guarantee a wide working radius to bring light to where it is needed. The CENALED SPOT Articulated arm is one of the few arm-mounted lights that can also be used under harsh production conditions, thanks to its high protection type.

Technology

- High-power LED chips for neutral white 5000K
- On/off and dimmable via pushbutton on light head
- Far-reaching articulated arms made of aluminium, freely adjustable via joints and with protected, built-in power cords
- Connection, depending on variant, is 24V DC or 100–305V AC, each with a 3 m power cord

Your benefits

- Stable LED light for powerful illumination in neutral white and with high detail sharpness
- Can be aligned precisely via the joints
- 30° beam angle for focused illumination

Areas of application

- Workstations at machines, installations or in craft trades
- Goldsmiths, dental laboratories, watchmakers' or sewing businesses
- Workbenches and testing workstations
- Conventional tooling machines

Articulated arms made of highly resistant die-cast aluminium

Die-cast aluminium

CNC geeignet approved

Shatterproof single-pane safety glass

High-power LED chips

Screw-on base

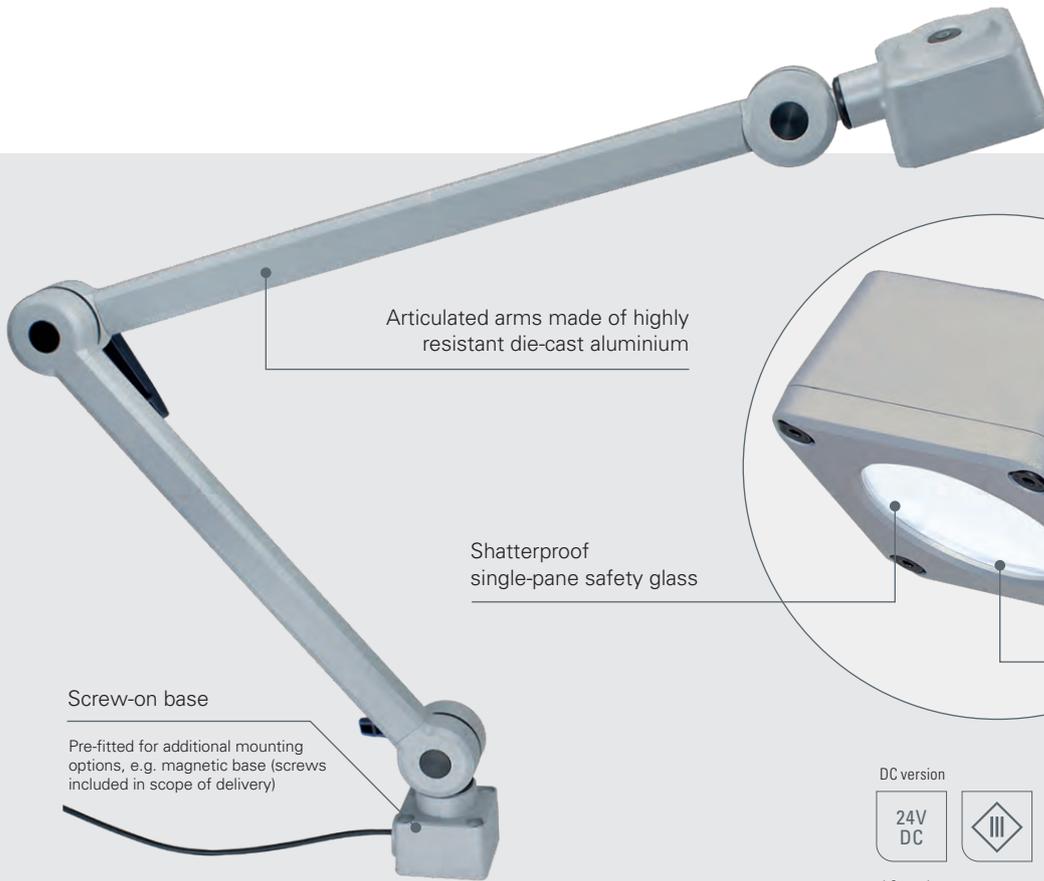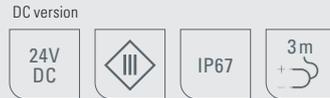Pre-fitted for additional mounting options, e.g. magnetic base (screws included in scope of delivery)

≥80 | 5000K | 100.000 h (L90/B10) | +50 −10 | 36 months

DC version
24V DC | III | IP67 | 3 m

AC version
100V – 305V AC | IP65 | 3 m
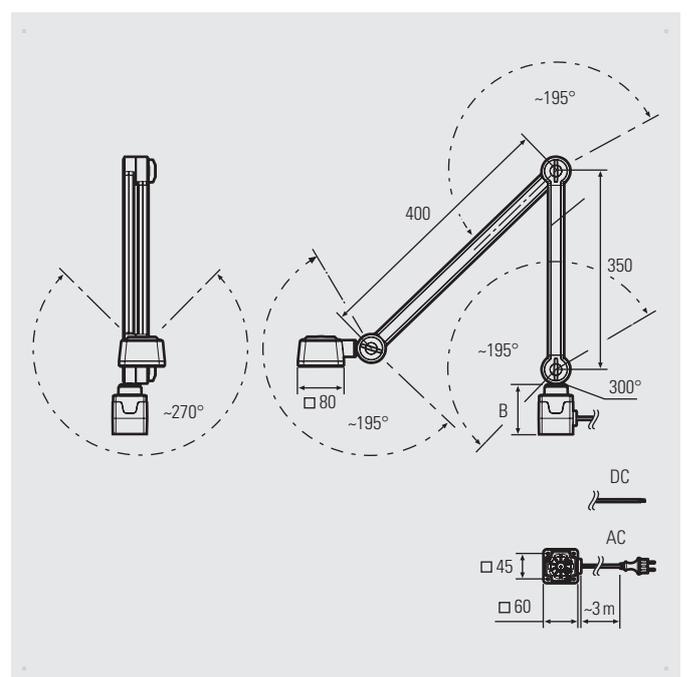
LED light	Item no.	Articulated arm length	Base (B)	Optics	E_{max} *	Luminous flux	Power	Connection
CENALED SPOT Articulated arm DC	121012-02	750 mm	59 mm	30°	8584 lx	1120 lm	~8.5 W	24V DC
CENALED SPOT Articulated arm AC	121012-12	750 mm	88 mm	30°	8584 lx	1120 lm	~9 W	100–305V AC

For power supply units for 24V DC, see the Accessories page in the Annex

* maximum level of illuminance, measurement field 100 cm x 100 cm at distance of 50 cm

Accessories	Item no.
Magnetic clamp for CENALED screw-on base	220500-01
Table clamp for CENALED screw-on base	220500-02
Wall bracket for CENALED screw-on base	220500-03

220500-01

220500-02

The CENALED SPOT forms part of the CENALED modular system. The basic module of every light is the screw-on base for a 24V DC or 100–305V AC connection. The modular structure is complemented by an articulated arm, flexible arm or a directly mounted articulated head. The light head is equipped with an on/off switch and brightness control (dimming). The screw-on base enables a variety of mounting options, such as for a magnetic clamp or table clamp.

ON/OFF and dimming switch

Positioning head joint lock

CENALED base, DC version

CENALED base, AC version

220500-03

LED machine light | IP65 | IP67
CENALED SPOT Articulated head

With the CENALED SPOT Articulated head, any workplace can be lit up quickly and easily. Fixed in a stationary place using the screw-on base or flexibly using accessories like the magnetic clamp or table clamp, work areas in tooling machines and installations are provided with focused illumination. Regardless of whether you are dealing with a simple application or use under harsh production conditions, the CENALED SPOT has the best protection with IP65 or IP67.

Technology
- High-power LED chips for neutral white
- On/off and dimmable via pushbutton on light head
- Available as a 24V DC variant or for direct connection to 100–305V AC, each with a 3 m power cord

Your benefits
- Compact light for powerful illumination with high detail sharpness
- Using the articulated head and base, the light head can be put into almost any position and the light aligned to focus on the specific object
- 30° beam angle for focused illumination

Areas of application
- Work areas of machines, such as drill machines, cutting machines or injection moulding machines
- Areas in industry and in plants where focused light is needed
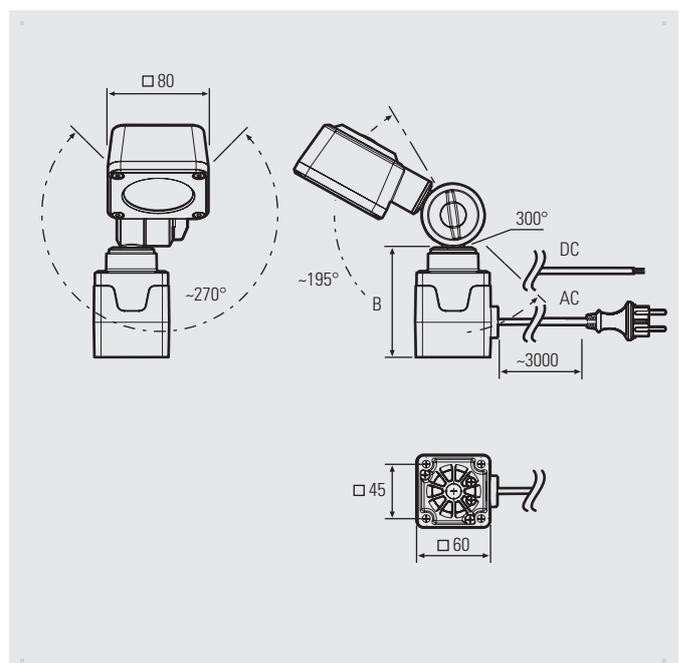
Pushbutton for ON/OFF
and dimming
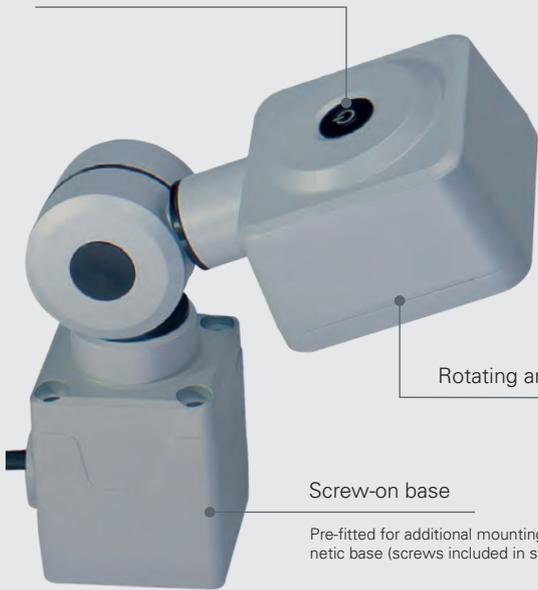
Shatterproof single-pane
safety glass 4 mm

Positioning joint lock

Rotating and swivelling head

Screw-on base

Pre-fitted for additional mounting options, e.g. magnetic base (screws included in scope of delivery)

CENALED SPOT Articulated head DC

CENALED SPOT Articulated head AC

DC version

| 24V DC | | IP67 | 3 m |

AC version

| 100V – 305V AC | | IP65 | 3 m |

| ≥85 | CNC | 5000K | 100.000 h (L90/B10) | +50 −10 | | | ETL | 36 months | |

LED light	Item no.	Base (B)	Optics	E_{max} *	Luminous flux	Power	Connection
CENALED SPOT Articulated head DC	121012-03	59 mm	30°	8584 lx	1120 lm	~8.5 W	24V DC
CENALED SPOT Articulated head AC	121012-13	88 mm	30°	8584 lx	1120 lm	~9 W	100–305V AC

For power supply units for 24V DC, see the Accessories page in the Annex

* maximum level of illuminance, measurement field 100 cm x 100 cm at distance of 50 cm

The CENALED SPOT forms part of the CENALED modular system. The screw-on base for a 24V DC or 100–305V AC connection provides the basis for each light. The light is extended by an articulated arm, flex arm or directly mounted articulated head. The uniform light head features an on/off switch and brightness control (dimming). The screw-on base enables various mounting options, e.g. using a magnetic clamp or table clamp.

Accessories	Item no.
Magnetic clamp for CENALED screw-on base	220500-01
Table clamp for CENALED screw-on base	220500-02
Wall bracket for CENALED screw-on base	220500-03

220500-01

Screw-in base with magnet

220500-02

220500-03

LED machine light | IP67
CENALED SPOT DC Surface-mounted

CENALED SPOT DC Surface-mounted is a compact LED light with 3 selectable beam angles: 15° and 30° for spot illumination and 65° for the moderate, extensive illumination of individual work areas on machines and installations. The housing is made from sturdy aluminium with single-pane safety glass over the light emitting aperture. Mounted on a separately available articulated angle, the light can be swivelled and positioned sideways, upwards and downwards.

Technology
- The latest LED technology and light emission via three selectable light characteristics, depending on the chosen light
- Made for harsh use close to workpieces: robust, oil-resistant and resistant to flying chips
- Ribbed, powder-coated aluminium base body and break-proof single-pane safety glass – No burning in of cooling lubricants or emulsions

Your benefits
- Extremely bright thanks to high power LED technology
- Compact size for use near spindles and workpiece-accentuated illumination
- Flicker-free light with no UV or IR content
- High flexibility in use thanks to optional articulated angles

Areas of application
- Tooling machines, CNC machines
- For camera-assisted quality assurance during processing

Versions
- 3 different beam angles: 15°, 30° or 65° optics
- Mounting on machine's metal surface or via optional articulated bracket

FKM seal

Safety glass

Sturdy aluminium
housing for heat dissipation

24V DC		15° | 30° | 65°	IP67	CNC	≥80	5700K	100.000 h (L90/B10)	M12	+50 −10	OPTION		ETL	36 months	
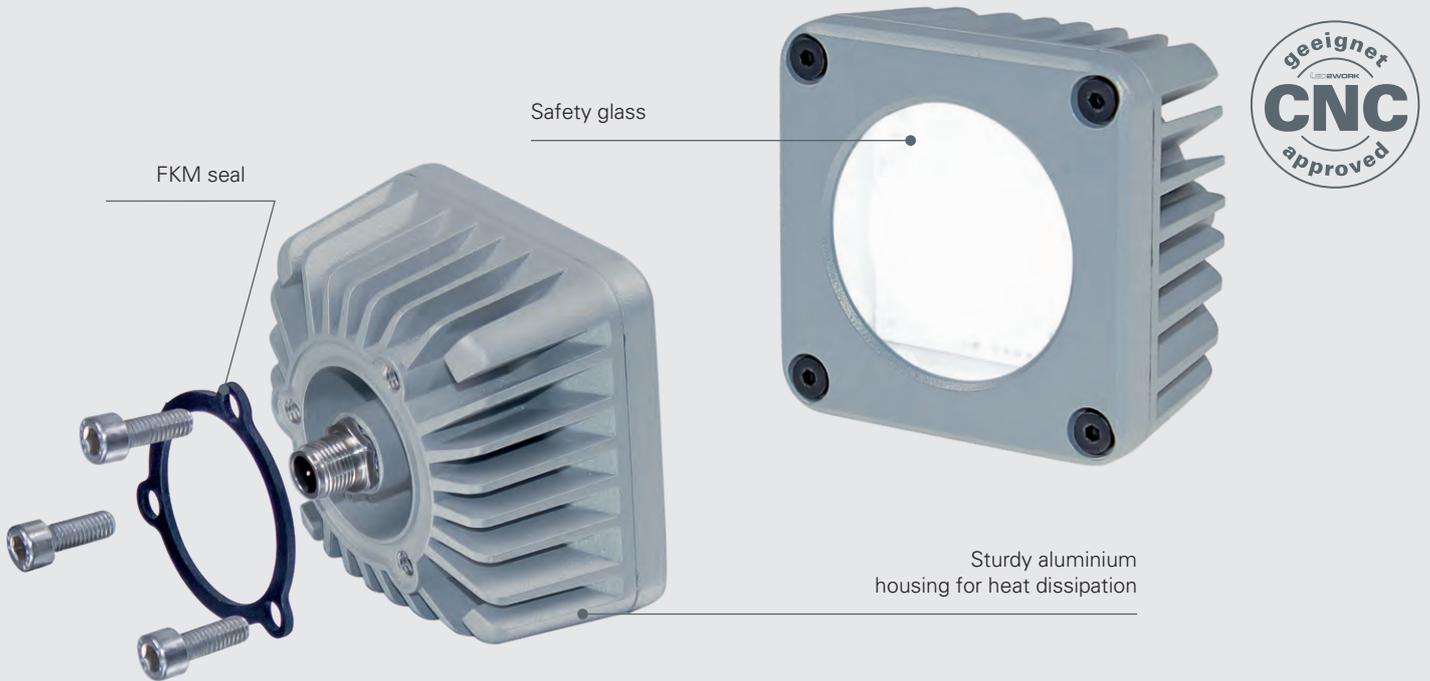
LED light	Item no.	Optics	E_{max}*	Luminous flux	Power	Connection
CENALED SPOT Surface-mounted 15°	121011-04	15°	6595 lx	1120 lm	~8.5 W	24V DC
CENALED SPOT Surface-mounted 30°	121012-04	30°	2193 lx	1120 lm	~8.5 W	24V DC
CENALED SPOT Surface-mounted 65°	121013-04	65°	642 lx	1120 lm	~8.5 W	24V DC

For power supply units, dimming boxes and connection materials, see the Accessories page in the Annex, code ■ and ■

* maximum level of illuminance, measurement field 100 cm x 100 cm at distance of 100 cm

~63   ~80   ~80   ~50   Ø 55   Ø 50   M6 (3x)
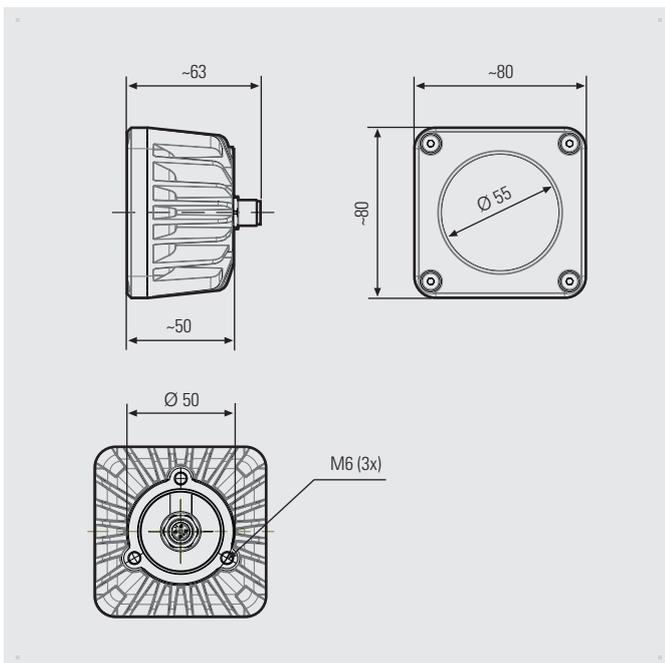
Accessories	Item no.
Articulated bracket, V2A, exclusive LED-light	214300-01

Light with articulated bracket (214300-01)

LED multicolour and indicator light | IP67
DOMELED and DOMELED IO-Link

Active colour marking of areas and all-round visible signals through colour changes or flashing: the DOMELED is a small yet effective indicator for machines and installations. With a diameter of 50 mm, it is only just as large as a tennis ball. Those looking for something bigger are in good hands with the DOMELED and its diameter of 90 mm. Depending on the use, two variants are possible: as a beacon with colour change and as a light with full IO-Link functionality. The DOMELED can be used wherever clear indication with good far-off visibility is important.

Technology
- Multicolour LED chip for standard colours or free colour selection and colour gradients via IO-Link
- Colour changing and flashing possible
- Controlled directly via the light or via IO-Link together with other sensors and actuators
- Opal white glare control with honeycomb texture
- Translucent cover and 180° optics for excellent visibility
- Sealed to IP67: plastic housing and light dome made from polycarbonate – impact-resistant, corrosion-resistant

Your benefits
- The coloured light, which can be seen from all sides, allows different machine and installation states to be indicated.
- Flicker-free, with no UV or IR content
- Indicator function through standard colours and flashing or – with IO-Link – freely definable colours and flashing intervals
- Extremely easy assembly or retrofitting

Areas of application
- Machinery and production installations
- Warehouse and picking areas
- Conveyor belts, sorting and assembly lines
- Automation in crafts and industry

Versions
- Light dome diameter 50 mm or 90 mm
- As an analogue version with colour control via PIN assignment or a version with IO-Link functionality for easy incorporation into automated installations or machines

Let's get colourful

One light, two variants:

- **Indicator light as a single workstation solution** with indicator light in standard colours and flashing
- **IO-Link indicator light:** Full control over colours, functions, flashing, dimming – incorporated as an IO-Link actuator

Light-permeable dome for
all-round display of coloured indicator light

Screw thread M30 x 1.5

Sensor plug connector M12

24V DC	◇ III	IP67	≥85	5000K	⬤	100.000 h (L80/B10)	+50 −20	⊗	36 months

DOMELED DC
M12

DOMELED IO-Link
IO-Link   M12

LED light	Item no.	Optics	Luminous flux [WHITE]	Power					Connection
				[WHITE]	[BLUE]	[GREEN]	[YELLOW]	[RED]	
DOMELED_50 DC	130190-01	180°	282 lm	~1.8 W	~1.7 W	~1.3 W	~1.3 W	~1.5 W	24V DC
DOMELED_90 DC	130290-01	180°	551 lm	~3.4 W	~3.5 W	~2.7 W	~2.7 W	~3.1 W	24V DC

For power supply units, see Accessories in the Annex

LED light	Item no.	Optics	Luminous flux [WHITE]	Power					Connection
				[WHITE]	[BLUE]	[GREEN]	[YELLOW]	[RED]	
DOMELED_50 DC IO-Link	130190-11	180°	282 lm	~1.8 W	~1.7 W	~1.3 W	~1.3 W	~1.5 W	24V DC
DOMELED_50 DC IO-Link	130290-11	180°	551 lm	~3.4 W	~3.5 W	~2.7 W	~2.7 W	~3.1 W	24V DC

For connection materials, see Accessories page in the Annex, connection materials code ■
For further information, see data sheets. Scope of delivery includes M30 nut x 1.5 made of plastic.

Ø 90
Ø 50
66
99
41
74
M30x1.5
M30x1.5
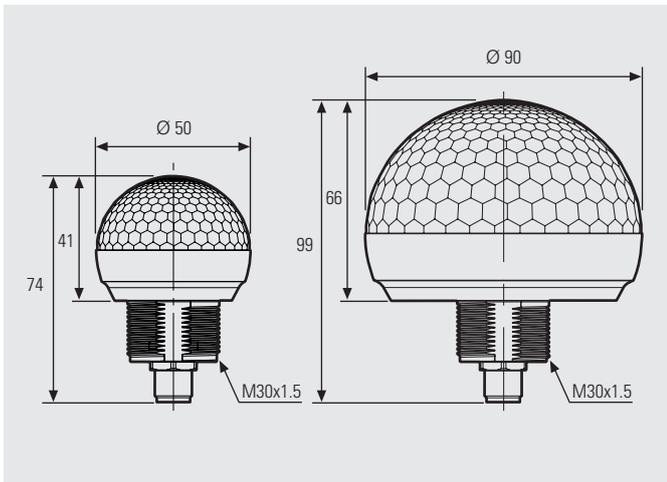
Accessories	Item no.
DOMELED Retention bracket V2A	210200-30

210200-30

Example of mounting

LED machine light | IP67/IP69K
FIELDLED EVO Surface-mounted

FIELDLED EVO is an extremely bright LED machine light for harsh environments in large-scale tooling machines: chips, oils and fluids do not trouble it at all. Microprisms beneath the safety glass further increase the light diffusion. Combined with the single-pane safety glass, the sealed aluminium housing ensures a high IP protection type. Depending on the variant, the reverse polarity-protected M12 connection is located on the front or the rear.

