



# LED2WORK

INTELLIGENCE IN LIGHT

- is a climate-neutral company
- founded in 2007
- develops and manufactures its products 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 workplace lights:

- are suitable for all work involving visual tasks, such as at manual workstations, system and assembly stations and at test stations
- are energy-efficient and produce bright, high-contrast light
- feature the latest high-performance LED technology
- guarantee top-quality workmanship and long service life
- are easy to install or retrofit

**Put simply: CONVINCING QUALITY!**







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## LED workplace light for pinpoint illumination CENALED SPOT Flexarm

Our handy LED light CENALED SPOT Flexarm lights up any work environment. It can be used in manual workstations, at workbenches or can be used to focus light in the processing area of machines. The flexible flex arm is encased. The base and light head are made of die-cast aluminium. Light is emitted by high-performance LED chips that are protected by safety glass. The practical CENALED SPOT Flexarm light can be quickly brought into play wherever light is needed.

### Technology

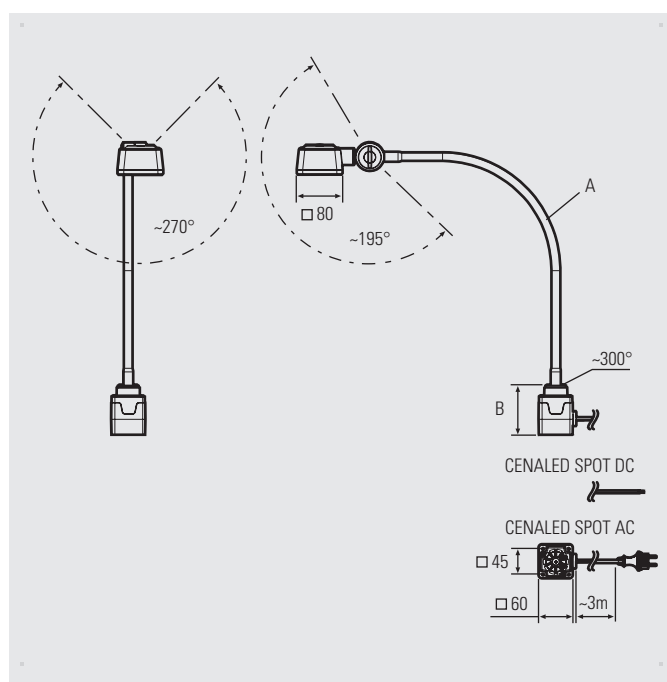
- High-power LED chips for neutral white
- On/off and dimmable using push-button on light head
- High-quality 500 mm gooseneck – flexible, tested for 20,000 bending cycles and fitted with an oil-resistant sheath
- Available as a 24V DC variant or for direct connection to 100–305V AC, each with a 3 m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

### Your benefits

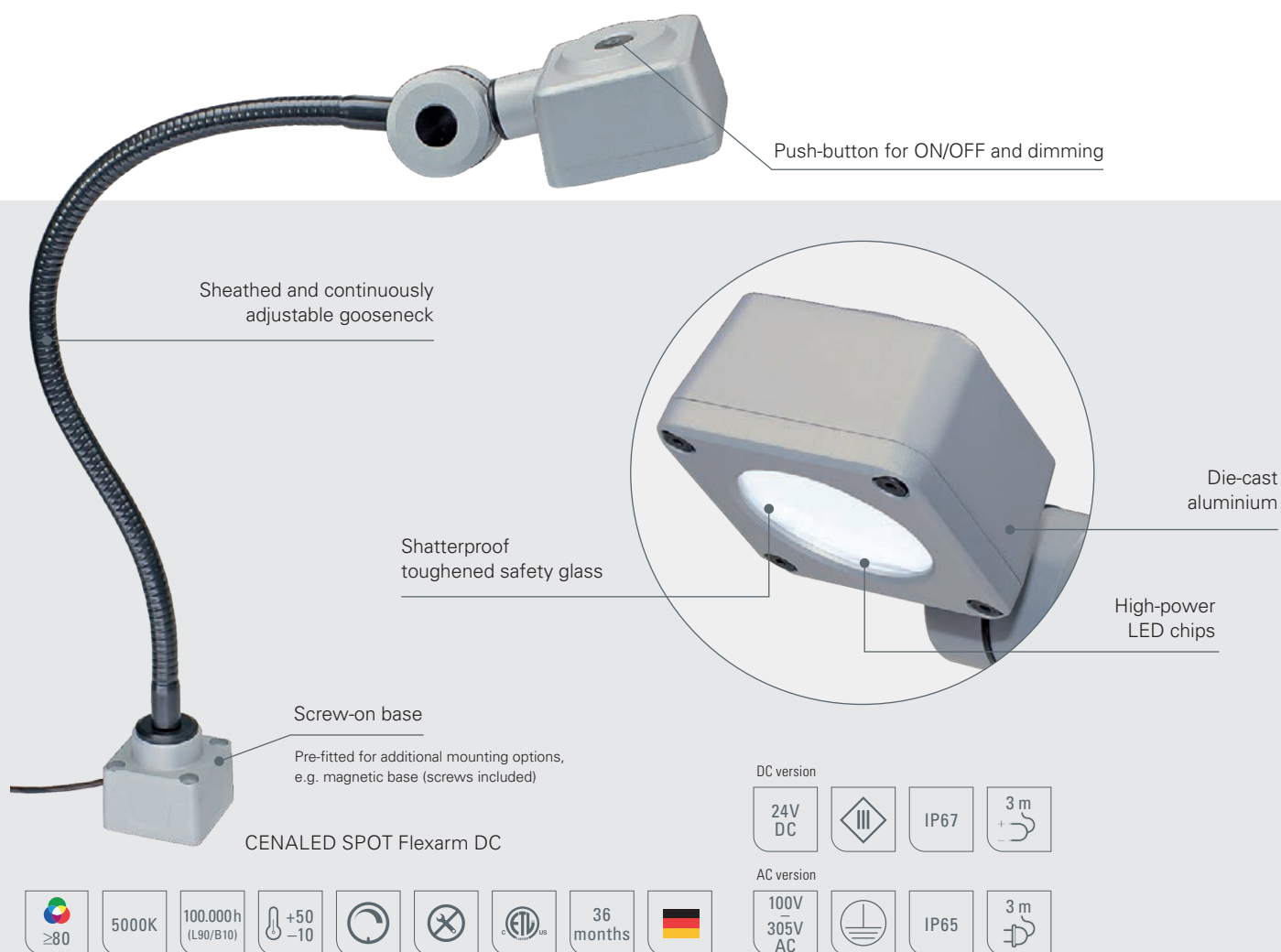
- Compact light for powerful, neutral white illumination with outstanding detail sharpness
- Flicker-free light with no UV or IR content
- Can be precisely positioned using the adjustable flex arm
- 30° beam angle for focused illumination

### Areas of application

- Manual workstations for goldsmiths or watchmakers
- Workstations at machines without their own lighting (e.g. drills) if light is needed in certain spots or at short notice







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

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

\* Maximum level of illumination, measurement field 100 cm x 100 cm at distance of 50 cm

Accessories	Item no.
Magnetic clamp for CENALED screw-on base (holding force 600 N)	220500-01
Table clamp for CENALED screw-on base	220500-02
Wall bracket for CENALED screw-on base	220500-03

The CENALED SPOT Flexarm is part of the CENALED modular system. All housing parts are made of die-cast aluminium in solid industrial quality. The screw-on base for a 24V DC or 100–305V AC connection forms the basis of every light. The light is supplemented by an articulated arm, flex arm or directly mounted articulated head. The light head is the same in all versions and features an on/off switch and brightness control (dimming). The screw-on base can be combined with various mounting options, e.g. a magnetic clamp or table clamp.





### LED magnifying workplace light CENALED LENS Flexarm

This magnifying light with double magnification features a flexible gooseneck that holds the light head securely in position once it has been adjusted. The CENALED LENS Flexarm can be used to view even the smallest components in great detail. The magnified area below the lens is perfectly illuminated. The high illumination level means that the LED light can be used as a simple workplace light. The magnifying light is supplied with a lens cover for this purpose. The cover is magnetic and can be easily attached to the gooseneck when not protecting the lens.