Technology
- Densely packed LED array – extremely powerful
- Light forming technology and microprismatic glare control
- Heat is dissipated to the rear via the aluminium housing

Your benefits
- Light emission over the entire light width
- Homogeneous illumination, flicker-free with no UV or IR content
- Oil-resistant and resistant to flying chips
- Long-lasting light output, as no oil or coolant can burn into the light-emitting surface
- On/off interface: load-free switching, flashing and dimming possible

Areas of application
- Large-volume machines and installations
- CNC machines, tooling machines and milling machines

Versions
- Width 96 mm in four lengths, width 150 mm in two lengths
- Connection at the front or rear, depending on the variant
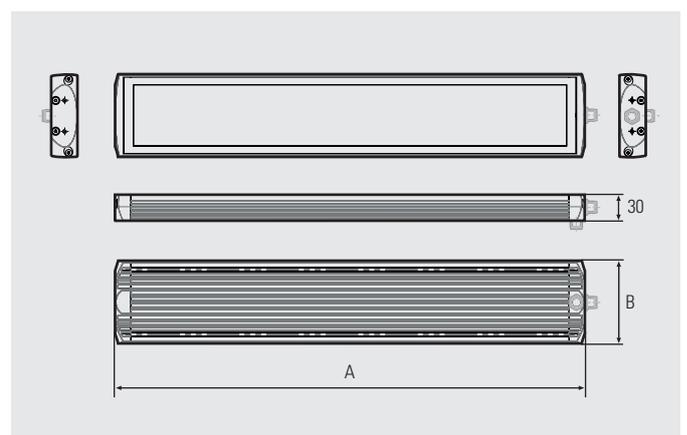
M12-A rear

M12-A front

Aluminium housing

Mounting: Screw channels for M5 screws in the rear profile

IP67/IP69K

Oil-resistant and resistant to flying chips

FIELDLED EVO 96 mm width

Shatterproof safety glass with microprismatic glare control

FIELDLED EVO 150 mm width

CNC approved — geeignet

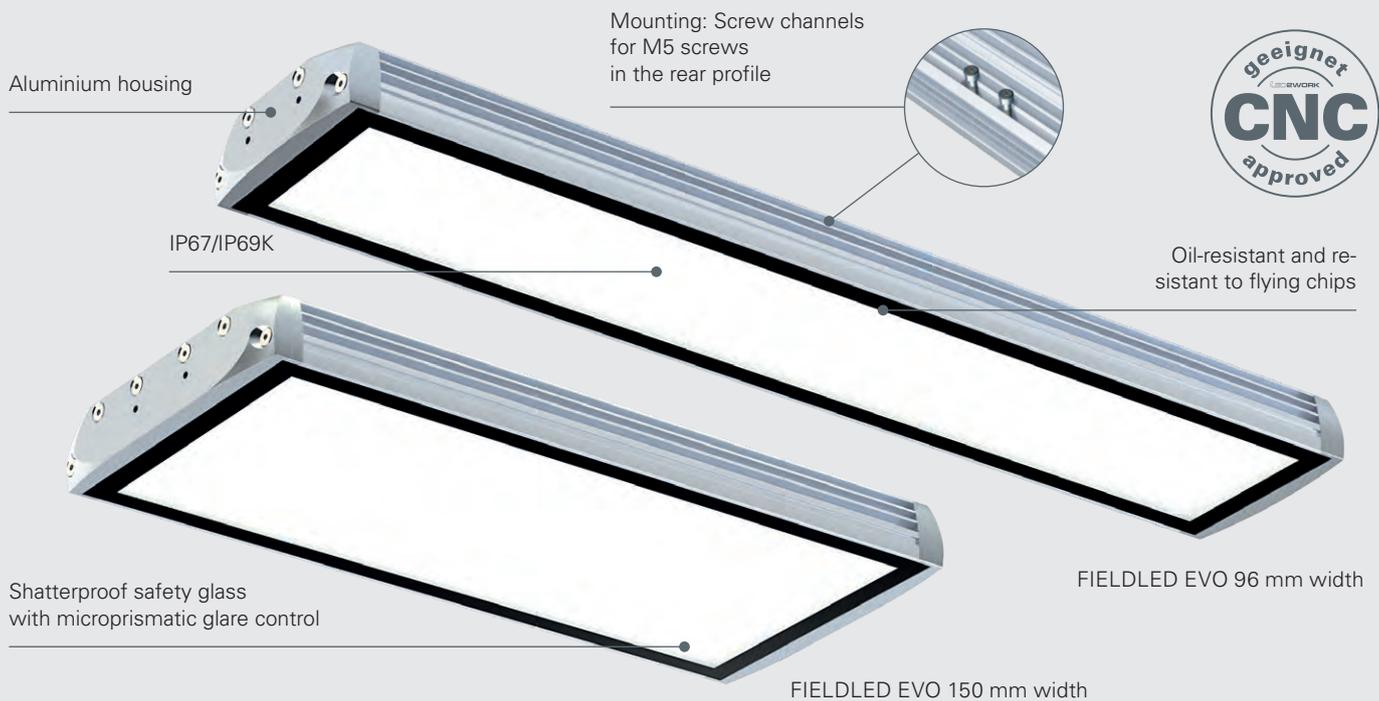| 24V DC | III | IP67/IP69K | CNC | ≥85 | 5600K | 100.000 h (L80/B10) | M12 | +60 / −30 | OPTION | ETL us | 36 months | |

LED light	Item no.	Length (A)	Width (B)	Optics	E_{max} *	Luminous flux	Power	Connection
FIELDLED EVO 280_96 surface-mounted, M12-A front	153010-01	280 mm	96 mm	100°	1069 lx	3000 lm	~19 W	24V DC
FIELDLED EVO 280_96 surface-mounted, M12-A rear	153010-02	280 mm	96 mm	100°	1069 lx	3000 lm	~19 W	24V DC
FIELDLED EVO 540_96 surface-mounted, M12-A front	153110-01	540 mm	96 mm	100°	2147 lx	6000 lm	~39 W	24V DC
FIELDLED EVO 540_96 surface-mounted, M12-A rear	153110-02	540 mm	96 mm	100°	2147 lx	6000 lm	~39 W	24V DC
FIELDLED EVO 790_96 surface-mounted, M12-A front	153210-01	790 mm	96 mm	100°	3047 lx	9000 lm	~58 W	24V DC
FIELDLED EVO 790_96 surface-mounted, M12-A rear	153210-02	790 mm	96 mm	100°	3047 lx	9000 lm	~58 W	24V DC
FIELDLED EVO 1040_96 surface-mounted, M12-A front	153310-01	1040 mm	96 mm	100°	3777 lx	12000 lm	~78 W	24V DC
FIELDLED EVO 1040_96 surface-mounted, M12-A rear	153310-02	1040 mm	96 mm	100°	3777 lx	12000 lm	~78 W	24V DC
FIELDLED EVO 370_150 surface-mounted, M12-A front	153410-01	370 mm	150 mm	100°	2012 lx	6700 lm	~43 W	24V DC
FIELDLED EVO 370_150 surface-mounted, M12-A rear	153410-02	370 mm	150 mm	100°	2012 lx	6700 lm	~43 W	24V DC
FIELDLED EVO 702_150 surface-mounted, M12-A front	153510-01	702 mm	150 mm	100°	3792 lx	13400 lm	~86 W	24V DC
FIELDLED EVO 702_150 surface-mounted, M12-A rear	153510-02	702 mm	150 mm	100°	3792 lx	13400 lm	~86 W	24V DC

For power supply units, dimming boxes and connection materials, see the Accessories page in the Annex, code ▇ and ▇

* maximum level of illuminance, measurement field 100 cm x 100 cm at distance of 100 cm

Accessories	Item no.
FIELDLED EVO mounting brackets, V2A, flat, 1 pair	210200-20
Mounting brackets, V2A, articulated 150°, 1 pair, for FIELDLED EVO 96 mm width	210200-21
FIELDLED EVO mounting brackets V2A, articulated 150°, 1 pair, for FIELDLED EVO 150 mm width	210200-22

210200-20

210200-21/210200-22

LED machine light | IP67
TOPLED

The TOPLED is an extremely robust light for illumination of a workpiece at close proximity. The compact LED light only needs minimal space, is extremely sturdy and provides powerful and targeted illumination. Thanks to its small size, it can be used very close to the processing area.

Technology
- High-power LED chips
- Light aperture protected by 4 mm single-pane safety glass: oil-resistant and resistant to flying chips
- Aluminium basic body for good heat dissipation to the rear – no thermal loading of the workpiece
- Connection via 150 mm connection cable with M12 plug

Your benefits
- Easy setup or retrofitting in tooling machines
- Close, low-shadow illumination in the processing area

Areas of application
- Tooling machines, CNC installations and machines for woodworking
- The ideal light for use on the spindle or spindle head

Oil-resistant

M12 plug connector

High-power LED chips

Single-pane safety glass

24V DC	⬦ III	IP67	CNC	≥80	5200K – 5700K	50.000 h (L80/B10)	M12	+60 –10	OPTION	⊘	36 months	🇩🇪

LED light	Item no.	Diameter	Optics	E_max *	Luminous flux	Power	Connection
TOPLED Surface-mounted	111913-01	50 mm	40°	800 lx	982 lm	~8.5 W	24V DC

For power supply units, dimming boxes and connection materials, see the Accessories page in the Annex, code 🟩 and 🟦   * maximum level of illuminance, measurement field 100 cm x 100 cm at distance of 50 cm

For sufficient cooling, the light needs to be fixed on a metallic surface, e.g. machine housing 400 x 400 mm, thickness 3 mm. Heat-conducting paste is recommended.

M12

20   23

ø 50

150

M18x1,5

View of rear
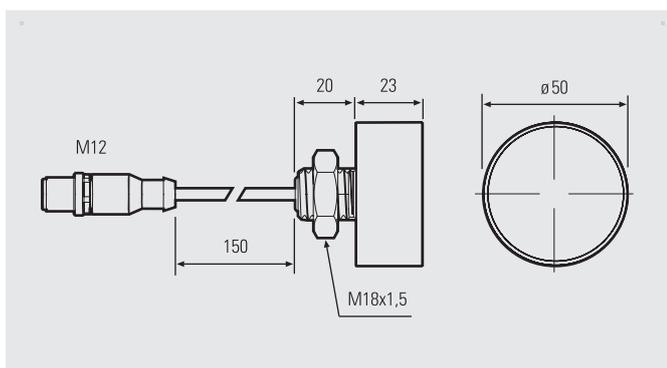
LED surface-mounted lights with high protection type

LED machine light | IP67
TUBELED_25

The TUBELED_25 has been specially developed for use in tooling machines and CNC machines, technical installations and in automation (with small installation space and distances). With its low structural height of just ~23 mm, it is ideal for confined installation situations. The LED surface-mounted light TUBELED_25 brings together robustness, efficiency and flexibility in extremely low dimensions. Alongside the stand-alone solution, the light is available as a cascadable version for connecting multiple lights to just one voltage connection.

Technology
- The latest performance-optimised LED technology
- Very slim profiled light-body made of aluminium
- Breakproof single-pane safety glass

Your benefits
- Pure-white light in daylight white
- Flicker-free light with no UV or IR content
- Electrically daisy chainable (cascadable)
- Resistant to oil, coolant and lubricant, insensitive to flying chips
- are shock- and vibration-resistant
- Easy assembly or retrofitting

Areas of application
- Tooling machines and CNC machines with little space
- Automation installations, machining centres

Versions
- 6 lengths: from 205 mm to 870 mm
- Variants for electrical daisy chaining (cascadable)

Single-pane safety glass
with opal white glare control

Robust aluminium housing

Space-saving geometry

Cascadable

24V DC	III	IP67	CNC	≥85	5600K	100.000 h (L80/B10)	M8	+55 −30	OPTION	ETL us	36 Monate	
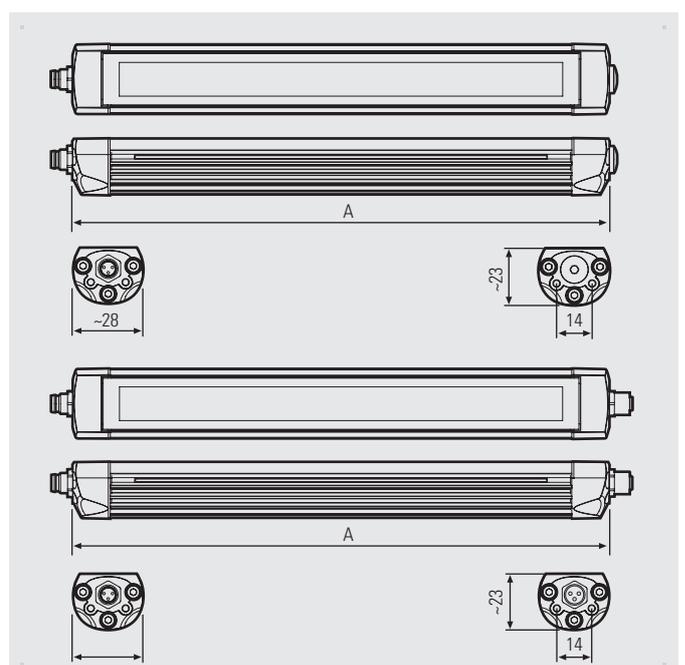
LED light	Item no.	Length (A)	Optics	E$_{max}$ *	Luminous flux	Power	Connection
TUBELED_25	154010-01	205 mm	100°	166 lx	668 lm	~4.3 W	24V DC
TUBELED_25	154110-01	290 mm	100°	250 lx	1002 lm	~6.5 W	24V DC
TUBELED_25	154210-01	370 mm	100°	328 lx	1336 lm	~8.6 W	24V DC
TUBELED_25	154310-01	540 mm	100°	466 lx	2004 lm	~13 W	24V DC
TUBELED_25	154410-01	705 mm	100°	623 lx	2672 lm	~17 W	24V DC
TUBELED_25	154510-01	870 mm	100°	747 lx	3340 lm	~21.6 W	24V DC
TUBELED_25	154610-01	1040 mm	100°	TBA [1]	4008 lm	~26 W	24V DC
TUBELED_25	154710-01	1540 mm	100°	TBA [1]	6012 lm	~39 W	24V DC
TUBELED_25, cascadable	154010-02	205 mm	100°	166 lx	668 lm	~4.3 W	24V DC
TUBELED_25, cascadable	154110-02	290 mm	100°	250 lx	1002 lm	~6.5 W	24V DC
TUBELED_25, cascadable	154210-02	370 mm	100°	328 lx	1336 lm	~8.6 W	24V DC
TUBELED_25, cascadable	154310-02	540 mm	100°	466 lx	2004 lm	~13 W	24V DC
TUBELED_25, cascadable	154410-02	705 mm	100°	623 lx	2672 lm	~17 W	24V DC
TUBELED_25, cascadable	154510-02	870 mm	100°	747 lx	3340 lm	~21.6 W	24V DC
TUBELED_25, cascadable	154610-02	1040 mm	100°	TBA [1]	4008 lm	~26 W	24V DC
TUBELED_25, cascadable	154710-02	1540 mm	100°	TBA [1]	6012 lm	~39 W	24V DC

For power supply units and connection materials, see the Accessories page in the Annex, code ▪   * maximum level of illuminance, measurement field 100 cm x 100 cm at distance of 100 cm
With through-wiring (cascadable), several lights can be electrically daisy chained. The total current consumption may not exceed 4A DC at t$_a$ max. of +40°C.   [1] See data sheet

Accessories	Item no.
TUBELED_25 mounting bracket, VA, 1 pair, adjustable + / -60°	210200-23
TUBELED_25 mounting bracket, VA, 1 pair, adjustable + / -60°, incl. magnet	210200-24
TUBELED_25 mounting bracket, VA, 1 pair, adjustable + / -180°	210200-25
TUBELED_25 mounting bracket, VA, 1 pair, adjustable + / -180°, incl. magnet	210200-26
TUBELED_25 mounting bracket, V2A, for light length 290 mm, light swivel 60°	210200-27

For figures, see TUBELED_25 RGB-W

LED machine light with indicator function | IP67
TUBELED_25 RGB-W

The LED light for tooling machines, installations technology and automation is a variant of the TUBELED_25, expanded to include an indicator function. The LED technology is well sealed and embedded within the slim, sturdy aluminium housing. The white light and RGB LED chips underneath the safety glass are arranged in clusters. This means: the LEDs for white light and the RGB LEDs work independently of each other and the uniform arrangement creates a homogeneous light pattern, whether indication takes place with illumination or colour.

Technology
■ The latest performance-optimised LED technology
■ LED chips for white light and RGB LED chips
■ Control of LED chips using the PLC controller of a machine or system
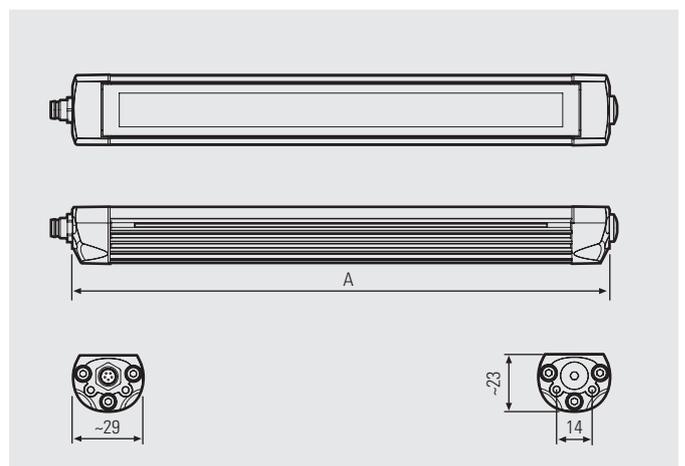■ Breakproof single-pane safety glass

Your benefits
■ Flicker-free surface lighting, with no UV or IR content
■ Pure-white light in daylight white for illumination and lightning flashing, flashing and coloured RGB light for indication
■ The light changes to coloured light, allowing different machine and installations statuses to be indicated.
■ Easy assembly or retrofitting
■ Resistant to oil, coolant and lubricant, insensitive to flying chips
■ Shock- and vibration-resistant

■ Areas of application
■ Tooling machines and CNC machines
■ Automation installations, machining centres
■ Production and plant areas with little space

Versions
■ 6 lengths: from 205 mm to 870 mm

Single-pane safety glass with opal white glare control

Space-saving geometry

Robust aluminium housing

Daylight white via white LED chips

| 24V DC | ◇ III | IP67 | CNC | ◉ ≥85 | 5000K | 100.000 h (L80/B10) | M8 | +55 −30 | OPTION | ⊗ | ETL us | 36 months | 🇩🇪 |

LED light	Item no.	Length (A)	Optics	E_{max} * [W]	Luminous flux [W]	Power				Connection
						[R]	[G]	[B]	[W]	
TUBELED_25 RGB-W	154090-01	205 mm	100°	167 lx	767 lm	~1,4 W	~1 W	~1,4 W	~4,8 W	24V DC
TUBELED_25 RGB-W	154190-01	290 mm	100°	247 lx	1150 lm	~2,2 W	~1,4 W	~2,2 W	~7,2 W	24V DC
TUBELED_25 RGB-W	154290-01	370 mm	100°	328 lx	1533 lm	~2,9 W	~1,9 W	~2,9 W	~9,6 W	24V DC
TUBELED_25 RGB-W	154390-01	540 mm	100°	479 lx	2300 lm	~4,3 W	~2,9 W	~4,3 W	~14,4 W	24V DC
TUBELED_25 RGB-W	154490-01	705 mm	100°	618 lx	3067 lm	~5,8 W	~3,8 W	~5,8 W	~19,2 W	24V DC
TUBELED_25 RGB-W	154590-01	870 mm	100°	739 lx	3833 lm	~7,2 W	~4,8 W	~7,2 W	~24 W	24V DC
TUBELED_25 RGB-W	154690-01	1040 mm	100°	TBA [1]	TBA [1]	~8,7 W	~5,8 W	~8,7 W	~28,8 W	24V DC

For power supply units and connection materials, see the Accessories page in the Annex, code ■

* maximum level of illuminance, measurement field 100 cm x 100 cm at distance of 100 cm
[1] See data sheet

Accessories	Item no.
TUBELED_25 mounting bracket, VA, 1 pair, adjustable + / -60°	210200-23
TUBELED_25 mounting bracket, VA, 1 pair, adjustable + / -60°, incl. magnet	210200-24
TUBELED_25 mounting bracket, VA, 1 pair, adjustable + / -180°	210200-25
TUBELED_25 mounting bracket, VA, 1 pair, adjustable + / -180°, incl. magnet	210200-26
TUBELED_25 mounting bracket, V2A, for light length 290 mm, light swivel 60°	210200-27

210200-23

210200-24

210200-25

210200-26

210200-27
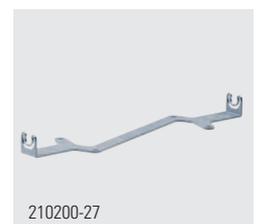
IO-Link: One light. Lots of possibilities.

IO-Link: A piece of the future in automation and control technology

What is IO-Link?
IO-Link is an internationally uniform, bidirectional communication standard understood by all IO-Link-compatible devices.

A translation into the language of the higher-level controller takes place in the centrally installed IO-Link master. Newer controllers often come with IO-Link built in. The automation of industrial processes can be done easily and affordably with IO-Link.

What can IO-Link lights from LED2WORK do?
At first glance, an LED light controlled via IO-Link is like any other LED light with RGB-W:

White light for illumination and an indicator function with flashing and changes to coloured light make the light a beacon that can be seen from far off.

But the LED lights with IO-LINK can do so much more!
Incorporated into an IO-Link installation, the behaviour of the IO-Link-compatible LED lights is easy to adjust, control and monitor using software.

No additional PLC programming is necessary.

Handling is more flexible, parametrisation more versatile and transparent. The diagnostics data can be used for long-term planning, statistics and certifications.

The benefits of LED2WORK IO-Link lights

- White light thanks to separate LED chips. Any colours can be combined with additional RGB LED chips.
- Alongside white light, 14 storage slots are available for personalised coloured light.
- Automated colour switching can be set between 2 and 4 colours.
- Light dimming between 100% and 0% intensity is possible.
- Flashing, lightning flashing, fading or glowing are possible along with permanent light. The duration of the effects can be adjusted.
- The light's output can be adjusted as needed.
- If the operating temperature is too high, the light automatically reduces its output.
- Using a fourth connection PIN, the light can be supplied with additional output.
- The diagnostics data range from operating hours counters and temperature indicators to output indicators.

Colour selection		Automatic colour switching
White + 14 times memory mapping for colour combinations | 6 colours preset		**Automatic colour switching**
		2 colours
		3 colours
		4 colours
Any colour can be mixed and saved from RGB. Even preset colours, except for white, can be changed.		Any saved colour can be allocated to automatic colour switching.

Dimming
100%–0%

Operating mode			
Static	Flashing	Lightning flashing	Fading/glowing

The duration can be adjusted for flashing, lightning flashing, fading and colour switching.

Dynamics
With fading/glowing, the minimum brightness of the effect can be set.

Special features

Output reduction
To use less powerful IO-Link masters, the maximum output of the light can be limited.

Supply to PIN 2
In the same way, with a stronger light on a less powerful IO-Link master can additionally switch the light's power supply to PIN 2.

Excess temperature reduction
If a temperature of more than 80°C is reached with a higher ambient temperature in the light, the output automatically and gradually drops until a constant temperature of under 80°C is reached.

Diagnostics data	
	Operating hours counter
	Remaining operating hours
	Maximum operating hours reached
	Supply voltage L+
	Voltage supply PIN 2
	Working temperature
	Maximum measured working temperature
	Power limit white
	Power limit red
	Power limit green
	Power limit blue

LED machine and system light with IO-Link | IP67
TUBELED_25 RGB-W IO-Link

The slim LED light with IO-Link functionality: connected to an IO-Link master at field level, the intelligent light TUBELED_25 RGB-W IO-Link can communicate with any suitable controller. The means brightness, light switching or signals such as coloured light, lightning flashing, flashing and more can be set directly in the controller. In the opposite direction, diagnostics data such as operating duration and temperature are transmitted from the light to the controller in order to simplify parametrisation. This TUBELED_25 can easily be incorporated as an actuator in any system automated with IO-Link in the usual way.

Technology
- The latest performance-optimised LED technology with IO-Link PCB
- LED chips for white light and RGB LED chips
- Control of the light from a higher-level control system via the IO-Link master
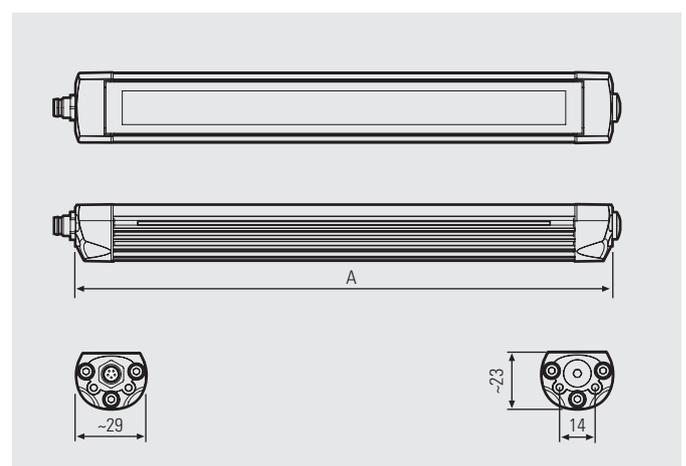
Your benefits
- Flicker-free surface lighting, with no UV or IR content, and indicator function using RGB light
- Easy incorporation into an automation solution
- Centralised, user-friendly configuration of all parameters via the controller, where light brightness and lightning flashing, flashing, coloured RGB light and much more can be set
- Diagnostics data such as temperatures and application time are transmitted directly to the controller
- Resistant to oil, coolant and lubricant, insensitive to flying chips

Areas of application
- Tooling machines and CNC machines pre-fitted with IO-Link
- Automated installations and machining centres

Versions
- 6 lengths: from 205 mm to 870 mm

IO-Link inside

CNC
geeignet approved

- Space-saving geometry
- Robust aluminium housing
- Single-pane safety glass with opal white glare control
- Daylight white via white LED chips

24V DC	III	IP67	≥85	5000K	100.000h (L80/B10)	M8	+55 −30	IO-Link		36 months	

LED light	Item no.	Length (A)	Optics	E_{max} * [W]	Luminous flux [W]	Power				Connection
						[R]	[G]	[B]	[W]	
TUBELED_25 RGB-W IO-Link	154090-11	205 mm	100°	167 lx	767 lm	~1,4 W	~1 W	~1,4 W	~4,8 W	24V DC
TUBELED_25 RGB-W IO-Link	154190-11	290 mm	100°	247 lx	1150 lm	~2,2 W	~1,4 W	~2,2 W	~7,2 W	24V DC
TUBELED_25 RGB-W IO-Link	154290-11	370 mm	100°	328 lx	1533 lm	~2,9 W	~1,9 W	~2,9 W	~9,6 W	24V DC
TUBELED_25 RGB-W IO-Link	154390-11	540 mm	100°	479 lx	2300 lm	~4,3 W	~2,9 W	~4,3 W	~14,4 W	24V DC
TUBELED_25 RGB-W IO-Link	154490-11	705 mm	100°	618 lx	3067 lm	~5,8 W	~3,8 W	~5,8 W	~19,2 W	24V DC
TUBELED_25 RGB-W IO-Link	154590-11	870 mm	100°	739 lx	3833 lm	~7,2 W	~4,8 W	~7,2 W	~24 W	24V DC

For power supply units and connection materials, see the Accessories page in the Annex, code ■

* maximum level of illuminance, measurement field 100 cm x 100 cm at distance of 100 cm

Accessories	Item no.
TUBELED_25 mounting bracket, VA, 1 pair, adjustable + / -60°	210200-23
TUBELED_25 mounting bracket, VA, 1 pair, adjustable + / -60°, incl. magnet	210200-24
TUBELED_25 mounting bracket, VA, 1 pair, adjustable + / -180°	210200-25
TUBELED_25 mounting bracket, VA, 1 pair, adjustable + / -180°, incl. magnet	210200-26
TUBELED_25 mounting bracket, V2A, for light length 290 mm, light swivel 60°	210200-27

210200-23   210200-24   210200-25   210200-26   210200-27

LED machine light | IP67/IP69K
TUBELED_40 II

Small installation space with harsh production conditions and temperatures of up to +70°C – the TUBELED_40 II manages this like no other. With a light diameter of just 40 mm and seven available lengths, the slim LED light is truly an all-round talent: it is a robust and bright upgrade for any machine.

Technology
- Heat dissipation via extruded aluminium profile – no burning in of cooling lubricant
- Shatterproof, 4 mm single-pane safety glass
- Light forming technology
- Oil-resistant seals (FKM seal Viton®)
- Machine space illumination – resistant to flying chips, and shock- and vibration-resistant – 100% CNC-compatible

Your benefits
- Fast and simple installation on existing machines
- Optimal illumination through 100° surface lighting
- Flicker-free, with no UV or IR content
- High IP67/IP69K protection type
- Electrically daisy chainable (cascadable)
- Suitable for use in ambient temperatures of up to +70°C
- On/off interface: load-free switching, flashing and dimming possible

Areas of application
- Microprecision and erosion machines, automated punches
- Wherever confined installation conditions prevail

Versions/installation
- 7 lengths: 190 mm, 280 mm, 365 mm, 540 mm, 715 mm 1040 mm, 1540 mm
- **Light flow-optimised power versions and performance-optimised ECO versions:**
  Power version for greater distances and high light requirement and ECO version for high ambient temperatures – price-performance winner
- Variants for electrical daisy chaining (cascadable)
- Can be mounted using optional mounting accessories
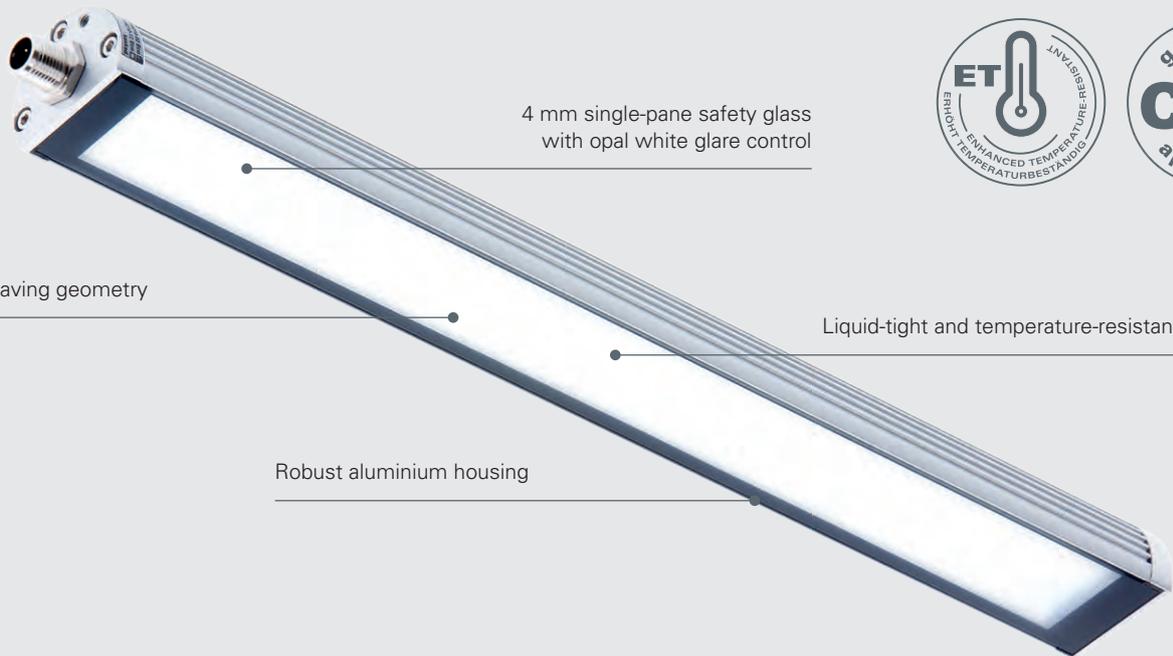
4 mm single-pane safety glass
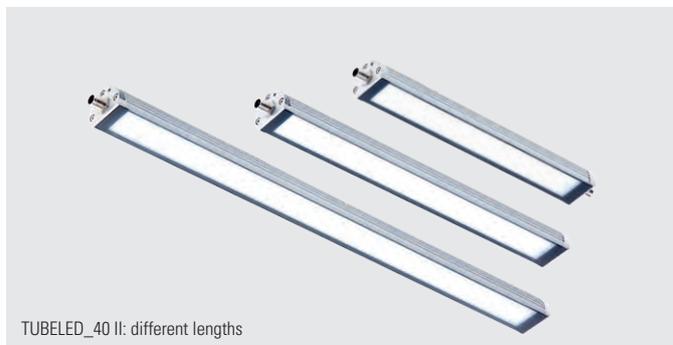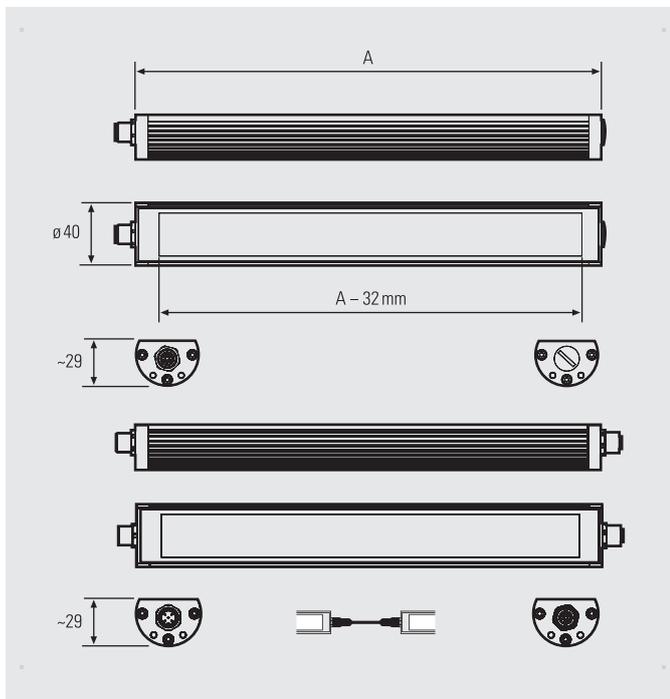with opal white glare control

Space-saving geometry

Liquid-tight and temperature-resistant

Robust aluminium housing

| 24V DC | | IP67/IP69K | CNC | ≥85 | 5600K | 100.000h (L80/B10) | M12 | Power version +60/−30 | ECO version +70/−30 | OPTION | D | | | 36 months | |

TUBELED_40 II: different lengths
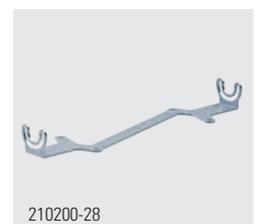

TUBELED_40 II, cascaded

LED surface-mounted lights with high protection type

LED light	Item no.	Length (A)	Optics	E_{max}*	Luminous flux	Power	Connection
TUBELED_40 II Power	118010-01	190 mm	100°	415 lx	1266 lm	~8 W	24V DC
TUBELED_40 II Power	118110-01	280 mm	100°	617 lx	1899 lm	~12 W	24V DC
TUBELED_40 II Power	118210-01	365 mm	100°	815 lx	2531 lm	~16 W	24V DC
TUBELED_40 II Power	118310-01	540 mm	100°	1184 lx	3798 lm	~24 W	24V DC
TUBELED_40 II Power	118410-01	715 mm	100°	1514 lx	5062 lm	~32 W	24V DC
TUBELED_40 II Power	118510-01	1040 mm	100°	2049 lx	7596 lm	~48 W	24V DC
TUBELED_40 II Power	118610-01	1540 mm	100°	2553 lx	11394 lm	~72 W	24V DC
TUBELED_40 II ECO	118010-02	190 mm	100°	250 lx	668 lm	~4 W	24V DC
TUBELED_40 II ECO	118110-02	280 mm	100°	371 lx	1000 lm	~6 W	24V DC
TUBELED_40 II ECO	118210-02	365 mm	100°	489 lx	1336 lm	~8.5 W	24V DC
TUBELED_40 II ECO	118310-02	540 mm	100°	711 lx	2004 lm	~13 W	24V DC
TUBELED_40 II ECO	118410-02	715 mm	100°	909 lx	2672 lm	~17 W	24V DC
TUBELED_40 II ECO	118510-02	1040 mm	100°	1233 lx	4008 lm	~24 W	24V DC
TUBELED_40 II ECO	118610-02	1540 mm	100°	1539 lx	6012 lm	~38 W	24V DC

LED light, cascadable	Item no.	Length (A)	Optics	E_{max}*	Luminous flux	Power	Connection
TUBELED_40 II Power, cascadable	118010-11	190 mm	100°	415 lx	1266 lm	~8 W	24V DC
TUBELED_40 II Power, cascadable	118110-11	280 mm	100°	617 lx	1899 lm	~12 W	24V DC
TUBELED_40 II Power, cascadable	118210-11	365 mm	100°	815 lx	2531 lm	~16 W	24V DC
TUBELED_40 II Power, cascadable	118310-11	540 mm	100°	1184 lx	3798 lm	~24 W	24V DC
TUBELED_40 II Power, cascadable	118410-11	715 mm	100°	1514 lx	5062 lm	~32 W	24V DC
TUBELED_40 II Power, cascadable	118510-11	1040 mm	100°	2049 lx	7596 lm	~48 W	24V DC
TUBELED_40 II Power, cascadable	118610-11	1540 mm	100°	2553 lx	11394 lm	~72 W	24V DC
TUBELED_40 II ECO, cascadable	118010-12	190 mm	100°	250 lx	668 lm	~4 W	24V DC
TUBELED_40 II ECO, cascadable	118110-12	280 mm	100°	371 lx	1000 lm	~6 W	24V DC
TUBELED_40 II ECO, cascadable	118210-12	365 mm	100°	489 lx	1336 lm	~8.5 W	24V DC
TUBELED_40 II ECO, cascadable	118310-12	540 mm	100°	711 lx	2004 lm	~13 W	24V DC
TUBELED_40 II ECO, cascadable	118410-12	715 mm	100°	909 lx	2672 lm	~17 W	24V DC
TUBELED_40 II ECO, cascadable	118510-12	1040 mm	100°	1233 lx	4008 lm	~24 W	24V DC
TUBELED_40 II ECO, cascadable	118610-12	1540 mm	100°	1539 lx	6012 lm	~38 W	24V DC

For power supply units, dimming boxes and connection materials, see the Accessories page in the Annex, code ■ and ■   * maximum level of illuminance, measurement field 100 cm x 100 cm at distance of 100 cm
With through-wiring (cascadable), several lights can be electrically daisy chained. The overall power consumption must not exceed 8A DC with t_a max. of +30°C or 7A DC with t_a max. of +40°C.

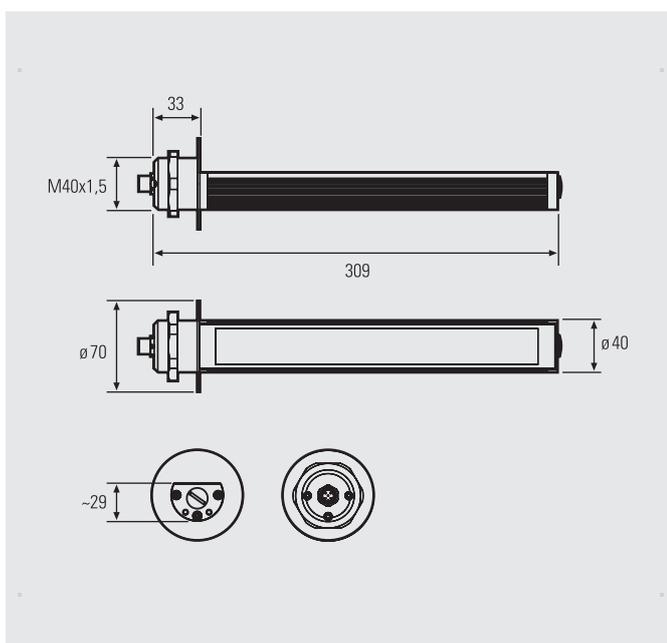| Accessories	Item no.
Light holder, aluminium, 1 pair	210200-06
Mounting bracket, V2A, 1 pair (LED light rotation axis infinitely adjustable by 111°)	210200-11
Mounting bracket, V2A, 1 pair, incl. magnet (LED light rotation axis infinitely adjustable by 111°)	210200-12
Mounting bracket, V2A, 1 pair, adjustable + / -180°	210200-14
Light holder, V2A, for light length 280 mm, light swivel 60°	210200-28

210200-06

210200-11

210200-12

210200-14

210200-28

TUBELED_40 II M40x1.5 for mounting
within the machine housing

Power version | ECO version

24V DC		IP67/IP69K	CNC	≥85	5600K	100.000 h (L80/B10)	M12	+60 −30	+70 −30	OPTION	D		ETL	36 months	

LED light	Item no.	Length (A)	Optics	E$_{max}$*	Luminous flux	Power	Connection
TUBELED_40 II M40 x 1.5 Power	118110-03	309 mm	100°	617 lx	1899 lm	~12 W	24V DC
TUBELED_40 II M40 x 1.5 ECO	118110-04	309 mm	100°	371 lx	1000 lm	~6 W	24V DC

For power supply units, dimming boxes and connection materials, see Accessories, code ■ and ■

* maximum level of illuminance, measurement field 100 cm x 100 cm at distance of 100 cm

LED surface-mounted lights with high protection type

LED machine light with indicator function | IP67/IP69K

TUBELED_40 II RGB-W

White LED chips for optimal illumination and RGB LED chips for colour switching in one light – meet the TUBELED_40 II RGB-W. With a diameter of 40 mm and its compact size, the light is best used wherever little space is available and harsh production conditions prevail. But the machine light can not only be used there: any production area can be illuminated in the best way and signal changes to machine and installation status in colour.

Technology

- White light and RGB LED chips in one light
- RGB LED chips can indicate different states of machines and installations through colour switching
- Control of LED chips using the PLC controller of a machine or plant
- Shatterproof single-pane safety glass, 4 mm

Your benefits

- Flicker-free, homogeneous illumination, with no UV or IR content, and indicator function using freely definable colours or flashing intervals
- Easy setup or retrofitting in tooling machines
- Optimal illumination through 100° surface lighting
- Resistant to oil and cooling lubricant, resistant to flying chips

Areas of application

- Tooling machines and CNC machines
- Injection moulding machines, automated punches
- Productions and production areas with little space

Versions/installation

- 4 lengths: 260 mm, 540 mm, 1040 mm, 1540 mm
- Attachment via optional brackets or existing brackets, with 1:1 replacement of conventional, standardised lighting

LED chips for white light
and coloured RGB light
arranged in clusters

geeignet
CNC
approved

Space-saving geometry

Single-pane safety glass
with opal white glare control

Daylight white via
white LED chips

Robust, trapezium-ribbed aluminium housing

| 24V DC | III | IP67/IP69K | D | Power version RGB ≥80 | +60 −30 | ECO version RGB ≥85 | +70 −30 | 5000K | RGB | 100.000 h (L80/B10) | M12 | ⊗ | c ETL us | 36 months | 🇩🇪 |
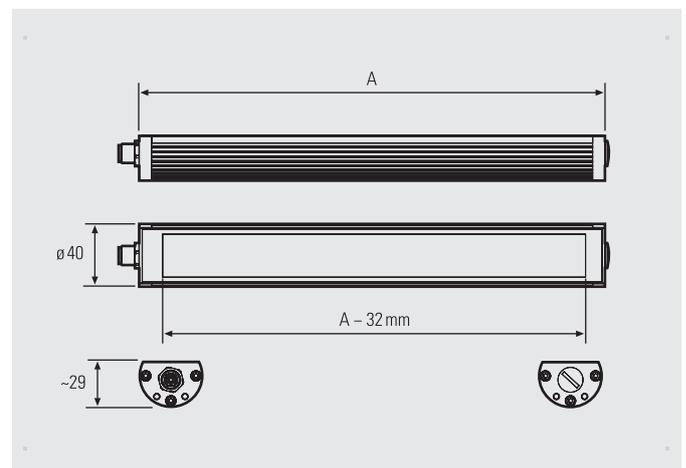
LED light	Item no.	Length (A)	Optics	E_{max}* [W]	Luminous flux [W]	Power				Connection
						[R]	[G]	[B]	[W]	
TUBELED_40 II RGB-W Power	118190-01	280 mm	100°	324 lx	1215 lm	~9 W	~2.5 W	~9 W	~9.5 W	24V DC
TUBELED_40 II RGB-W Power	118390-01	540 mm	100°	607 lx	2430 lm	~18 W	~5 W	~18 W	~19 W	24V DC
TUBELED_40 II RGB-W Power	118590-01	1040 mm	100°	1078 lx	4860 lm	~36 W	~10 W	~36 W	~38 W	24V DC
TUBELED_40 II RGB-W Power	118690-01	1540 mm	100°	1346 lx	7290 lm	~54 W	~15 W	~54 W	~57 W	24V DC
TUBELED_40 II RGB-W ECO	118190-02	280 mm	100°	282 lx	1150 lm	~2.2 W	~1.4 W	~2.2 W	~7 W	24V DC
TUBELED_40 II RGB-W ECO	118390-02	540 mm	100°	540 lx	2300 lm	~4.3 W	~2.9 W	~4.3 W	~14 W	24V DC
TUBELED_40 II RGB-W ECO	118590-02	1040 mm	100°	962 lx	4600 lm	~8.6 W	~5.8 W	~8.6 W	~28 W	24V DC
TUBELED_40 II RGB-W ECO	118690-02	1540 mm	100°	1201 lx	5670 lm	~13 W	~8.7 W	~13 W	~42 W	24V DC

For power supply units, dimming boxes and connection materials code ■, see the Accessories page in the Annex

* maximum level of illuminance, measurement field 100 cm x 100 cm at distance of 100 cm

210200-06

210200-11

210200-12
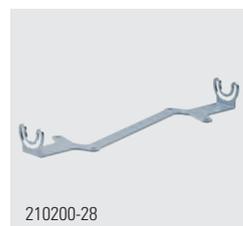
210200-14

210200-28

Accessories	Item no.
Light holder, aluminium, 1 pair	210200-06
Light holder, V2A bracket for swivel mounting, 1 pair	210200-11

Accessories	Item no.
Light holder, V2A bracket, swivelled incl. magnet, 1 pair	210200-12
Light holder, V2A, 1 pair, adjustable + / -180°	210200-14
Mounting bracket, V2A, for light length 280 mm, light swivel 60°	210200-28

LED surface-mounted lights with high protection type

AC variant with WIDE RANGE voltage connection

LED machine light | IP67/IP69K
TUBELED_70 EVO

The TUBELED_70 EVO follows – upgraded with state-of-the-art LED technology – in the footsteps of the proven TUBELED_70 – the first machine light developed to quickly and easily take the place of older tube lights with fluorescent technology and a diameter of 70 mm in established tooling machines. Available in different lengths and connection versions, the TUBELED_70 EVO is available for conversion and initial setup alike. Thanks to its good heat management, the LED light is also equipped for use in higher temperature ranges.

Technology
- The latest development in LED technology
- Heat dissipation via extruded aluminium profile
- Shatterproof, 4 mm single-pane safety glass
- Oil-resistant seals (FKM seal Viton®)
- Installed directly in the working area of machines or machining centres: resistant to flying chips and shock- and vibration-resistant – CNC-compatible

Your benefits
- Flicker-free light with no UV or IR content
- 100° optics for powerful, flat lighting – individual optics available on request
- Quick installation and easy setup or retrofitting
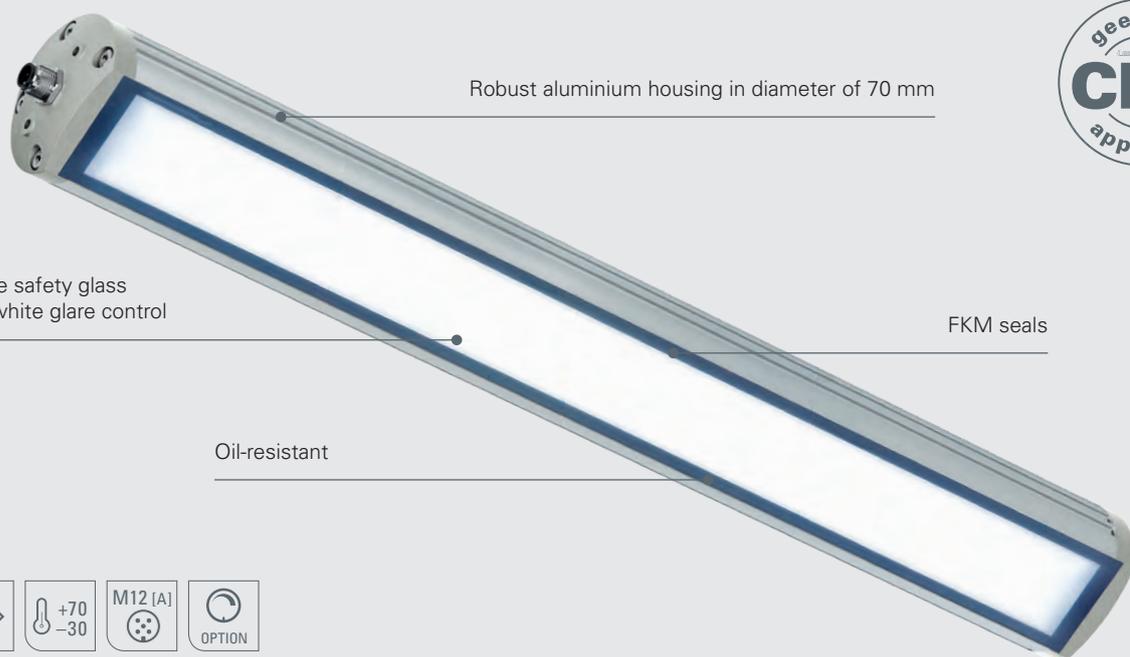
Areas of application
- Tooling machines and CNC machines, machining centres: As an OEM or for retrofitting
- External applications

Versions
- Available in 6 lengths as 24V DC or with 120–277V AC wide-range connection
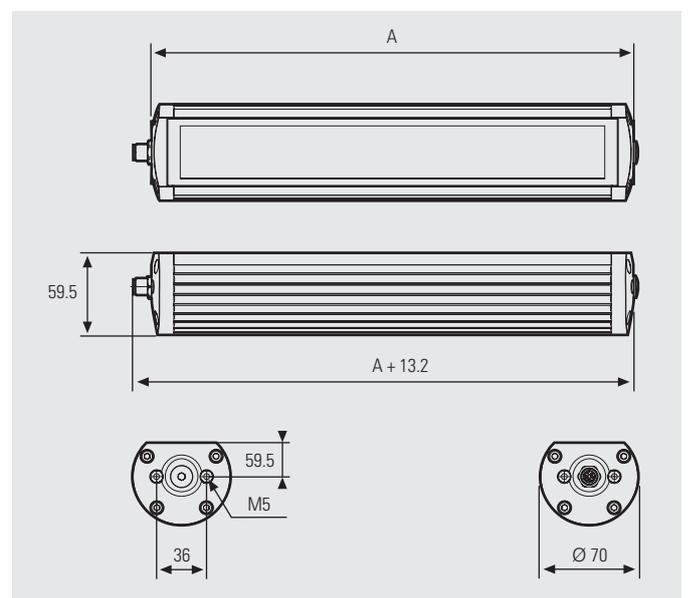
Robust aluminium housing in diameter of 70 mm

Single-pane safety glass
with opal white glare control

FKM seals

Oil-resistant

CNC geeignet approved

DC version

| 24V DC | III | +70 / -30 | M12 [A] | OPTION |

AC version

| WIDE RANGE 120 V / 277 V AC | | +60 / -10 | M12 [S] | | IP67/ IP69K | CNC | ≥85 | 5600K | 100.000 h (L80/B10) | | c(ETL)us | 36 months | |

LED light	Item no.	Length (A)	Optics	E$_{max}$*	Luminous flux	Power	Connection
TUBELED_70 EVO DC	156010-01	300 mm	100°	TBA	1899 lm	~12 W	24V DC
TUBELED_70 EVO DC	156110-01	510 mm	100°	TBA	3164 lm	~21 W	24V DC
TUBELED_70 EVO DC	156210-01	560 mm	100°	TBA	3798 lm	~24 W	24V DC
TUBELED_70 EVO DC	156310-01	790 mm	100°	TBA	7596 lm	~37 W	24V DC
TUBELED_70 EVO DC	156410-01	1100 mm	100°	TBA	7596 lm	~48 W	24V DC
TUBELED_70 EVO DC	156510-01	1580 mm	100°	TBA	11394 lm	~74 W	24V DC

For power supply units, dimming boxes and connection materials, see the Accessories page in the Annex, code ▪ and ▪

* Values for maximum level of illuminance, E$_{max}$, see data sheet

LED light	Item no.	Length (A)	Optics	E$_{max}$*	Luminous flux	Power	Connection
TUBELED_70 EVO AC	156010-11	300 mm	100°	TBA	1899 lm	~14 W	120–277V AC
TUBELED_70 EVO AC	156110-11	510 mm	100°	TBA	3164 lm	~23 W	120–277V AC
TUBELED_70 EVO AC	156210-11	560 mm	100°	TBA	3798 lm	~27 W	120–277V AC
TUBELED_70 EVO AC	156310-11	790 mm	100°	TBA	7596 lm	~41 W	120–277V AC
TUBELED_70 EVO AC	156410-11	1100 mm	100°	TBA	7596 lm	~54 W	120–277V AC
TUBELED_70 EVO AC	156510-11	1580 mm	100°	TBA	11394 lm	~81 W	120–277V AC

For connection materials, see the Accessories page in the Annex, code ▪

* Values for maximum level of illuminance, E$_{max}$, see data sheet

Accessories	Item no.
TUBELED_70 light holder, aluminium, 1 pair	210200-02
TUBELED_70 light holder, 1 pair	210200-31

210200-02

210200-31

LED machine light | IP67
VARILED II

The LED machine light VARILED II is a very flat LED surface-mounted light for initial setup or retrofitting for lighting machines and installations. The high IP67 protection type confirms that it is extremely leak-tight. Furthermore, the LED light is insensitive to many media such as oils and coolants. Its benefit is its narrow, very flat shape combined with a homogeneous and flicker-free illumination that would not normally be expected from such a compact light.

Technology

- Aluminium basic body with single-pane safety glass
- Wide-radiating optics with quality diffusor lens
- Flat housing with M8 plug connector

Your benefits

- Homogeneous, flicker-free light thanks to diffuse light distribution
- Extremely robust LED machine light
- Very flat structure and space-saving installation in the machining area

Areas of application

- For work areas with confined space conditions
- Tooling machines and machining centres
- Injection moulding machines and extruders
- For illuminating automated installations

Versions/assembly

- Available in seven lengths
- Mounting via the slotted hole directly on the housing

M8 connection

Very flat aluminium housing

Single-pane safety glass

IP67

CNC approved geeignet

| 24V DC | | IP67 | CNC | ≥85 | 5600K | 100.000 h (L80/B10) | M8 | +60 −30 | | ETL | 36 months | |
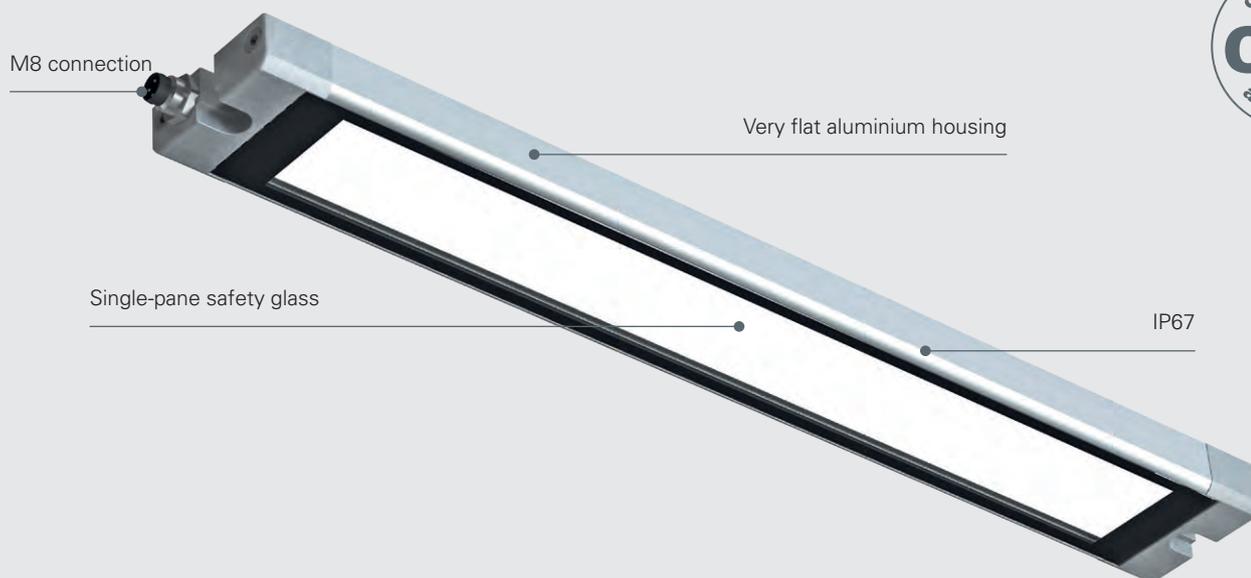
LED light	Item no.	Length (A)	Distance (B)	Optics	E_max*	Luminous flux	Power	Connection
VARILED II	157010-01	125 mm	112 mm	100°	TBA	633 lm	~4 W	24V DC
VARILED II	157110-01	208 mm	195 mm	100°	TBA	1266 lm	~8 W	24V DC
VARILED II	157210-01	298 mm	285 mm	100°	TBA	1899 lm	~12 W	24V DC
VARILED II	157310-01	383 mm	370 mm	100°	TBA	2531 lm	~16 W	24V DC
VARILED II	157410-01	558 mm	545 mm	100°	TBA	3798 lm	~24 W	24V DC
VARILED II	157510-01	733 mm	720 mm	100°	TBA	5062 lm	~32 W	24V DC
VARILED II	157610-01	1058 mm	1045 mm	100°	TBA	7596 lm	~48 W	24V DC

For power supply units and connection materials, see the Accessories page in the Annex, code ■

* Values for maximum level of illuminance, E_{max}, see data sheet

A

~40 4.5

B = A − 13

~14

A + 8.7
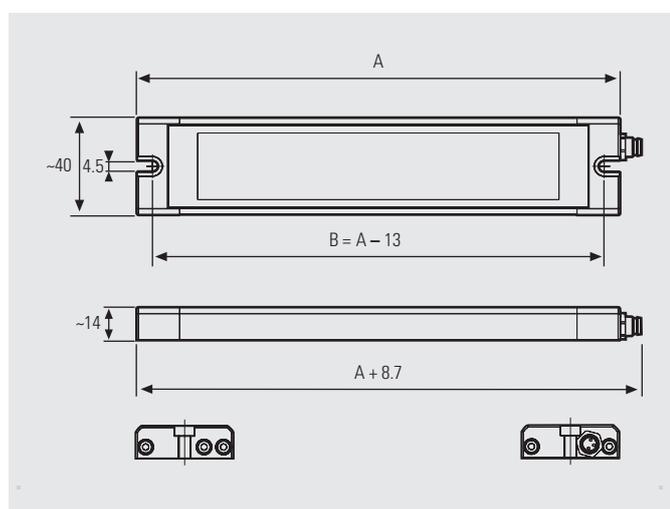
LED machine light | IP67/IP69K
FIELDLED EVO Recessed

The recessed FIELDLED EVO is the perfect machine light for large-scale tooling machines thanks to its precise-fit installation and powerful illumination. It was developed for harsh production environments and remains completely untroubled by chips, oil and emulsions. The safety glass is glued to the aluminium housing. An additional oil-resistant seal encloses the installation frame against the machine housing. Even in its recessed variant, the FIELDLED EVO comes with the highest protection type and is utterly indestructible.

Technology
- Flat structure and compact LED array in the inside – extremely powerful
- Single-pane safety glass (TSG) with microprismatic glare control underneath
- Heat is dissipated to the rear via the aluminium housing
- On/off interface: load-free switching, flashing and dimming possible

Your benefits
- Continuous light output
- Coolant does not burn on the light-emitting surface
- Light forming technology and microprisms for improved light diffusion
- Homogeneous, flicker-free light with no UV or IR content

Areas of application
- Large-volume machines and machining centres
- CNC machines, tooling machines
- Milling machines, surface grinding machines

Versions
- 4 lengths available: 280 mm, 540 mm, 790 mm, 1040 mm
- 2 variants per length: Connection at the front or the rear
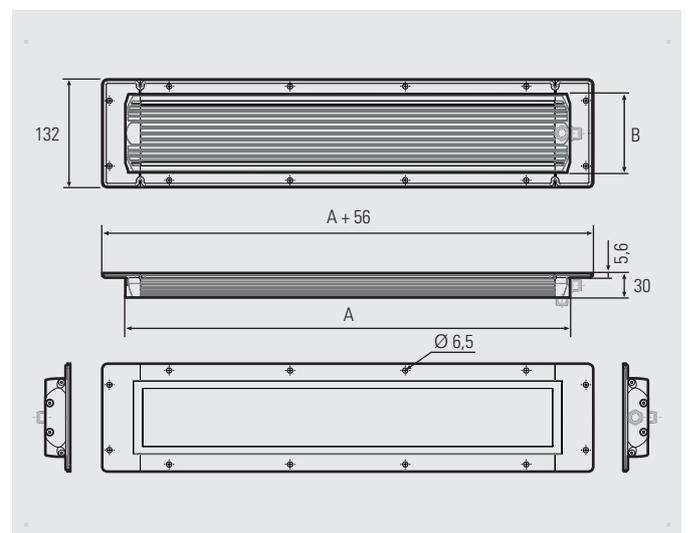
Rear seal
between the light and machine

Single-pane safety glass
with microprismatic glare control
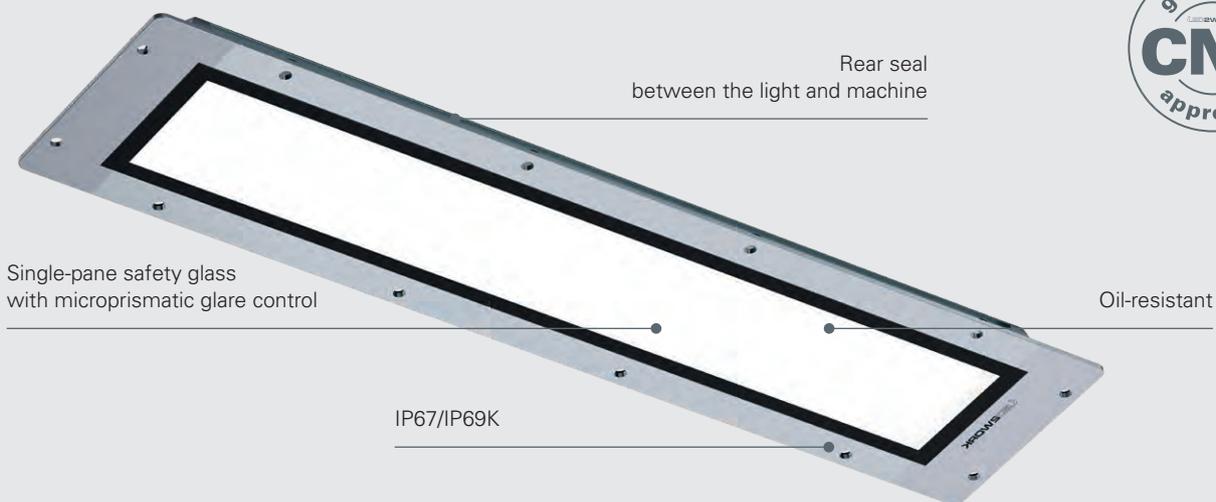
Oil-resistant

IP67/IP69K

24V DC	III	IP67/IP69K	CNC	≥85	5600K	100.000 h (L80/B10)	M12	+60 −30	OPTION	ETL	36 months	

LED light	Item no.	Length (A)	Width (B)	Optics	E_{max}*	Luminous flux	Power	Connection
FIELDLED EVO 280_96 recessed, M12-A front	153010-11	280 mm	96 mm	100°	1969 lx	3000 lm	~19 W	24V DC
FIELDLED EVO 280_96 recessed, M12-A rear	153010-12	280 mm	96 mm	100°	1969 lx	3000 lm	~19 W	24V DC
FIELDLED EVO 540_96 recessed, M12-A front	153110-11	540 mm	96 mm	100°	2147 lx	6000 lm	~39 W	24V DC
FIELDLED EVO 540_96 recessed, M12-A rear	153110-12	540 mm	96 mm	100°	2147 lx	6000 lm	~39 W	24V DC
FIELDLED EVO 790_96 recessed, M12-A front	153210-11	790 mm	96 mm	100°	3047 lx	9000 lm	~58 W	24V DC
FIELDLED EVO 790_96 recessed, M12-A rear	153210-12	790 mm	96 mm	100°	3047 lx	9000 lm	~58 W	24V DC
FIELDLED EVO 1040_96 recessed, M12-A front	153310-11	1040 mm	96 mm	100°	3777 lx	12000 lm	~78 W	24V DC
FIELDLED EVO 1040_96 recessed, M12-A rear	153310-12	1040 mm	96 mm	100°	3777 lx	12000 lm	~78 W	24V DC

For power supply units, dimming boxes and connection materials, see the Accessories page in the Annex, code ▇ and ▇   * maximum level of illuminance, measurement field 100 cm x 100 cm at distance of 100 cm

High-quality, moulded seal

Rear M12 plug connector

Front with M12 plug connector
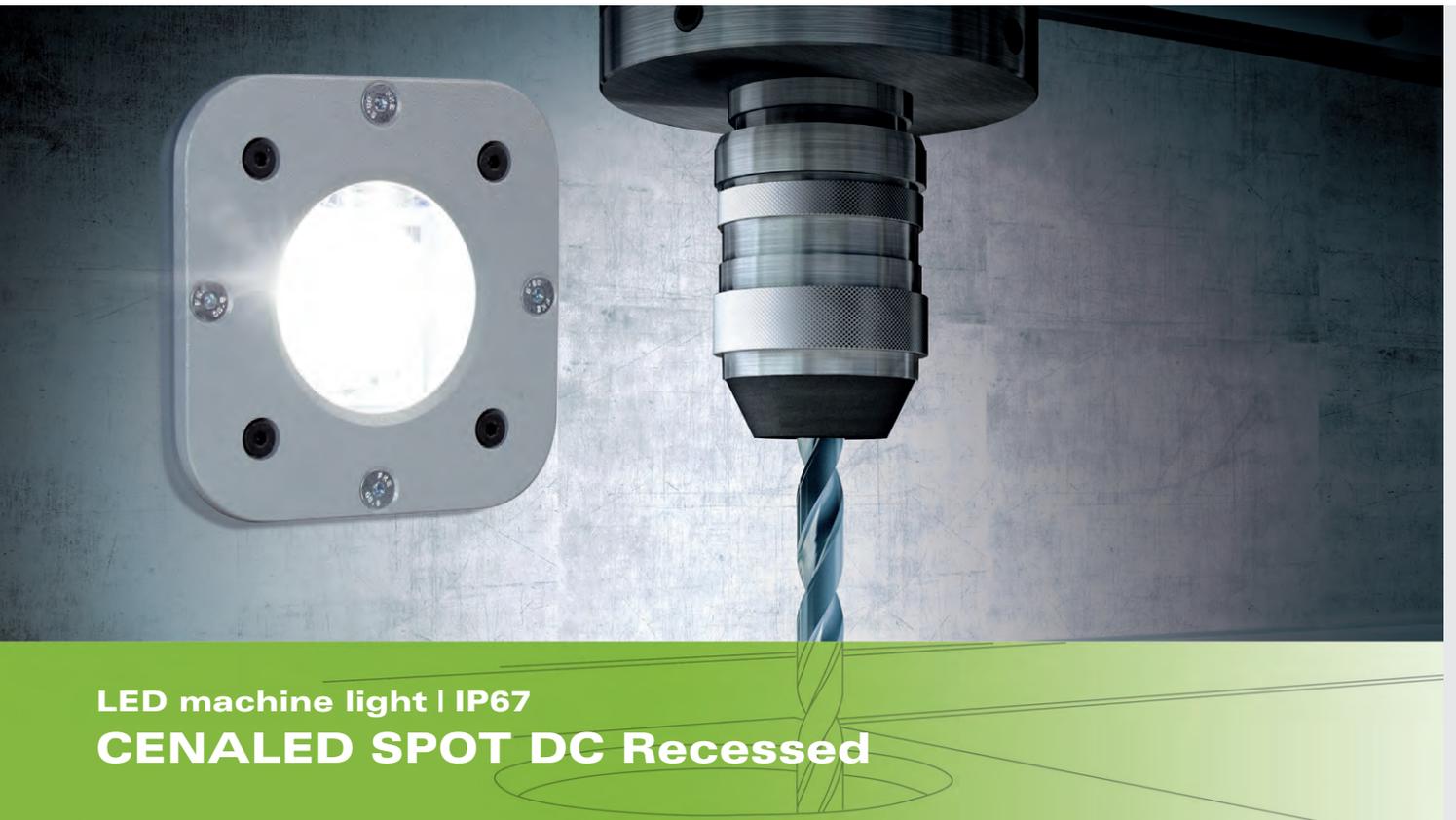
LED machine light | IP67
CENALED SPOT DC Recessed

CENALED SPOT DC Recessed is an LED machine light with high protection type for recessed mounting. It is available in three versions, which differ in terms of beam angle. The recess and housing are made of sturdy aluminium. Strong single-pane safety glass over the light aperture protects the powerful LED technology inside. The light has a low installation depth and only minimally protrudes from the machine or installation housing.

Technology
- The latest LED technology and light emission via three selectable light characteristics, depending on the chosen light
- Made for harsh production environments: robust, oil-resistant and resistant to flying chips
- Ribbed, powder-coated aluminium base body and breakproof single-pane safety glass - No burning in of cooling lubricants or emulsions on the surface and maximum heat dissipation
- Installation in recesses using screws

Your benefits
- High-power LED technology: Bright, whether as a spotlight or surface lighting
- Low installation depth and surface protrusion of just 4 mm
- No accumulation of chips
- Flicker-free illumination with no UV or IR content

Areas of application
- Tooling machines, CNC machines
- For camera-assisted quality assurance during processing
- For serial use, as well as for retrofitting in machines

Versions
- 3 different beam angles: 15°, 30° or 65° optics

FKM seal

Safety glass

Robust aluminium
housing for heat dissipation

| 24V DC | | 15°\|30°\|65° | IP67 | CNC | ≥80 | 5700K | 100.000 h (L80/B10) | M12 | +50 −10 | OPTION | | ETL us | 36 months | |

LED light	Item no.	Optics	E_{max}*	Luminous flux	Power	Connection
CENALED SPOT Recessed 15°	121011-05	15°	6595 lx	1120 lm	~8.5 W	24V DC
CENALED SPOT Recessed 30°	121012-05	30°	2193 lx	1120 lm	~8.5 W	24V DC
CENALED SPOT Recessed 65°	121013-05	65°	642 lx	1120 lm	~8.5 W	24V DC

For power supply units and connection materials, see the Accessories page in the Annex, code ▇ and ▇

* maximum level of illuminance, measurement field 100 cm x 100 cm at distance of 100 cm

~63

~105

Ø 55

M5 (4x)

Ø 92

~5   45

92

~80
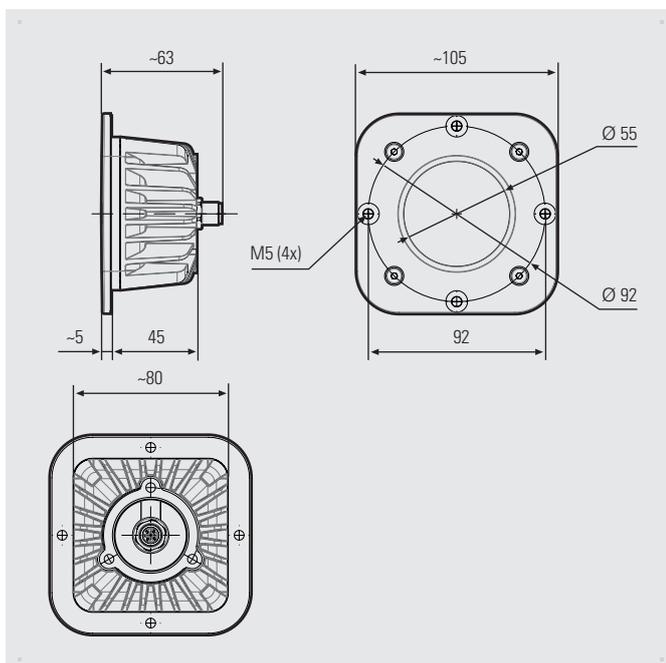
LED machine light | IP67/IP69K
TUBELED_40 II Integrated

The recessed light TUBELED_40 II Integrated is suitable for the initial setup and retrofitting of machines and installations. The dimensions of the outer covers are based on the sizes of standardised installation cavities on tooling machines. The sealed LED light is coolant-resistant, resistant to flying chips and oil-resistant. Its absolute strength lies in its homogeneous and flicker-free illumination of machining areas, such as in tooling machines.

Technology
- Basic body and cover made of aluminium
- Light forming technology and 4 mm single-pane safety glass over light aperture
- Heat dissipation to the rear via aluminium profile – No burning in of oils, coolants or lubricants
- Seamless tightening onto the mounting surface thanks to moulded seal on rear
- Dimmable using external accessories

Your benefits
- Flicker-free, homogeneous light with no UV or IR content
- Easy assembly or retrofitting
- Resistant to oil and cooling lubricant, resistant to flying chips
- Flat and space-saving installation
- Minimal disturbing edges – No attack surface for chips to accumulate
- Installation dimensions based on the most common installation cavities in industry

Areas of application
- Machines and machining centres with confined space conditions and standardised installation cavities
- Turning, drilling, milling and grinding machines
- Injection moulding machines, extruders and blow-moulding machines

Versions
- Cover width 74 mm or 78 mm, cover lengths from 220 mm to 745 mm
- Installation in machine environment required

Single-pane safety glass
with opal white glare control
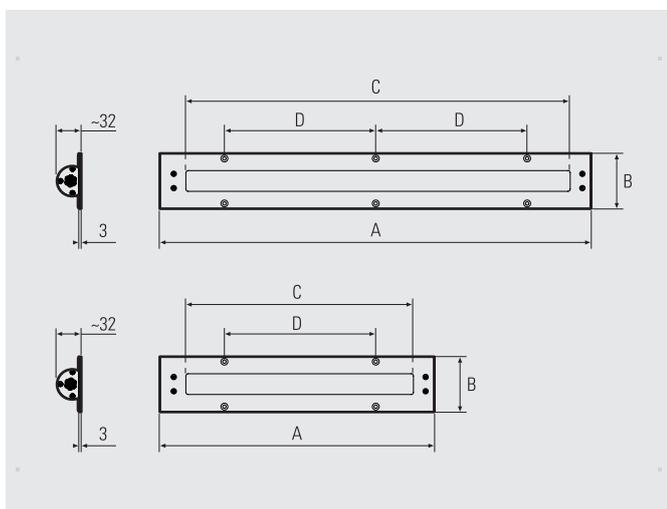
IP67 / IP69K

Liquid-tight and temperature-resistant

Robust housing and
front panel made of aluminium

| 24V DC | | IP67/ IP69K | CNC | ≥85 | 5600K | 100.000 h (L80/B10) | M12 | +60 −30 | OPTION | | | ETL us | 36 months | |
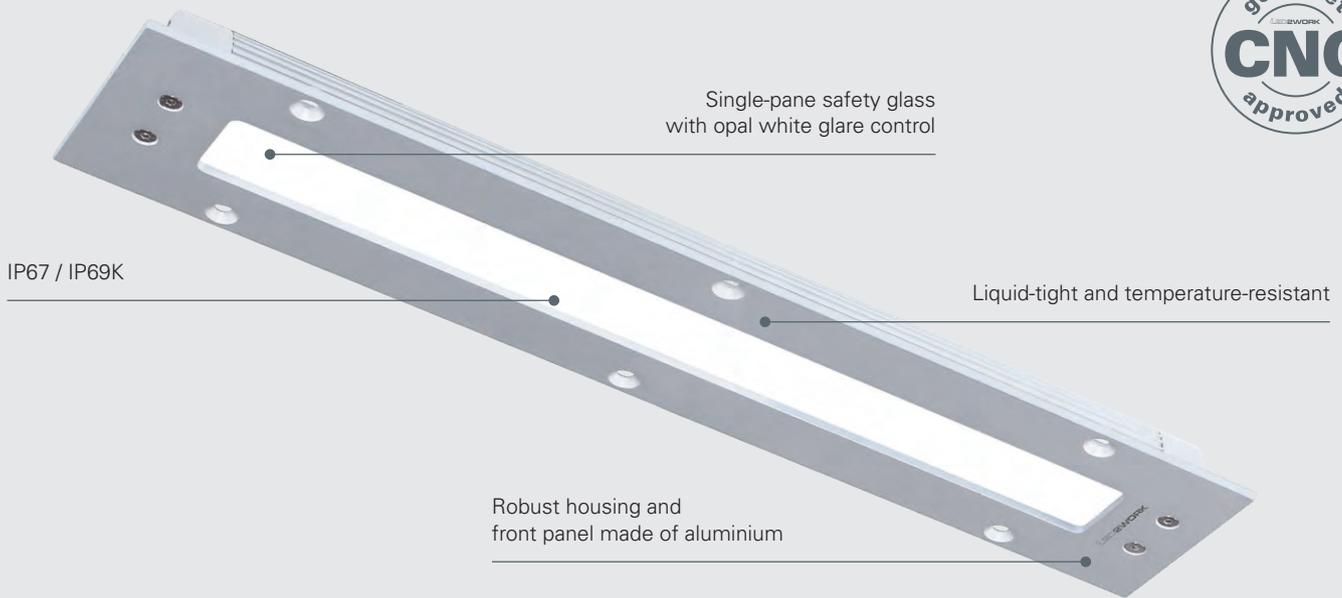
LED light	Item no.	A	B	C	D	Optics	E_max *	Luminous flux	Power	Connec-tion
TUBELED_40 II Integrated Power	151010-01	220 mm	74 mm	158 mm	125 mm	100°	415 lx	1266 lm	~8 W	24V DC
TUBELED_40 II Integrated Power	151010-03	284 mm	74 mm	158 mm	270 mm	100°	415 lx	1266 lm	~8 W	24V DC
TUBELED_40 II Integrated Power	151110-01	395 mm	74 mm	333 mm	250 mm	100°	815 lx	2531 lm	~16 W	24V DC
TUBELED_40 II Integrated Power	151110-03	395 mm	74 mm	248 mm	250 mm	100°	617 lx	1899 lm	~12 W	24V DC
TUBELED_40 II Integrated Power	151210-01	570 mm	74 mm	508 mm	200 mm	100°	1184 lx	3797 lm	~24 W	24V DC
TUBELED_40 II Integrated Power	151310-01	745 mm	74 mm	508 mm	250 mm	100°	1184 lx	3797 lm	~24 W	24V DC
TUBELED_40 II Integrated Power	152010-01	340 mm	78 mm	248 mm	240 mm	100°	617 lx	1899 lm	~12 W	24V DC
TUBELED_40 II Integrated Power	152210-01	700 mm	78 mm	508 mm	305 mm	100°	1184 lx	3797 lm	~24 W	24V DC

For power supply units, dimming boxes and connection materials, see the Accessories page in the Annex, code ■ and ■
* maximum level of illuminance, measurement field 100 cm x 100 cm at distance of 100 cm

Rear M12 connection, A-coded

Rear with moulded seal

LED recessed lights with high protection type

LED machine light with indicator function | IP67/IP69K
TUBELED_40 II RGB-W Integrated

The TUBELED_40 II Integrated RGB-W is equipped with white light for optimal illumination with with RGB LED chips for indication. The dimensions of the light body and the outer covers are based on the sizes of standardised installation cavities. The LED recessed light is resistant to coolant and lubricant, and resistant to flying chips and oil-resistant. The LED recessed light is ideal for illuminating production areas and for the colour-coded indication of state changes on machines and installations.

Technology
- White light and RGB LED chips in one light
- RGB LED chips can indicate different states of machines and installations through colour switching
- Control of LED chips using the PLC controller of a machine or plant
- Shatterproof, 4 mm single-pane safety glass
- Elegant cover for flush installation without dirt-collecting edges
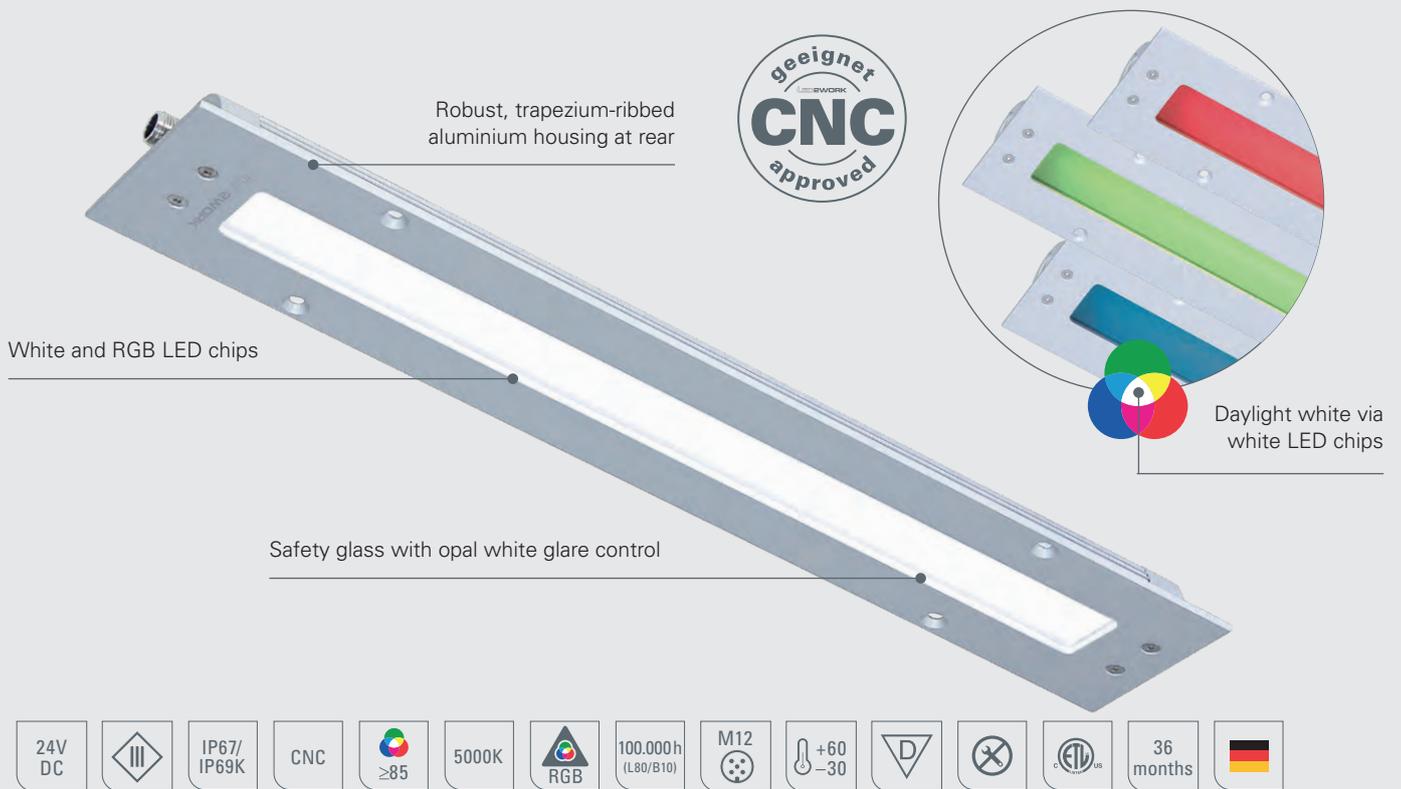
Your benefits
- Flicker-free, homogeneous illumination, with no UV or IR content, and indicator function using freely definable colours or flashing intervals
- Easy assembly or retrofitting
- Optimal illumination due to 100° surface lighting
- Resistant to oil and cooling lubricant, resistant to flying chips
- Installation dimensions coordinated to fit the most common installation cavities in industry

Areas of application
- Tooling machines and CNC machines
- Injection moulding machines, erosion machines, automated punches
- Installations or production and manufacturing areas with confined space conditions

Versions/installation
- Cover width 74 mm or 78 mm, cover lengths from 220 mm to 745 mm
- Installation in machine environment required

Robust, trapezium-ribbed aluminium housing at rear

CNC approved

White and RGB LED chips

Daylight white via white LED chips

Safety glass with opal white glare control

| 24V DC | | IP67/ IP69K | CNC | ≥85 | 5000K | RGB | 100.000 h (L80/B10) | M12 | +60 −30 | | | | 36 months | |

LED light	Item no.	A	B	C	D	Optics	E_{max} * [W]	Luminous flux [W]	Power				Connec-tion
									[R]	[G]	[B]	[W]	
TUBELED_40 II Integrated RGB-W	151090-01	220 mm	74 mm	158 mm	125 mm	100°	155 lx	767 lm	~1.4 W	~1 W	~1.4 W	~4.8 W	24V DC
TUBELED_40 II Integrated RGB-W	151190-01	395 mm	74 mm	333 mm	250 mm	100°	324 lx	1215 lm	~9 W	~2.5 W	~9 W	~9.5 W	24V DC
TUBELED_40 II Integrated RGB-W	151290-01	570 mm	74 mm	508 mm	200 mm	100°	607 lx	2430 lm	~18 W	~5 W	~18 W	~19 W	24V DC
TUBELED_40 II Integrated RGB-W	151390-01	745 mm	74 mm	508 mm	250 mm	100°	607 lx	2430 lm	~18 W	~5 W	~18 W	~19 W	24V DC
TUBELED_40 II Integrated RGB-W	152090-01	340 mm	78 mm	248 mm	240 mm	100°	324 lx	1215 lm	~9 W	~2.5 W	~9 W	~9.5 W	24V DC
TUBELED_40 II Integrated RGB-W	152290-01	700 mm	78 mm	508 mm	305 mm	100°	607 lx	2430 lm	~18 W	~5 W	~18 W	~19 W	24V DC

For power supply units and connection materials, see the Accessories page in the Annex, connection materials code ■   * maximum level of illuminance, measurement field 100 cm x 100 cm at distance of 100 cm

Moulded seal at rear
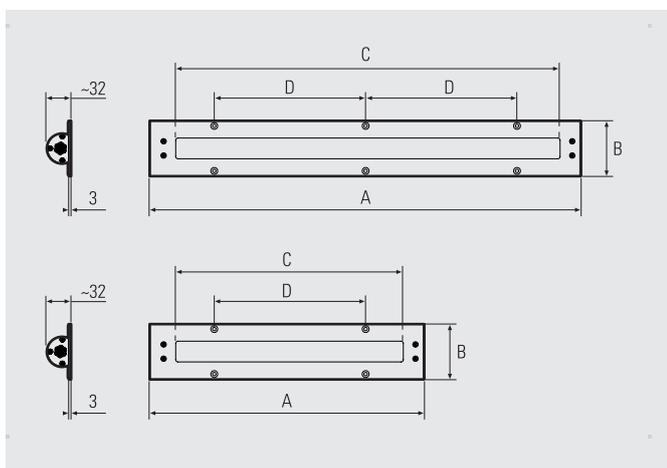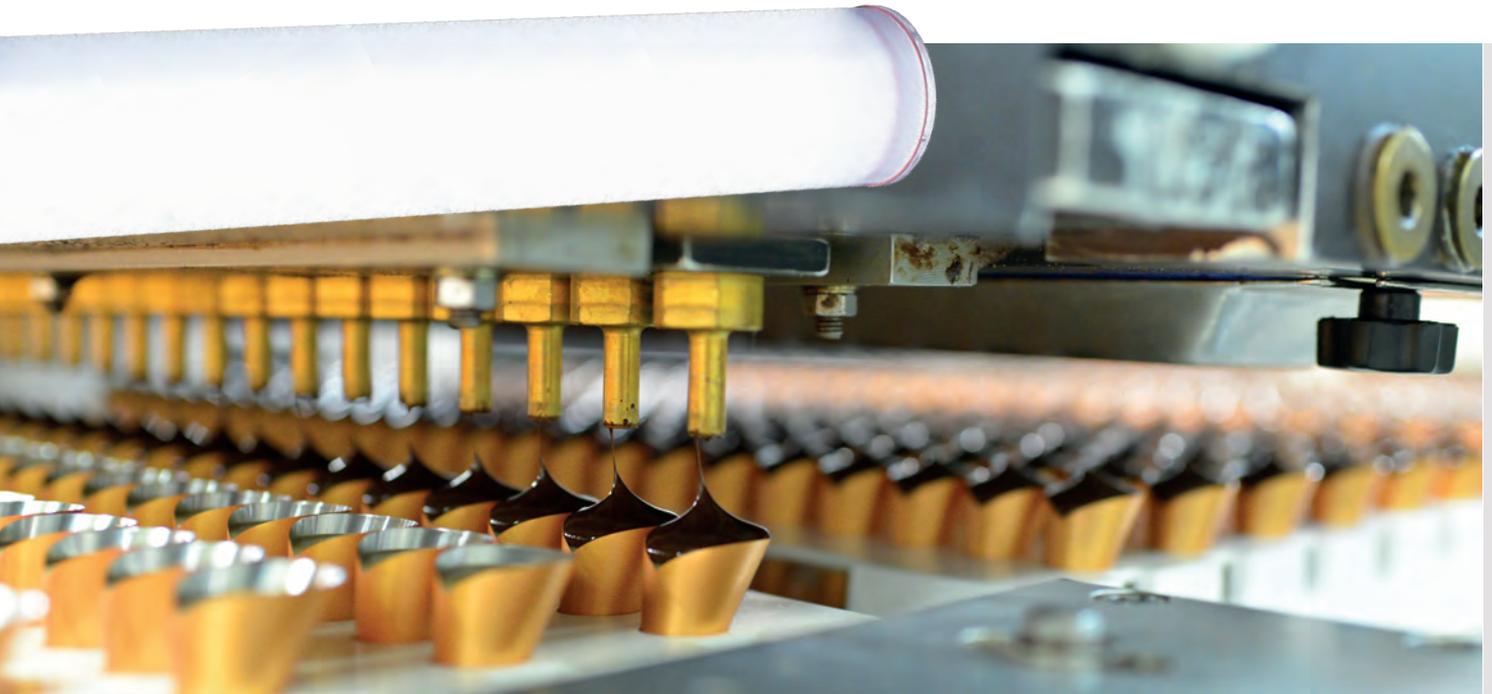
LED industry light | IP67/IP69K
INROLED_50 Ecolab

Opal white with dirt-repellent coating: the INROLED_50 Ecolab is the power light for the F&B sector. Completely sealed, the LED light is excellently suited to hygiene-sensitive areas in the food and beverage industry, as well as in the pharmaceuticals and packaging industry. But the robust light is also popular in building and housing technology, as well as in architecture thanks to its exceptional light output and translucent body.

Technology
- Light flux-optimised and performance-optimised LED technology with 24V DC or 230V AC connection
- Housing: Guard tube made of 4 mm thick, splinter-free and opal white polycarbonate with sealed end caps
- FDA-compliant materials and M12 plug connector made of stainless steel – Suitable for food & beverage
- Dirt-repellent Ecolab special coating

Your benefits
- Strong, flicker-free light with no UV or IR content
- Very high protection type (IP67/IP69K); impact-resistance IK09 and dirt-repellent
- HACCP-certified for production and handling of food
- Resistant to hydrogen peroxide (H_2O_2, max. 35%), acids and bases*

Areas of application
- Installations in the packaging industry, food & beverage, pharmaceuticals
- Machines, conveyor belts, architecture and buildings

Versions/installation
- 24V DC connection in Power and ECO
- Each in 3 lengths: 305 mm, 565 mm, 1065 mm
- Includes light holder made of metal-detectable PP

*Advance check in individual cases

M12 plug connector V4A

Ecolab®

Internal aluminium body –
for optimal thermal management

Polycarbonate tube with
dirt-repellent Ecolab coating
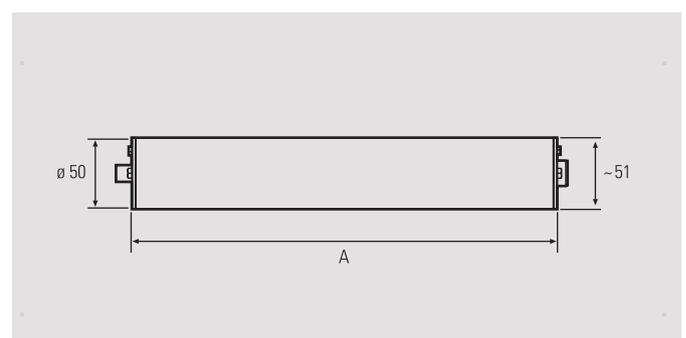
IP67/IP69K

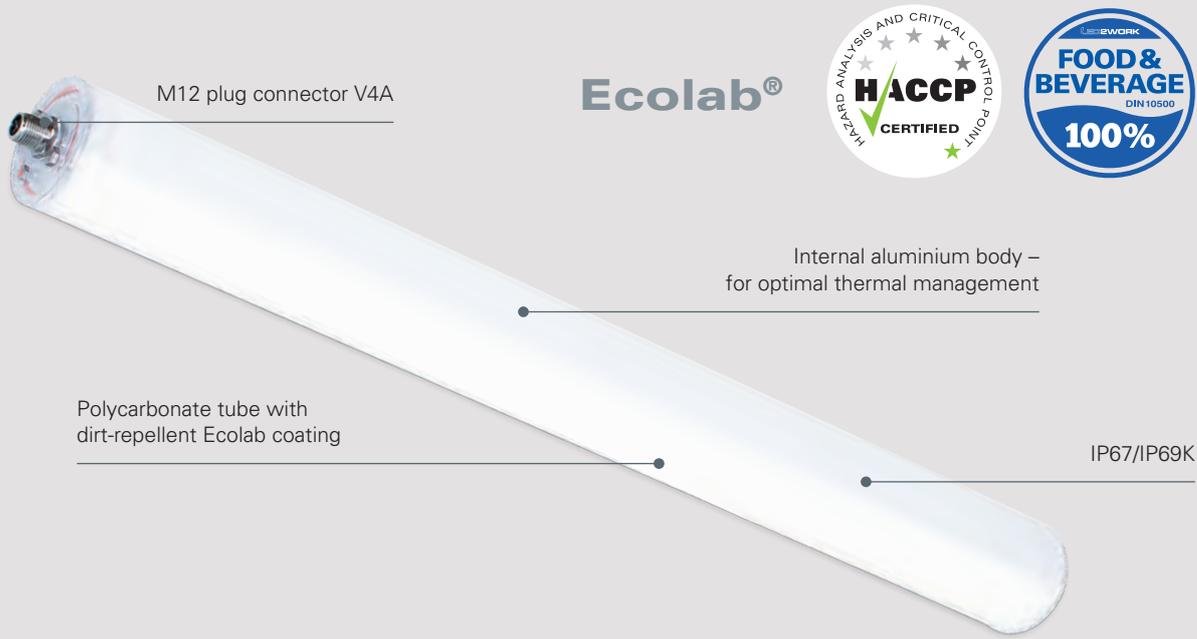| 24V DC | III | +50 −30 | Power | +70 −30 ECO | 100.000 h (L80/B10) | ≥85 | M12 [A] | OPTION | ETL | 100 % F&B | IP67/ IP69K | IK09 | 5600K | | 36 months | |

LED light	Item no.	Length (A)	Optics	E$_{max}$*	Luminous flux	Power	Connection
INROLED_50 Ecolab DC Power	110010-01	305 mm	100°	405 lx	1899 lm	~12 W	24V DC
INROLED_50 Ecolab DC Power	110110-01	565 mm	100°	813 lx	3798 lm	~24 W	24V DC
INROLED_50 Ecolab DC Power	110210-01	1065 mm	100°	1507 lx	7596 lm	~48 W	24V DC

LED light	Item no.	Length (A)	Optics	E$_{max}$*	Luminous flux	Power	Connection
INROLED_50 Ecolab DC ECO	110010-02	305 mm	100°	235 lx	1000 lm	~6 W	24V DC
INROLED_50 Ecolab DC ECO	110110-02	565 mm	100°	456 lx	2004 lm	~13 W	24V DC
INROLED_50 Ecolab DC ECO	110210-02	1065 mm	100°	825 lx	4008 lm	~24 W	24V DC

Mounting accessories	Item no.
INROLED_50 light holder, F&B safe, 1 pair	210200-09
INROLED_50 light holder, cable tie+base, metal detectable PP, 1 pair	210200-13
INROLED_50 light holder, 1 pair of clamps, galvanised steel	210200-17
INROLED_50 light holder, austenitic stainless steel 1.4310, 1 pair	210200-29

Delivery incl. light holder 210200-13
For power supply units, dimming boxes and connection materials code ■ and ■, see the Accessories page in the Annex

* maximum level of illuminance, measurement field 100 cm x 100 cm at distance of 100 cm

210200-13
(included in scope of delivery)

210200-09

210200-17

210200-17
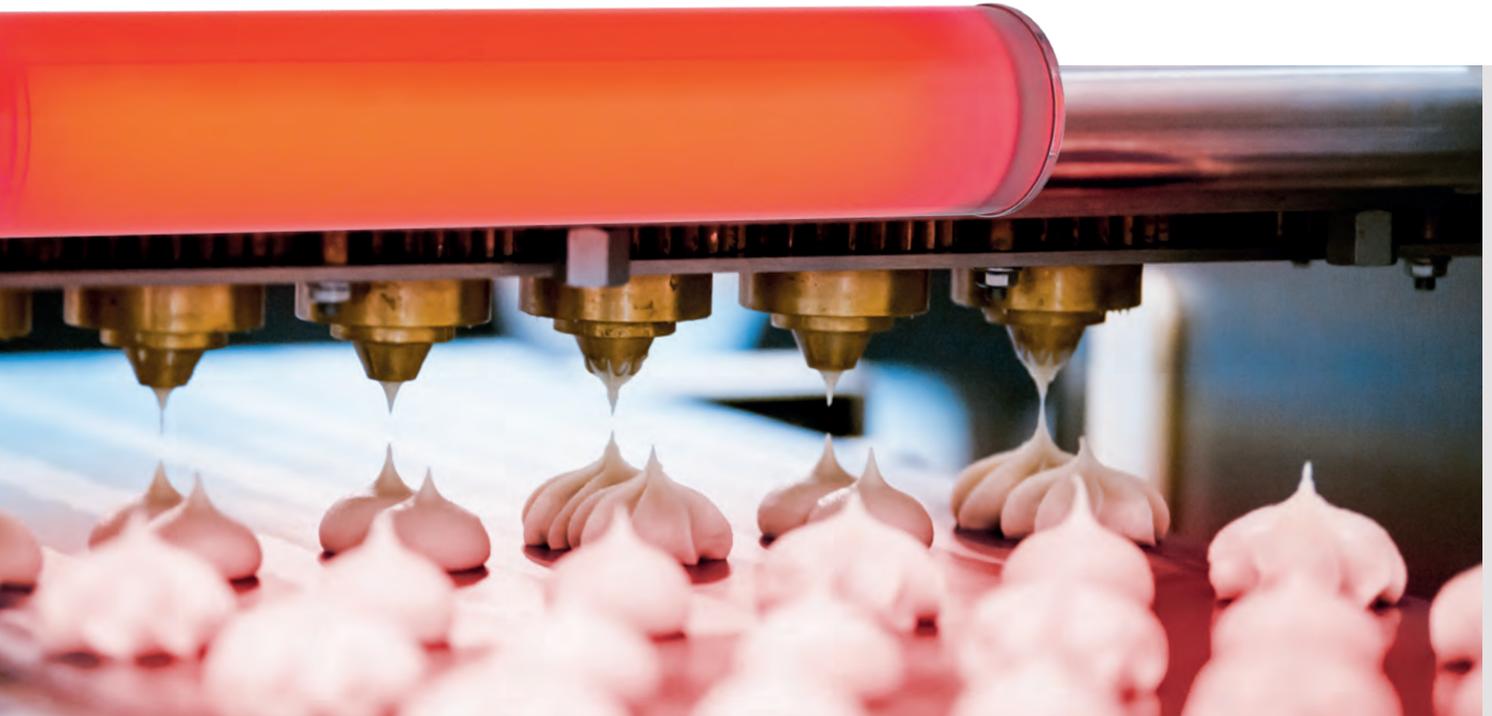
LED industry light | IP67/IP69K
INROLED_50 Ecolab RGB-W

INROLED_50 Ecolab RGB-W in industry: strong, homogeneous illumination, high protection type and indicator function by switching light colours – and all in one LED light. An opal white guard tube with dirt-repellent coating protects the light body completely from the outside and makes the INROLED_50 ECOLAB RGB-W ideal for lighting up hygiene-sensitive areas such as those in the food, pharmaceutical and packaging industry.

Technology

- White light and RGB LED chips arranged in clusters
- RGB LED chips can indicate different states of machines and installations through colour switching
- Control of LED chips using the PLC controller of a machine or installation
- Guard tube with dirt-repellent Ecolab coating
- M12 plug connection made of stainless steel (F&B-compatible)
- High IP67/IP69K protection type

Your benefits

- Just one light for illumination and indication
- Strong, flicker-free light with no UV or IR content
- Very high protection type (IP67/IP69K); impact-resistance IK09 and dirt-repellent
- HACCP-certified for production and handling of food
- Resistant to hydrogen peroxide (H_2O_2, max. 35%), acids and bases*

Areas of application

- Installations in the packaging industry, food and luxury food industry, pharmaceuticals
- Logistics workstations and assembly lines

Versions/installation

- 3 lengths: 305 mm, 565 mm, 1065 mm
- Easy mounting using light holders supplied
- Optional: Light holder for F&B or spring clips
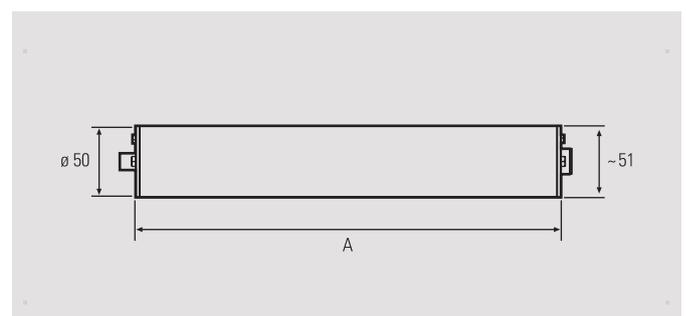
*Advance check in individual cases

M12 plug connector
made of stainless steel V4A

Ecolab®

HAZARD ANALYSIS AND CRITICAL CONTROL POINT
HACCP
✓ CERTIFIED

LED2WORK
FOOD & BEVERAGE
DIN 10500
100%

White and RGB LED chips

Polycarbonate tube with
dirt-repellent Ecolab coating

Daylight white via
white LED chips

IP67/IP69K

| 24V DC | III | IP67/IP69K | IK09 | 100% F&B | ≥85 | 5000K | RGB | 100.000 h (L80/B10) | M12 | +55 −30 | | ETL | 36 months | |

LED light	Item no.	Length (A)	Optics	E_{max} * [W]	Luminous flux	Power				Connection
					[W]	[R]	[G]	[B]	[W]	
INROLED_50 Ecolab RGB-W	110090-01	305 mm	100°	222 lx	1215 lm	~9 W	~2.5 W	~9 W	~9.5 W	24V DC
INROLED_50 Ecolab RGB-W	110190-01	565 mm	100°	443 lx	2430 lm	~18 W	~5 W	~18 W	~19 W	24V DC
INROLED_50 Ecolab RGB-W	110290-01	1065 mm	100°	820 lx	4860 lm	~36 W	~10 W	~36 W	~38 W	24V DC

Delivery incl. light holder 210200-13
For power supply units, dimming boxes and connection materials code ■, see the Accessories page in the Annex

* maximum level of illuminance, measurement field 100 cm x 100 cm at distance of 100 cm

Accessories	Item no.
INROLED_50 light holder, F&B safe, 1 pair	210200-09
INROLED_50 light holder, cable tie+base, metal detectable PP, 1 pair	210200-13
INROLED_50 light holder, 1 pair of clamps, galvanised steel	210200-17
INROLED_50 light holder, austenitic stainless steel 1.4310, 1 pair	210200-29

210200-13
(included in scope of delivery)

210200-09

210200-17

210200-17

AC variant with WIDE RANGE voltage connection

LED industry light | IP67/IP69K
INROLED_70 Borosilicate

Equipped with a guard tube made of borosilicate glass (safety glass), the INROLED_70 has a range of different uses. Modern, powerful LED technology and a tube diameter of 70 mm guarantee a high light output. This enables it to be used in buildings or housing technology, alongside classic areas such as machines and installations. As multiple lights can be linked electrically, homogeneous and economic illumination of larger surfaces is guaranteed.

Technology
- 4 mm thick borosilicate glass protects the electronics against water, dust and moisture
- All variants can be daisy chained together electrically
- Nearly no heating, dissipation of residual heat thanks to ribbed aluminium body
- Secure cable fastening outside, WAGO clamp inside

Your benefits
- Optimal anti-glare feature and light diffusion thanks to microprismatic cover
- High protection type (IP67/IP69K)
- High light output; flicker-free light with no UV or IR content; flat and homogeneous light
- Easy retrofitting of installations with conventional 70 mm tube lights

Areas of application
- For fixed installations around machines, technical installations, housing technology, architecture

Versions/installation
- Performance-optimised LED technology with 24V DC or 120–277V AC connection
- 5 lengths: 354 mm, 513 mm, 650 mm, 921 mm, 1214 mm
- Can be mounted using optional light holder

ø70   ~71,5

A

201200-01

210200-02

Wörnitz Outdoor Pool, Photo: Wunderwaldphoto, www.wunderwaldphoto.com (For credits, see U3)

Cable feed
via cable fastening
(Wago clamp inside)

IP67/IP69K

Borosilicate glass tube,
4 mm thick

Aluminium housing for
heat dissipation inside

Microprismatic
cover for LED
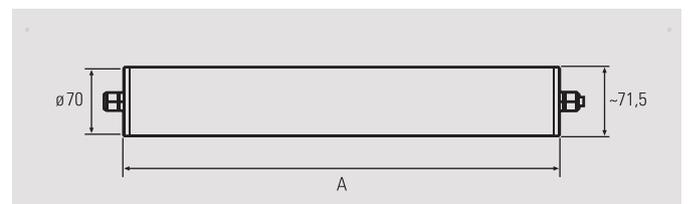
| IP67/ IP69K | ≥85 | 5600K | 100.000 h (L80/B10) | | 36 months | | DC version 24V DC | III | +45 −10 | OPTION | ETL us | AC version WIDE RANGE 120 V 277 V AC | | +40 −10 |

| LED light	Item no.	Length (A)	Optics	E_{max}*	Luminous flux	Power	Connection
INROLED_70 ECO DC, borosilicate glass	115010-01	354 mm	125°	352 lx	1000 lm	~6,5 W	24V DC
INROLED_70 ECO DC, borosilicate glass	115110-01	513 mm	125°	518 lx	1670 lm	~11 W	24V DC
INROLED_70 ECO DC, borosilicate glass	115210-01	650 mm	125°	535 lx	2004 lm	~13 W	24V DC
INROLED_70 ECO DC, borosilicate glass	115310-01	921 mm	125°	747 lx	3340 lm	~21 W	24V DC
INROLED_70 ECO DC, borosilicate glass	115410-01	1214 mm	125°	791 lx	4342 lm	~28 W	24V DC

With through-wiring (cascadable), several lights can be electrically daisy chained. The total current consumption may not exceed 4A DC at t_a max. +40 °C.
For power supply units see the Accessories page in the Annex

LED light	Item no.	Length (A)	Optics	E_{max}*	Luminous flux	Power	Connection
INROLED_70 ECO AC, borosilicate glass	115010-02	354 mm	125°	352 lx	1000 lm	~10 W	120–277V AC
INROLED_70 ECO AC, borosilicate glass	115110-02	513 mm	125°	518 lx	1670 lm	~14 W	120–277V AC
INROLED_70 ECO AC, borosilicate glass	115210-02	650 mm	125°	535 lx	2004 lm	~15 W	120–277V AC
INROLED_70 ECO AC, borosilicate glass	115310-02	921 mm	125°	747 lx	3340 lm	~23 W	120–277V AC
INROLED_70 ECO AC, borosilicate glass	115410-02	1214 mm	125°	791 lx	4342 lm	~30 W	120–277V AC

Through-wiring (cascadable): The total current consumption may not exceed 16A at t_a max. +40°C .

* maximum level of illuminance, measurement field 100 cm x 100 cm at distance of 100 cm

Accessories	Item no.
Mains connection lead PVC, 5 m, black, angled plug/open end for 220–240V AC	201200-01
INROLED_70 light holder, aluminium, 1 pair	210200-02
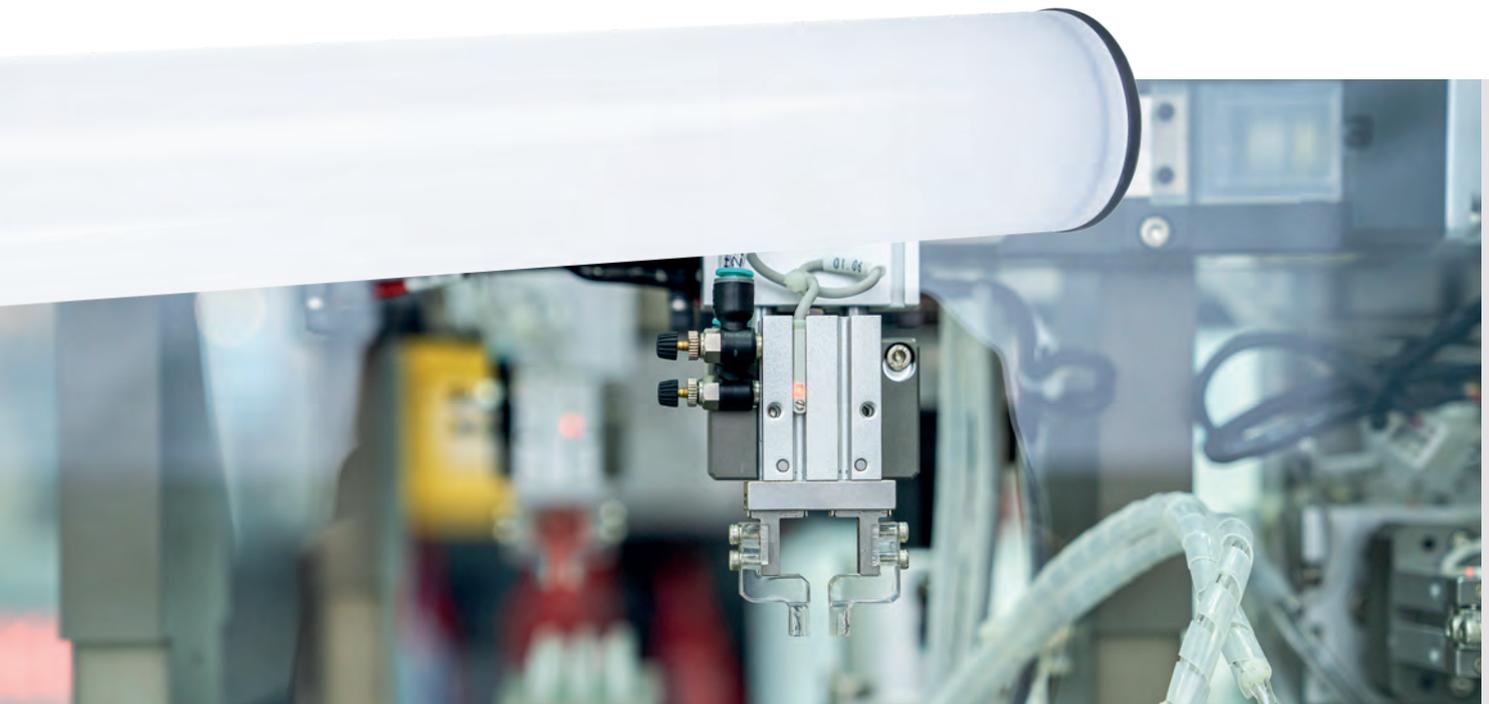
AC variant with WIDE RANGE voltage connection

LED industry light | IP67/IP69K
INROLED_70 polycarbonate

Light weight with high protection type: The INROLED_70 with polycarbonate guard tube has a range of different uses. Homogeneous, soft light, low weight and the option of through-wiring are the benefits of this INROLED_70. The splinter-free guard tube secures the light against the ingress of water, dust and moisture. Use in buildings or housing technology is also possible, as well as in logistics or technical installations.

Technology
- Guard tube made of polycarbonate protects the electronics against water, dust and moisture
- All variants can be daisy chained electrically (cascadable)
- Secure cable fastening outside, WAGO clamp inside

Your benefits
- Opal white glare control
- High protection type (IP67/IP69K)
- High light output; flicker-free light with no UV or IR content; flat and homogeneous light
- Easy retrofitting

Areas of application
- Technical installations
- Machines
- Housing and building technology

Versions/installation
- Performance-optimised LED technology with 24V DC or 120–277V AC mains connection
- 5 lengths: 354 mm, 513 mm, 650 mm, 921 mm, 1214 mm
- Can be mounted using optional light holder

ø70 ~71,5 A

201200-01

210200-02

Cable feed
via cable fastening
(Wago clamp inside)

IP67/IP69K

Guard tube made of poly-
carbonate, splinter-free

Aluminium housing for
heat dissipation inside

Opal white cover
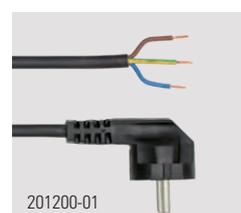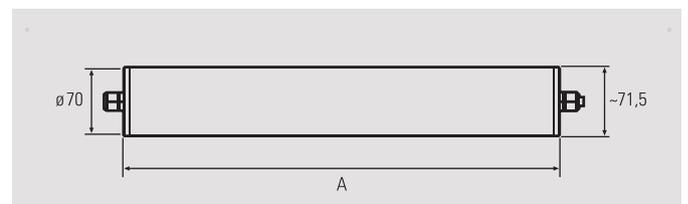
| IP67/ IP69K | ≥85 | 5600K | 100.000 h (L80/B10) | ⊗ | 36 months | 🇩🇪 | DC version 24V DC | III | +45 −10 | OPTION | AC version WIDE RANGE 120 V 277 V AC | ⏚ | +40 −10 |

| LED light	Item no.	Length (A)	Optics	E_{max} *	Luminous flux	Power	Connection
INROLED_70 ECO DC, polycarbonate guard tube	115010-03	354 mm	125°	251 lx	1000 lm	~6,5 W	24V DC
INROLED_70 ECO DC, polycarbonate guard tube	115110-03	513 mm	125°	369 lx	1670 lm	~11 W	24V DC
INROLED_70 ECO DC, polycarbonate guard tube	115210-03	650 mm	125°	381 lx	2004 lm	~13 W	24V DC
INROLED_70 ECO DC, polycarbonate guard tube	115310-03	921 mm	125°	532 lx	3340 lm	~21 W	24V DC
INROLED_70 ECO DC, polycarbonate guard tube	115410-03	1214 mm	125°	564 lx	4342 lm	~28 W	24V DC

With through-wiring (cascadable), several lights can be electrically daisy chained. The total current consumption may not exceed 4A DC at t_a max. +40 °C.
For power supply units see Accessories

LED light	Item no.	Length (A)	Optics	E_{max} *	Luminous flux	Power	Connection
INROLED_70 ECO AC, polycarbonate guard tube	115010-04	354 mm	125°	251 lx	1000 lm	~10 W	120–277V AC
INROLED_70 ECO AC, polycarbonate guard tube	115110-04	513 mm	125°	369 lx	1670 lm	~14 W	120–277V AC
INROLED_70 ECO AC, polycarbonate guard tube	115210-04	650 mm	125°	381 lx	2004 lm	~15 W	120–277V AC
INROLED_70 ECO AC, polycarbonate guard tube	115310-04	921 mm	125°	532 lx	3340 lm	~23 W	120–277V AC
INROLED_70 ECO AC, polycarbonate guard tube	115410-04	1214 mm	125°	564 lx	4342 lm	~30 W	120–277V AC

Through-wiring (cascadable): The total current consumption may not exceed 16A at t_a max. +40°C .

* maximum level of illuminance, measurement field 100 cm x 100 cm at distance of 100 cm

Accessories	Item no.
Mains connection lead PVC, 5 m, black, angled plug/open end for 220–240V AC	201200-01
INROLED_70 light holder, aluminium, 1 pair	210200-02
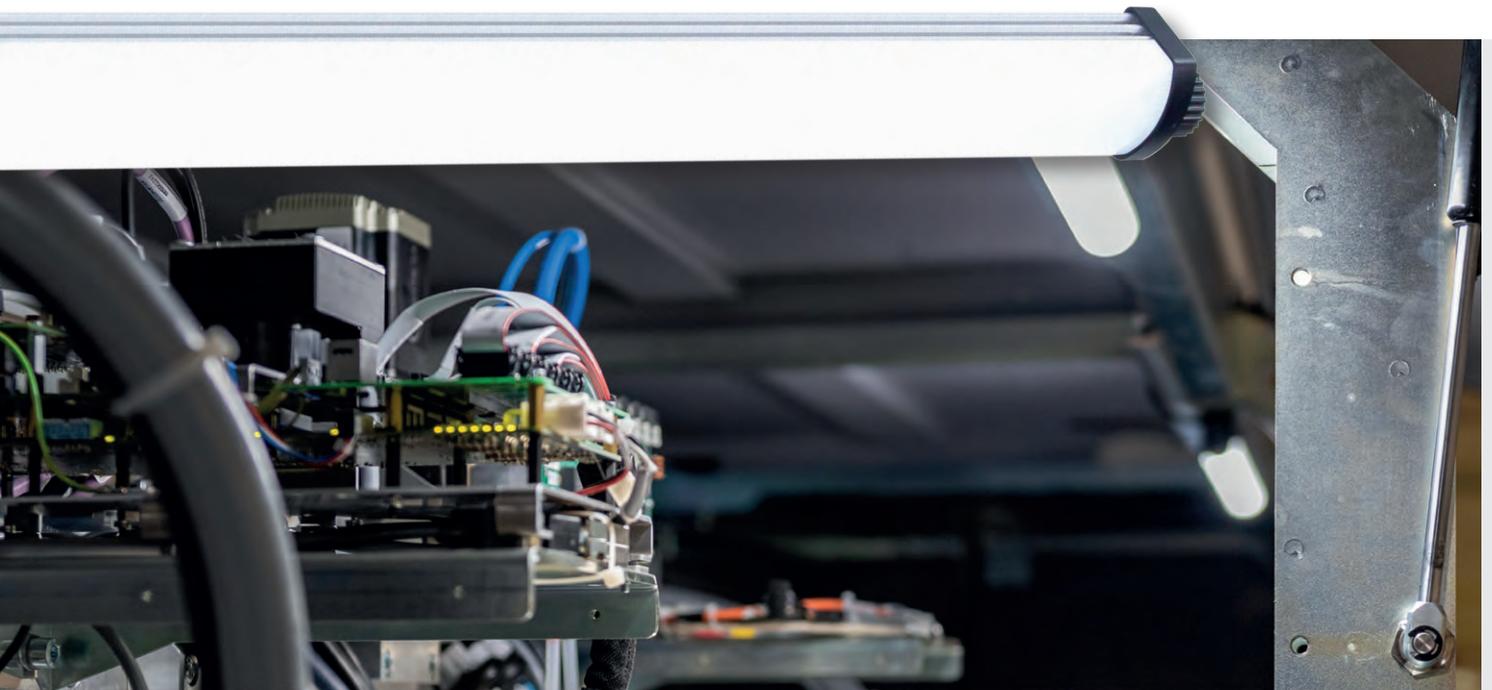
LED machine and system light | IP54
LEANLED II

The LEANLED II can be used as a light strip in all chip-, coolant- and lubricant-free machine spaces and automated installations thanks to its extremely slim and compact structure. A cover made of polycarbonate protects the LED chips from dust and splashes. With the variants for electrical daisy chaining, installations that can light up large production surfaces homogeneously and evenly are very quickly and easily possible.

Technology
- Slim LED light with low installation height of just 25 mm
- Cover made of clear or opal white polycarbonate, break-proof and splinter-free
- Heat dissipation via rear aluminium profile
- Connections: Sensor plug-in connector M12-A coded

Your benefits
- Even, flicker-free illumination of work areas
- Very bright LED lighting with no UV or IR content
- Homogeneous illumination with opal white glare control
- Cascadable, i.e. electrically daisy chainable versions – resulting in easy voltage supply of multiple lights with one power cord

■ Areas of application
- For hard-to-reach areas in machines and installations
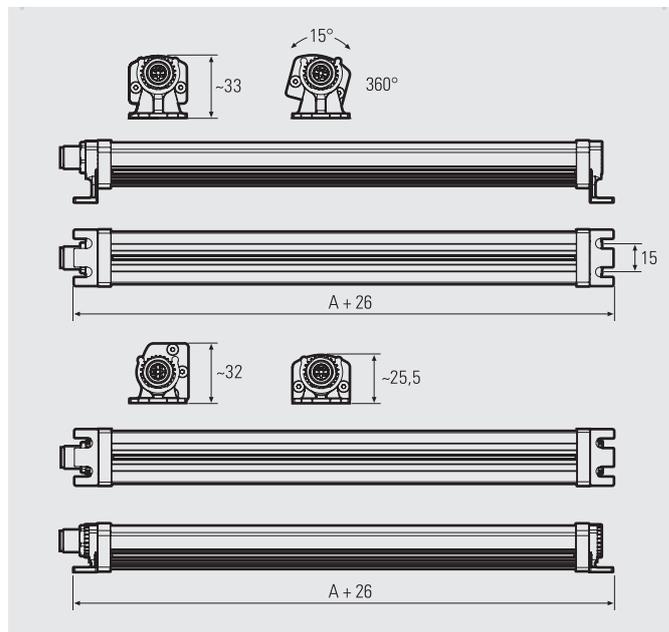
- Automation machines, bending machines, automated punches, woodworking machinery
- Shipping centres, logistics and many more applications

Versions
- 7 lengths: 180 mm, 260 mm, 350 mm, 520 mm, 760 mm, 1020 mm, 1520 mm
- Available with transparent, splinter-free polycarbonate cover or white opal white cover for glare control
- Single workstation solution or electrically daisy chainable

M12 plug connector

Alternative mounting:
Screw channels
for M4 screws
in the rear profilel

Clear cover

Robust aluminium housing
for heat dissipation

Opal white glare control

24V DC	III	IP54	≥85	5600K	100.000 h (L80/B10)	M12	+60 −10	OPTION	D	—	ETL	36 months	—

11 | 30

25

A

15°

~33

360°

15

A + 26

~32

~25,5

A + 26

Can be rotated in 15° increments

Planar mounting
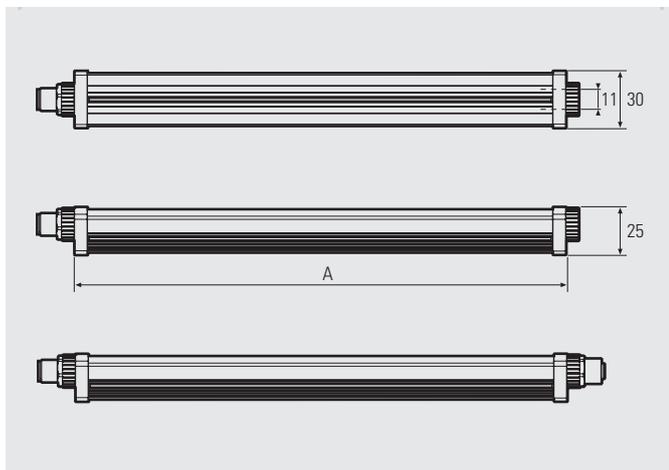
Delivery included 2 pairs of light holders

LED industry and system light

LED light	Item no.	Length (A)	Optics	E_{max}*	Luminous flux	Power	Connection
LEANLED II, clear cover	111010-01	180 mm	120°	187 lx	668 lm	~4 W	24V DC
LEANLED II, clear cover	111010-02	260 mm	120°	278 lx	1000 lm	~6 W	24V DC
LEANLED II, clear cover	111010-03	350 mm	120°	368 lx	1336 lm	~8 W	24V DC
LEANLED II, clear cover	111010-04	520 mm	120°	560 lx	2004 lm	~13 W	24V DC
LEANLED II, clear cover	111010-05	760 mm	120°	821 lx	3004 lm	~19 W	24V DC
LEANLED II, clear cover	111010-06	1020 mm	120°	1037 lx	4008 lm	~24 W	24V DC
LEANLED II, clear cover	111010-07	1520 mm	120°	1311 lx	6012 lm	~37 W	24V DC
LEANLED II, opal white cover	111010-11	180 mm	120°	120 lx	668 lm	~4 W	24V DC
LEANLED II, opal white cover	111010-12	260 mm	120°	179 lx	1000 lm	~6 W	24V DC
LEANLED II, opal white cover	111010-13	350 mm	120°	237 lx	1336 lm	~8 W	24V DC
LEANLED II, opal white cover	111010-14	520 mm	120°	358 lx	2004 lm	~13 W	24V DC
LEANLED II, opal white cover	111010-15	760 mm	120°	527 lx	3004 lm	~19 W	24V DC
LEANLED II, opal white cover	111010-16	1020 mm	120°	625 lx	4008 lm	~24 W	24V DC
LEANLED II, opal white cover	111010-17	1520 mm	120°	834 lx	6012 lm	~37 W	24V DC

LED light, cascadable	Item no.	Length (A)	Optics	E_{max}*	Luminous flux	Power	Connection
LEANLED II, clear cover, cascadable	111010-21	180 mm	120°	187 lx	668 lm	~4 W	24V DC
LEANLED II, clear cover, cascadable	111010-22	260 mm	120°	278 lx	1000 lm	~6 W	24V DC
LEANLED II, clear cover, cascadable	111010-23	350 mm	120°	368 lx	1336 lm	~8 W	24V DC
LEANLED II, clear cover, cascadable	111010-24	520 mm	120°	560 lx	2004 lm	~13 W	24V DC
LEANLED II, clear cover, cascadable	111010-25	760 mm	120°	821 lx	3004 lm	~19 W	24V DC
LEANLED II, clear cover, cascadable	111010-26	1020 mm	120°	1037 lx	4008 lm	~24 W	24V DC
LEANLED II, clear cover, cascadable	111010-27	1520 mm	120°	1311 lx	6012 lm	~37 W	24V DC
LEANLED II, opal white cover, cascadable	111010-31	180 mm	120°	120 lx	668 lm	~4 W	24V DC
LEANLED II, opal white cover, cascadable	111010-32	260 mm	120°	179 lx	1000 lm	~6 W	24V DC
LEANLED II, opal white cover, cascadable	111010-33	350 mm	120°	237 lx	1336 lm	~8 W	24V DC
LEANLED II, opal white cover, cascadable	111010-34	520 mm	120°	358 lx	2004 lm	~13 W	24V DC
LEANLED II, opal white cover, cascadable	111010-35	760 mm	120°	527 lx	3004 lm	~19 W	24V DC
LEANLED II, opal white cover, cascadable	111010-36	1020 mm	120°	625 lx	4008 lm	~24 W	24V DC
LEANLED II, opal white cover, cascadable	111010-37	1520 mm	120°	834 lx	6012 lm	~37 W	24V DC

With through-wiring (cascadable), several lights can be electrically daisy chained. The total current consumption may not exceed 4A DC at t_a max. +40°C.
Delivery incl. 2 pairs of light holders for flexible mounting
For power supply units, dimming boxes and connection materials, see the Accessories page in the Annex, code ■ and ■

* maximum level of illuminance, measurement field 100 cm x 100 cm at distance of 100 cm

Accessories	Item no.
Spring clip, galvanised steel, 1 pair	210200-07
Spring clip with magnet, 1 pair	210200-08
Light holder mounting set, planar or swivelling light (spare part), plastic, 2x 2 pairs	210200-18
Light holder mounting adapter for mounting set 210200-18, 1 pair	210200-19

210200-07   210200-08   210200-18   210200-19

Electrical daisy chaining (cascading)

with M12 plug connector

| 24V DC | III | IP54 | ≥85 | 5600K | 100.000 h (L80/B10) | M12 | +60 −10 | OPTION | D | | ETL us | 36 Monate | |
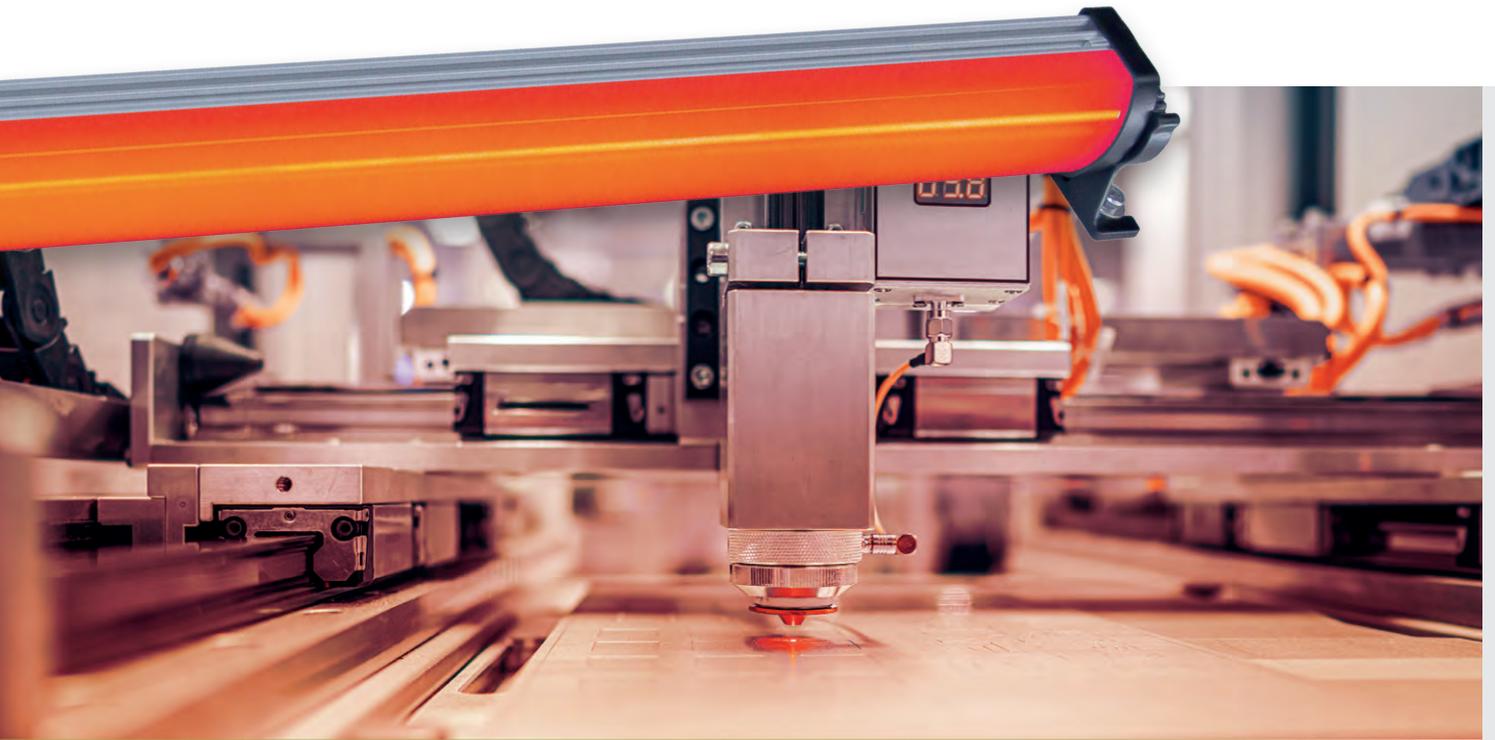
LED indicator light | IP54
SIGNALED II RGB

The SIGNALED II RGB is purely an indicator light, which evenly radiates coloured light across the entire surface. The LED light generates caution and safety notices that can be seen from afar with coloured light. Depending on the control and desired indicator effect, all colour shades from the RGB colour range can be chosen. The LED indicator light comes with protection type IP54 and can be used on almost any machine where there is no exposure to flying chips or cooling lubricant.

Technology
- RGB LED chips for coloured light for indication: Control of light and indicator specifications by machine or installation controller
- Opal white glare control, breakproof and splinter-free, supported by a robust aluminium profile

Your benefits
- All colours from the RGB colour spectrum can be chosen for indication
- Coloured light can indicate different machine and installation states
- Multiple lights can be electrically linked to cover larger surfaces

Areas of application
- As an indicator for machines where there is no exposure to shavings or no use of coolant or lubricants, and installations in automation
- Bending, punching and woodworking machinery
- Conveyor belts, picking and packaging stations, and logistics and shipping centres

Versions
- 7 lengths: 180 mm, 260 mm, 350 mm, 520 mm, 760 mm 1020 mm, 1520 mm
- Available as a standalone solution or electrically daisy

Aluminium housing
for heat dissipation

Alternative mounting:
Screw channels
for M4 screws
in the rear profilel

RGB LEDs

White polycarbonate
cover, splinter-free

White as a mixed colour

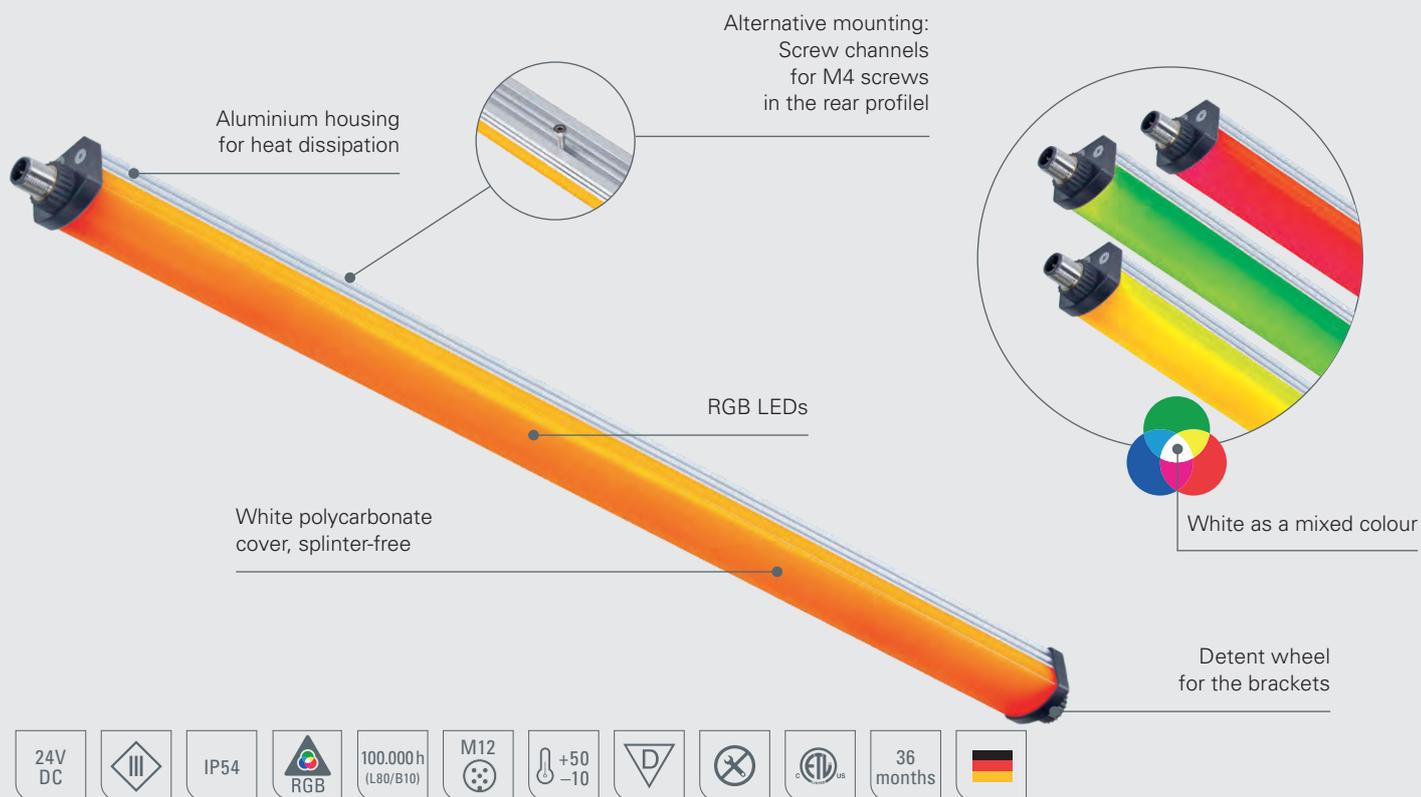Detent wheel
for the brackets

| 24V DC | III | IP54 | RGB | 100.000 h (L80/B10) | M12 | +50 −10 | | | ETL | 36 months | |
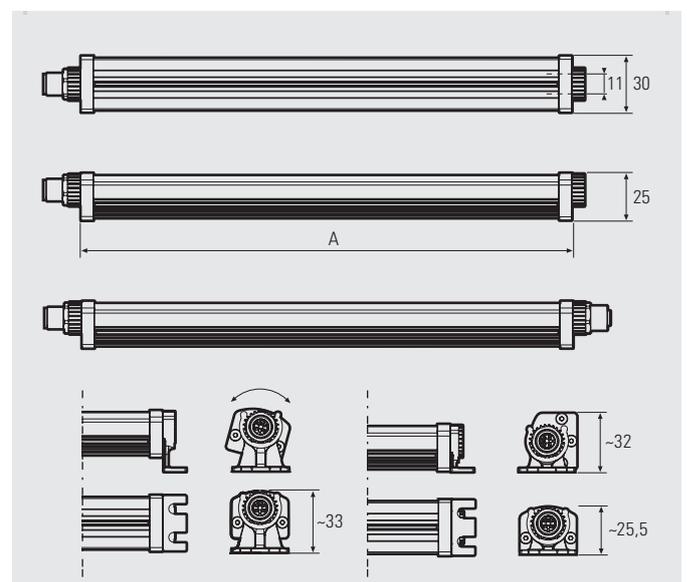
LED light	Item no.	Length (A)	Optics	Luminous flux			Power			Connection
				[R]	[G]	[B]	[R]	[G]	[B]	
SIGNALED II RGB	111090-11	180 mm	120°	61 lm	112 lm	37 lm	~0.96 W	~0.64 W	~0.96 W	24V DC
SIGNALED II RGB	111090-12	260 mm	120°	91 lm	168 lm	55 lm	~1.44 W	~0.96 W	~1.44 W	24V DC
SIGNALED II RGB	111090-13	350 mm	120°	121 lm	224 lm	73 lm	~1.92 W	~1.28 W	~1.92 W	24V DC
SIGNALED II RGB	111090-14	520 mm	120°	182 lm	336 lm	110 lm	~2.8 W	~2 W	~2.8 W	24V DC
SIGNALED II RGB	111090-15	760 mm	120°	273 lm	504 lm	165 lm	~4.24 W	~2.96 W	~4.24 W	24V DC
SIGNALED II RGB	111090-16	1020 mm	120°	364 lm	672 lm	220 lm	~5.6 W	~4 W	~5.6 W	24V DC
SIGNALED II RGB	111090-17	1520 mm	120°	546 lm	1008 lm	330 lm	~8.4 W	~6 W	~8.4 W	24V DC

Delivery incl. 2 pairs of light holders for planar or rotating mounting
For power supply units and connection materials code ■ see Accessories page in the Annex

Accessories	Item no.
Spring clip, galvanised steel, 1 pair	210200-07
Spring clip with magnet, 1 pair	210200-08
Light holder mounting set, planar or swivelling light (spare part), plastic, 2x 2 pairs	210200-18
Light holder mounting adapter for mounting set 210200-18, 1 pair	210200-19

For figures, see LEANLED II

LED light with indicator function | IP54
SIGNALED II RGB-W

Indication and illumination: Whether in daylight white or in colour – the SIGNALED II RGB-W evenly radiates bright light across the entire surface. The opal white cover gives the lighting a homogeneous effect, while coloured LED chips generate light for noticeable signals, which can be supported by additionally switched flashing or lightning flashing. The LED light is ideal for areas on and in machines and installations where there is no exposure to flying chips, coolant or lubricants.

Technology
- White light and RGB LED chips for illumination and indication: Control via the machine or installation controller
- Robust aluminium profile and opal white cover, breakproof and splinter-free

Your benefits
- Bright, motivating daylight white for illumination
- All colours from the RGB colour spectrum can be chosen for coloured light signals, in order to indicate different machine and installation states

Areas of application
- As an indicators in areas where there is no exposure to flying chips, coolant or lubricant intake on tooling machines or in automated installations.
- Bending, punching and woodworking machinery
- Conveyor belts, picking and packaging stations, and logistics and shipping centres

Versions
- 7 lengths: 180 mm, 260 mm, 350 mm, 520 mm, 760 mm 1020 mm, 1520 mm
- Available as a standalone solution or electrically daisy chainable (on request)

Aluminium housing
for heat dissipation

Alternative mounting:
Screw channels
for M4 screws
in the rear profilel

White polycarbonate
cover, splinter-free

Daylight white via
white LED chips

Detent wheel
for the brackets

24V DC	III	IP54	≥85	5000K	RGB	100.000 h (L80/B10)	M12	+50 −10		D	36 months	
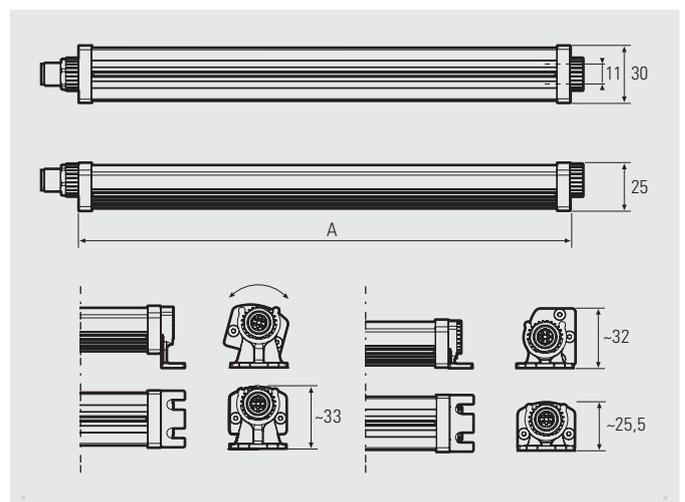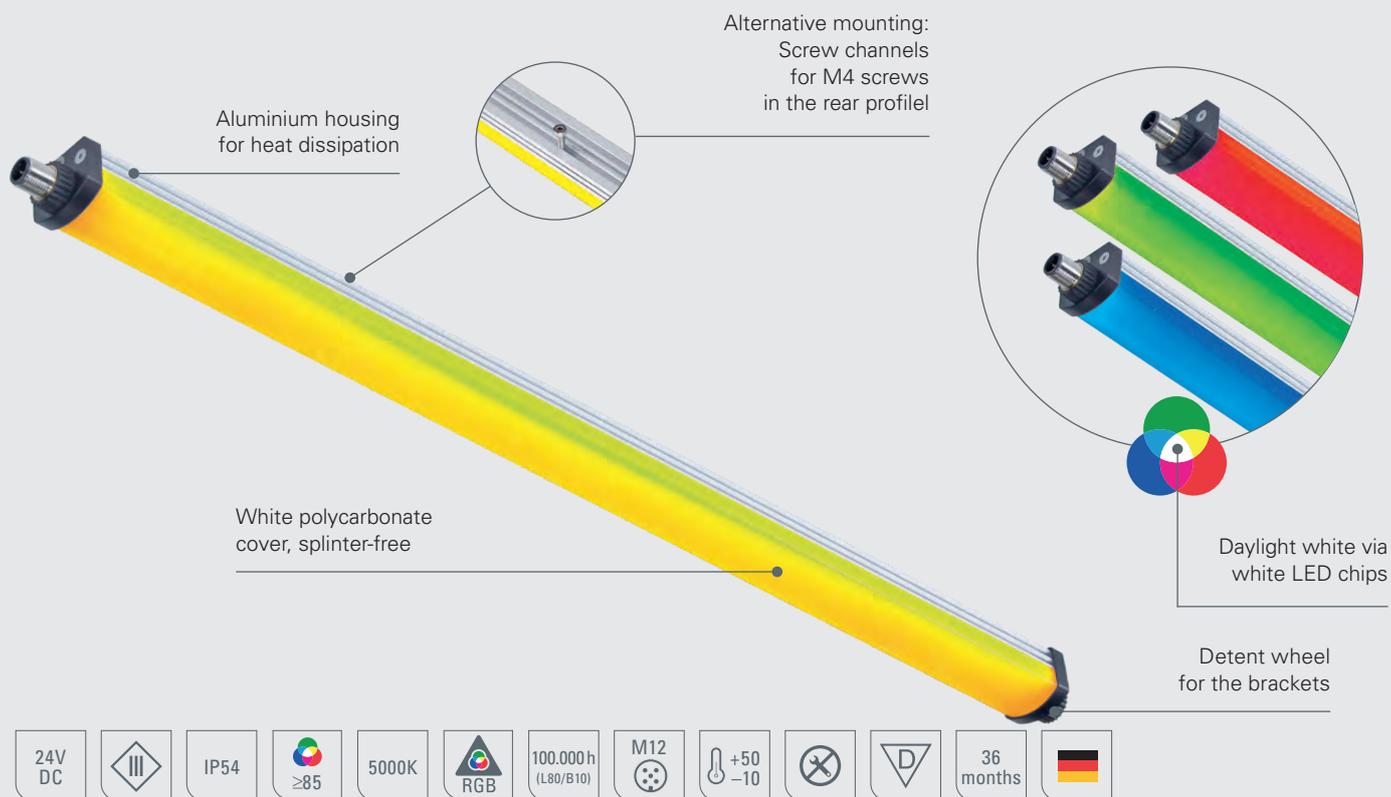
LED light	Item no.	Length (A)	Optics	E_{max}* [W]	Luminous flux [W]	Power				Connection
						[R]	[G]	[B]	[W]	
SIGNALED II RGB-W	111090-41	180 mm	120°	TBA	767 lm	~1.44 W	~0.96 W	~1.44 W	~4.8 W	24V DC
SIGNALED II RGB-W	111090-42	260 mm	120°	TBA	1150 lm	~2.16 W	~1.44 W	~2.16 W	~7.2 W	24V DC
SIGNALED II RGB-W	111090-43	350 mm	120°	TBA	1530 lm	~2.8 W	~2 W	~2.8 W	~9.6 W	24V DC
SIGNALED II RGB-W	111090-44	520 mm	120°	TBA	2300 lm	~4.32 W	~2.88 W	~4.32 W	~14.4 W	24V DC
SIGNALED II RGB-W	111090-45	760 mm	120°	TBA	3450 lm	~6.48 W	~4.32 W	~6.48 W	~21.6 W	24V DC
SIGNALED II RGB-W	111090-46	1020 mm	120°	TBA	4600 lm	~8.64 W	~5.76 W	~8.64 W	~28.8 W	24V DC
SIGNALED II RGB-W	111090-47	1520 mm	120°	TBA	6900 lm	~12.96 W	~8.64 W	~12.96 W	~43.2 W	24V DC

Delivery incl. 2 pairs of light holders for planar or rotating mounting
For power supply units and connection materials code ■ see Accessories page in the Annex

* Values for maximum level of illuminance, E_{max}, see data sheet

Accessories	Item no.
Spring clip, galvanised steel, 1 pair	210200-07
Spring clip with magnet, 1 pair	210200-08
Light holder mounting set, planar or swivelling light (spare part), plastic, 2x 2 pairs	210200-18
Light holder mounting adapter for mounting set 210200-18, 1 pair	210200-19

For figures, see LEANLED II

LED machine light | IP54
TUBELED_40 Element

As simple as possible, but no simpler: TUBELED_40 Element is the LED light for bringing work areas on machines and installations where there is no exposure to cooling lubricants and flying chips into perspective. With protection type IP54, the slim industrial light is well equipped for most applications. The 24V DC version is also available as a variant for electrical daisy chaining, and additionally as a version with 230V AC connection.

Technology
- The latest performance-optimised LED technology
- Slim light housing made of extruded aluminium profile with black plastic end caps and sealed PMMA cover

Your benefits
- Flicker-free and performance-optimised surface lighting, with no UV or IR content
- Daylight white
- Electrically daisy chainable (cascadable)

Areas of application
- Metal or woodworking, along with plastic processing
- Assembly and packaging installations

Versions
- Available in 7 lengths
- Variants for electrical daisy chaining (cascadable)
- Connection variants: 24V DC, 24V DC cascadable or 220–240V AC, each via M12 plug connections
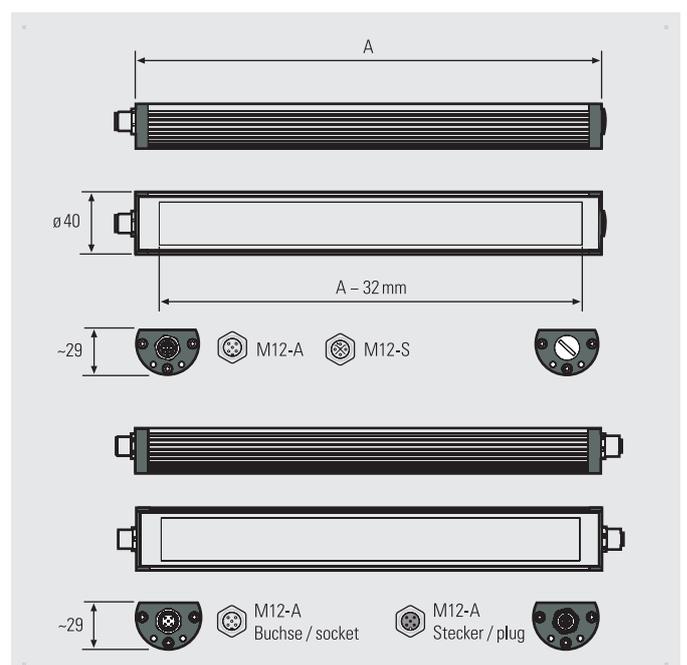
Protected against splashes and temperature-resistant

Robust aluminium housing

Breakproof PMMA cover

DC version

| 24V DC | | ≥85 | 100.000 h (L80/B10) | +70 −30 | M12 [A] | 5600K | OPTION |

AC version

| 220 V − 240 V AC | | ≥80 | 50.000 h (L80/B10) | +50 −30 | M12 [S] | 5000K | | | 36 months | |

LED light	Item no.	Length (A)	Optics	E$_{max}$ *	Luminous flux	Power	Connection
TUBELED_40 Element DC	119010-02	190 mm	100°	179 lx	668 lm	~4 W	24V DC
TUBELED_40 Element DC	119110-02	280 mm	100°	265 lx	1000 lm	~6 W	24V DC
TUBELED_40 Element DC	119210-02	365 mm	100°	351 lx	1336 lm	~8.5 W	24V DC
TUBELED_40 Element DC	119310-02	540 mm	100°	512 lx	2004 lm	~13 W	24V DC
TUBELED_40 Element DC	119410-02	715 mm	100°	659 lx	2672 lm	~17 W	24V DC
TUBELED_40 Element DC	119510-02	1040 mm	100°	906 lx	4008 lm	~24 W	24V DC
TUBELED_40 Element DC	119610-02	1540 mm	100°	1158 lx	6012 lm	~38 W	24V DC
TUBELED_40 Element DC, cascadable	119010-12	190 mm	100°	179 lx	668 lm	~4 W	24V DC
TUBELED_40 Element DC, cascadable	119110-12	280 mm	100°	265 lx	1000 lm	~6 W	24V DC
TUBELED_40 Element DC, cascadable	119210-12	365 mm	100°	351 lx	1336 lm	~8.5 W	24V DC
TUBELED_40 Element DC, cascadable	119310-12	540 mm	100°	512 lx	2004 lm	~13 W	24V DC
TUBELED_40 Element DC, cascadable	119410-12	715 mm	100°	659 lx	2672 lm	~17 W	24V DC
TUBELED_40 Element DC, cascadable	119510-12	1040 mm	100°	906 lx	4008 lm	~24 W	24V DC
TUBELED_40 Element DC, cascadable	119610-12	1540 mm	100°	1158 lx	6012 lm	~38 W	24V DC

For power supply units, dimming boxes and connection materials code ■ and ■ see the Accessories page in the Annex
With through-wiring (cascadable), several lights can be electrically daisy chained. The total current consumption may not exceed 4A DC at t$_a$ max. +40°C.

* maximum level of illuminance, measurement field 100 cm x 100 cm at distance of 100 cm

LED light	Item no.	Length (A)	Optics	E$_{max}$ *	Luminous flux	Power	Connection
TUBELED_40 Element AC	119110-03	280 mm	100°	262 lx	1030 lm	~8.5 W	220–240V AC
TUBELED_40 Element AC	119310-03	540 mm	100°	502 lx	2060 lm	~17 W	220–240V AC
TUBELED_40 Element AC	119510-03	1040 mm	100°	957 lx	5120 lm	~34 W	220–240V AC
TUBELED_40 Element AC	119610-03	1540 mm	100°	1194 lx	6180 lm	~51 W	220–240V AC

For connection materials code ■ see the Accessories page in the Annex
For mounting accessories for TUBELED_40 Element, see TUBELED_40 II

* maximum level of illuminance, measurement field 100 cm x 100 cm at distance of 100 cm

Accessories

Voltage connection of an LED light

Accessory	Item no.		Length of power cord	Cable material	Version	Operating voltage
Sensor cable M12, 4-wire	200100-01	■	5 m	PUR	M12 bushing/M12 plug, A-coded	24V DC
Sensor cable M12, 4-wire	200100-02	■	2.5 m	PUR	M12 bushing/M12 plug, A-coded	24V DC
Sensor cable M12, 4-wire	200100-03	■	10 m	PUR	M12 bushing/M12 plug, A-coded	24V DC
Sensor cable M12, 4-wire	200100-04	■	5 m	PUR	M12 bushing/open cable ends, 4-wire, A-coded	24V DC
Sensor cable M12, 4-wire	200100-05	■	2.5 m	PUR	M12 bushing/open cable ends, 4-wire, A-coded	24V DC
Sensor cable M12, 4-wire	200100-06	■	10 m	PUR	M12 bushing/open cable ends, 4-wire, A-coded	24V DC
Sensor cable M12, 4-wire	200100-07	■	5 m	PUR	M12 bushing, angled/open cable ends, 4-wire, A-coded	24V DC
Sensor cable M12, 5-wire	200100-09	■	2.5 m	PUR	M12 bushing/open cable ends, 5-wire, A-coded	24V DC
Sensor cable M12, 5-wire	200100-10	■	5 m	PUR	M12 bushing/open cable ends, 5-wire, A-coded	24V DC
Sensor cable M12, 5-wire	200100-11	■	10 m	PUR	M12 bushing/open cable ends, 5-wire, A-coded	24V DC
Sensor cable M12, 3 + PE	200100-14	■	5 m	PUR	M12 bushing/open cable ends, S-coded	220...240V AC
Sensor cable M12, 3 + PE	200100-15	■	2.5 m	PUR	M12 bushing/open cable ends, S-coded	220...240V AC
Sensor cable M12, 3 + PE	200100-16	■	10 m	PUR	M12 bushing/open cable ends, S-coded	220...240V AC
Sensor cable M8, 3-wire	200100-20	■	2 m	PUR	M8 bushing/open cable ends, 3-wire	24V DC
Sensor cable M8, 3-wire	200100-21	■	5 m	PUR	M8 bushing/open cable ends, 3-wire	24V DC
Sensor cable M8, 3-wire	200100-22	■	10 m	PUR	M8 bushing/open cable ends, 3-wire	24V DC
Sensor cable M8, 5-wire	200100-23	■	2 m	PUR	M8 bushing/open cable ends, 5-wire	24V DC
Sensor cable M8, 5-wire	200100-24	■	5 m	PUR	M8 bushing/open cable ends, 5-wire	24V DC
Sensor cable M8, 5-wire	200100-25	■	10 m	PUR	M8 bushing/open cable ends, 5-wire	24V DC

Preassembled plug connectors

Accessory	Item no.		Version	Operating voltage
Bushing M12, 4-wire	200200-01	■	M12 bushing, straight, 4-pin, A-coded, can be preassembled	24V DC
Bushing M12, 4-wire	200200-02	■	M12 bushing, angled, 4-pin, A-coded, can be preassembled	24V DC
Plug M12, 4-pin	200200-04	■	M12 plug, straight, 4-pin, A-coded, can be preassembled	24V DC
Plug M12, 4-pin	200200-05	■	M12 plug, angled, 4-pin, A-coded, can be preassembled	24V DC
Bushing M12, 3 + PE	200200-11	■	M12 bushing, straight, S-coded, can be preassembled	220...240V AC
Bushing M8, 3-pin	200200-20	■	M8 bushing, straight, 3-pin, can be preassembled	24V DC

Distributors, adapters and other

Accessory	Item no.		Version	Operating voltage
T-distributor M12	200200-03	■	M12 T-piece, A-coded	24V DC
Protective plug M12	200200-06		Cover for M12 bushing	24V DC
Y-distributor M12	200200-08	■	1x M12 plug on 2x 1 m cables with M12 bushing, 3-wire, max. 4 A	24V DC
Adapter M12 | M8	200200-21	■	Adapter M12, sensor plug for M8 sensor bushing, 3-pin	24V DC
Adapter M12 | M8	200200-23	■	Adapter M12, sensor plug for M8 sensor bushing, 4-pin	24V DC
Adapter M12 | M8	200200-24	■	Adapter M12, sensor plug for M8 sensor bushing, connection cable 200 mm, 5-pin	24V DC
Sensor/actuator box M12	200300-01	■	Sensor/actuator box with connection cable, 4 slots, A-coded, max. 4 A	24V DC

Always up to date!

You can find more information, data sheets and figures for the accessories here:

https://shop.led2work.com/en/Product-accessories/

Operating equipment with fixed voltage

LED driver	Item no.	Power consumption	Input voltage	Output voltage	Version
Top-hat rail power supply unit	210100-01	~72 W	88...264V AC	24V DC	–
Table power supply unit, M12 socket	210100-02	~60 W	90...264V AC	24V DC	M12-A
Plug power supply unit, M12 socket, protection class II	210100-03	~36 W	100...240V AC	24V DC	M12-A
Top-hat rail power supply unit	210100-04	~480 W	90...264V AC	24V DC	–
Table power supply unit, M12 socket	210100-05	~120 W	90...264V AC	24V DC	M12-A
Switching power supply unit, IP67, M12 socket, open ends	210100-06	~60 W	90...305V AC	24V DC	M12-A
Switching power supply unit, IP67, M12 socket, open ends	210100-07	~100 W	90...305V AC	24V DC	M12-A
Switching power supply unit, IP67, M12 socket, open ends	210100-08	~150 W	90...305V AC	24V DC	M12-A
Top-hat rail power supply unit	210100-09	~120 W	88...264V AC	24V DC	–
Top-hat rail power supply unit	210100-10	~240 W	88...264V AC	24V DC	–
Switching power supply unit, M12 socket, protection class II	210100-11	~60 W	100...240V AC	24V DC	M12-A
Plug PSU, M12 socket, angled, protection class II	210100-13	~36 W	100...240V AC	24V DC	M12-A
Top-hat rail PSU, protection class II	NEC class 2	210100-14	~100 W (~91 W)	88...264V AC	24V DC	–
Switching power supply unit, IP67, M12 socket, open ends	210100-15	~240 W	90...305V AC	24V DC	M12-A
Plug power supply unit, M12 socket, protection class II	210100-16	~60 W	90...264V AC	24V DC	M12-A
Plug PSU, interchangeable adapter, M12 socket, protection class II	210100-17	~40 W	90...264V AC	24V DC	M12-A

Dimmers and lighting accessories for 24V DC lights

Accessory	Item no.	Protection type	Current	Input voltage	Power
DIMM module, external, M12-A plug/bushing	210700-04	IP40	max. 6 A	24V DC	~144 W
PWM module, external, M12-A plug/bushing	210700-05	IP40	max. 4 A	24V DC	~96 W
DIMM module, external, M12-A plug/bushing incl. connection cable 3 m	210700-06	IP54	max. 4 A	24V DC	~96 W
PIR sensor, external, M12-A plug/bushing	210700-07	IP54	max. 4 A	24V DC	~96 W
DIMM module, external, M12-A plug/bushing, for RGB-W	210700-08	IP54	max. 4 A	24V DC	~96 W

Holders and mounting brackets

Accessory	Item no.	Version
TUBELED_70 EVO	INROLED_70 light holder	210200-02	Light holder for TUBELED_70 EVO	INROLED_70, aluminium, light swivel 360°, 1 pair
TUBELED_40 light holder	210200-06	Light holder for TUBELED_40 II	TUBELED_40 Element, aluminium, light swivel 360°, 1 pair
LEANLED II	SIGNALED II light holder	210200-07	Spring clip for LEANLED II	SIGNALED II, galvanised steel, 1 pair
LEANLED II	SIGNALED II light holder	210200-08	Magnetic bracket for LEANLED II	SIGNALED II, spring clip 210200-07 on magnet, 1 pair
TUBELED_40 light holder	210200-11	Mounting bracket for TUBELED_40 II	TUBELED_40 Element, V2A, light swivel 111°, 1 pair
TUBELED_40 light holder	210200-12	Magnetic bracket for TUBELED_40 II	TUBELED_40 Element, mounting bracket 210200-11 on magnet, 1 pair
TUBELED_40 light holder	210200-14	Mounting bracket for TUBELED_40 II	TUBELED_40 Element, V2A, light swivel +/- 180°, 1 pair
LEANLED II	SIGNALED II light holder	210200-18	Mounting set for LEANLED II	SIGNALED II RGB, planar or swivelling light (spare part), 2x 2 pairs
LEANLED II	SIGNALED II light holder	210200-19	Mounting adapter for LEANLED II	SIGNALED II RGB light holder set 210200-18, 1 pair
FIELDLED EVO light holder	210200-20	Mounting bracket for FIELDLED EVO, V2A, plan. light, 1 pair
FIELDLED EVO light holder	210200-21	Mounting bracket for FIELDLED EVO 96 mm wide, V2A, light swivel 150°, 1 pair
FIELDLED EVO light holder	210200-22	Mounting bracket for FIELDLED EVO 150 mm wide, V2A, light swivel 150°, 1 pair
TUBELED_25 light holder	210200-23	Mounting bracket for TUBELED_25, V2A, mounted light, swivel 60°, 1 pair
TUBELED_25 light holder	210200-24	Magnetic bracket for TUBELED_25, mounting bracket 210200-23 on magnet, 1 pair
TUBELED_25 light holder	210200-25	Mounting bracket for TUBELED_25, V2A, mounted light, swivel 180°, 1 pair
TUBELED_25 light holder	210200-26	Magnetic bracket for TUBELED_25, mounting bracket 210200-25 on magnet, 1 pair
TUBELED_25 light holder	210200-27	Mounting bracket for TUBELED_25 only, light length 290 mm, V2A, mounted light, swivel 60°
TUBELED_40 light holder	210200-28	Mounting bracket for TUBELED 40 II only, light length 280 mm, V2A, mounted light, swivel 60°
INROLED_50 light holder	210200-29	INROLED_50 light holder, austenitic stainless steel 1.4310, 1 pair
DOMELED light holder	210200-30	DOMELED retention bracket V2A, 1 piece
TUBELED_70 EVO light holder	210200-31	Mounting bracket for TUBELED_70 EVO, V2A, 1 pair
TUBELED_40 II light holder	210200-32	Mounting bracket for TUBELED 40 II only, light length 190 mm, V2A, mounted light, swivelling

Mounting accessories CENALED with the light

Explanation of symbols

🇩🇪	Made in Germany	(colour wheel) ≥85	Colour rendering index (Ra)	+60 −30	Ambient temperature for use (°C)
24V DC	Voltage connection	5000K	Light colour in Kelvin Binnig according to 3-step MacAdam colour sorting	OPTION	Light is dimmable, but does not have an internal dimmer
◇III	Electrical protection class	RGB	RGB LED chips (additionally with hybrid lights)	(dimmer)	Light has an internal dimmer
IP67/ IP69K	IP protection type (degree of protection)	100.000 h (L80/B10)	LED service life in operating hours during ongoing operation	⊗	Maintenance-free
CNC	Resistant to flying chips, shock- and vibration-resistant , oil- and coolant-resistant	M12	Connection type	ETL	ETL Listed (UL/CSA), safety test seal
15°|30°|65°	Beam angle/beam characteristics	3 m + −	Cable length in metres	36 months	Warranty in months

Voltage connection of an LED light

Depending on the variant, LED lights are connected to 24V direct voltage or alternating voltage. In the industrial world, 24V DC are widespread in control technology for tooling machines, and in automation. The direct current connection offers benefits when it comes to safety, fault reduction and simpler installation materials. In contrast, alternating current connections are available almost everywhere, meaning that LED lights with AC connections can be used virtually anywhere. WIDE-RANGE voltage connections from 100V–305V AC or 120V–277V AC also cover voltage ranges below or above the widespread 220–240V AC. A light with this kind of connection withstands voltage fluctuations better and can be used all over the world, just like all 24V DC lights.

Electrical protection class of an LED light

The protection class marks the safety measures taken by the manufacturer to prevent electrical shock due to electrical currents and high voltages.

Symbol	Meaning
(earth symbol)	Protection class I applies for lights for which a protective conductor terminal is required.
(square symbol)	Protection class II describes a higher protective insulation without protective conductor terminal.
◇III	Protection class III is given to lights operated with safety extra-low voltage.

IP protection type coding for LED lights

The IP protection type describes protection against the ingress of dust, foreign bodies and water into a light. The protection type is specified using an IP code.

The first digit indicates the protection grade against the ingress of dust and foreign bodies. The second digit specifies the protection against the ingress of water.

First code number	Protection against the ingress of dust and foreign bodies	Second code number	Protection against the ingress of water
0	Non protected	0	Non protected
1	Protection against ingress of solid foreign bodies with a diameter greater than 50 mm	1	Protection against vertically dripping water
2	Protection against ingress of solid foreign bodies with a diameter greater than 12.5 mm	2	Protection against dripping water with a 15° incline
3	Protection against ingress of solid foreign bodies with a diameter greater than 2.5 mm	3	Protection against inclined water spray up to 60° incline
4	Protection against ingress of solid foreign bodies with a diameter greater than 1 mm	4	Protection against splashes
5	Protected against dust in harmful quantities	5	Protection against water jets
6	Dustproof	6	Protection against strong water jets
		7	Protection against temporary submersion (max. 30 min at 1 m water depth)
		8	Protection against continuous submersion
		9K	Protection against very intensive water jets

CNC-compatible

If an LED light is described as CNC-compatible, the light housing and cover above the light aperture are so robust and sealed that they can also be used under harsh conditions, as in the workspace of tooling machines or machining centres. This light withstands even permanent exposure to flying chips and to emulsions such as coolant and lubricants. With even harsher conditions, such as in blasting booths, the inevitable wear can be counteracted by using changeable foil covers over the light aperture.

Beam characteristics of an LED light

The beam angle of an LED light specifies the angle in which the light is radiated forwards. This information is important for the purpose, place of use and coordinated light planning.

| Beam angle	Usage planning
15° to 30°	Focused light planning (spot light)
40° to 65°	Accentuated light with flat character
100° to 120°	Homogeneous, flat light planning

Colour rendering index of an LED light

The colour rendering index R_a describes the presentation of the colours in artificial lighting compared to the colour rendering in sunlight. Sunlight has a reference value of 100 and the higher the R_a value of a light, the better the colour rendering of the light source.

Colour rendering index R_a	Quality of colour rendering
90...100	excellent
80...90	good
70...80	satisfactory
60...70	sufficient
50...60	deficient
0...50	insufficient

Light colour of an LED light

The light colour in Kelvin (K) describes the colour temperature of a light source and characterises the appearance of the light it radiates. The higher the measurement unit in Kelvin, the cooler the light is perceived. In industrial lighting, colour temperatures of between 3,500 and 6,500 are normal – light in this range is perceived as bright and stimulating. Daylight white (5200–5700K) is especially suitable for environments requiring bright and intense lighting.

3000K | 4000K | 5000K | 5600K | 6000K | 7000K
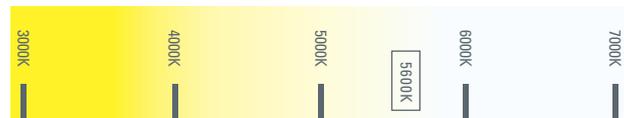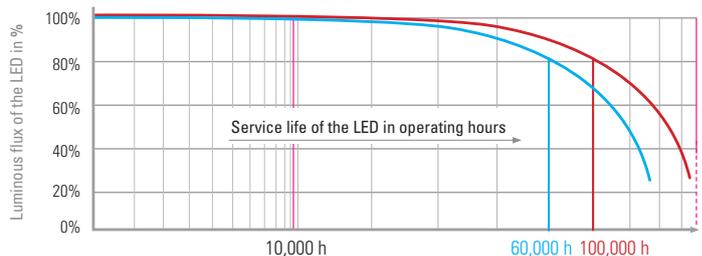
Service life of an LED light

Service life is an important variable for LED light. The lights built into the light are connected with the light housing in such a special way that they are described as *non-replaceable*. But saying that, LED sources have almost five times the life expectancy of conventional light sources.

The service life of an LED is specified in operating hours. But this does not mean that the LED will fail exactly after this time, but rather will only have a fraction of its original luminous flux, which is specified as the **L-value** .

L-value: **L80** specifies that **80% of the original luminous flux** is still reached after the specified service life expires.

B-value: **B10** stands for the percentage of LEDs, i.e. **10%**, which have a higher loss of luminous flux (L) – **a very low value where the very high quality of the LED chips used comes into effect.**

The information **L80/B10** therefore means that after reaching the specified service life, 80% of the original luminous flux is still present in 90% of the tested LED chips.

Luminous flux of the LED in %

100% | 80% | 60% | 40% | 20% | 0%

Service life of the LED in operating hours

10,000 h | 60,000 h | 100,000 h

ETL Listed (UL / CSA standard

This test symbol indicates that the product has undergone extensive testing and meets the relevant safety and performance standards. The ETL test is based on standards set out by organisations such as the American National Standards Institute (ANSI) or other internationally recognised safety organisations. While the CE mark is a self-certification by the manufacturer that the product meets the European guidelines, the ETL test confirms the compliance with safety standards through independent tests.

Warranty

We are so convinced of the quality of our products that we provide all our LED lights with a 36-month warranty, as long as the light has been used as intended. During these 36 months, any defects and errors occurring on the product are rectified for free, as long as they are attributed to material, processing or design errors. Further information can be found in the respective operating instructions under the point "Warranty".

Lumens and lux

Lumen (lm) is a unit of measurement for the total volume of the visible light radiated by the light in a room. Lumen specifies the total luminous flux of the light. Lux (lx) is a unit of measurement for the level of illuminance and describes how much light touches a surface of up to one square metre. One lux corresponds to one lumen per square metre.