#### Technology

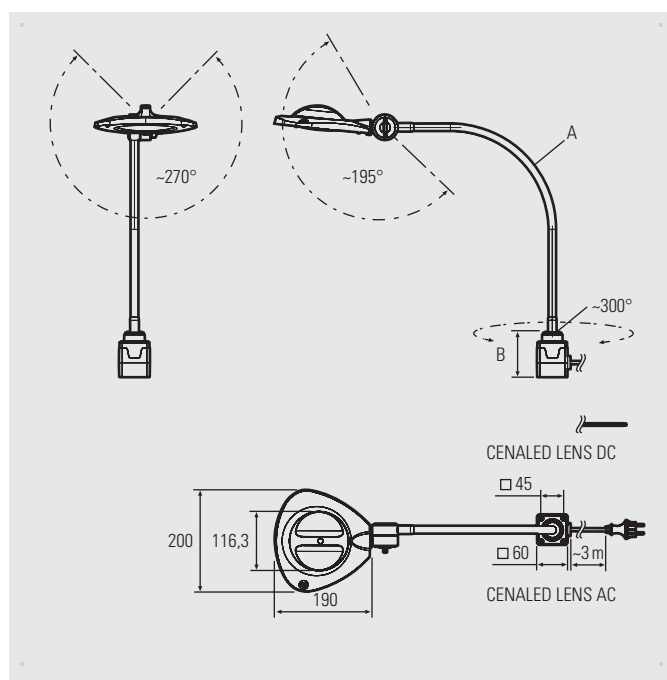
- High-power LED ring for daylight white light
- 4 dpt glass lens, focal length 250 mm
- On/off and dimmable using push-button on light head
- High-quality 500 mm gooseneck – manoeuvrable, tested for 20,000 bending cycles and fitted with an oil-resistant sheath
- Available as a 24V DC variant or for 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 outstanding detail sharpness
- Flicker-free light with no UV or IR content
- Light and magnifier can be moved and adjusted with precision
- Beam angle of 120° and opal white glare control

#### Areas of application

- Manual and testing workstations
- Workstations at machines and installations





IP54	≥85	5600K	100.000 h (L80/B10)	+50 -10				36 months		DC version	24V DC		3 m	AC version	100V 305V AC		3 m
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LED light	Item no.	Arm length (A)	Base (B)	Optics	E <sub>max</sub> *	Luminous flux	Power	Connection
CENALED LENS Flex arm DC	121110-01	500 mm	59 mm	120°	4051 lx	1277 lm	~8.4 W	24V DC
CENALED LENS Flex arm AC	121110-11	500 mm	88 mm	120°	4051 lx	1277 lm	~9 W	100–305V AC

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

\* Maximum level of illumination at a distance of 250 cm

Accessories	Item no.
Magnetic clamp for CENALED screw-on base (holding force 600 N)	220500-01
Table clamp for CENALED screw-on base	220500-02
Wall bracket for CENALED screw-on base	220500-03

The CENALED LENS Flexarm forms part of the CENALED modular system. All housing parts are made of die-cast aluminium in solid industrial quality. The screw-on base for a 24V DC or 100–305V AC connection forms the basis of every light. The light is supplemented by an articulated arm, flex arm or directly mounted articulated head. The light head is the same in all versions and features an on/off switch and brightness control (dimming). The screw-on base can be combined with various mounting options, e.g. a magnetic clamp or table clamp.



## LED workplace lights with flex arms



### LED workplace light for wide-area illumination **CENALED FLOOD Flexarm**

The CENALED FLOOD Flexarm is a flexible LED work light for wide-area illumination of manual workstations, workbenches or machines. The screw-on base and light head are made of die-cast aluminium with safety glass over the light aperture. The flexible arm and head joint make it easy to position the light in any desired position and aim the light where it is needed. A magnetic clamp, table clamp and wall bracket are available as alternative mounting options for the screw-on base.

#### Technology

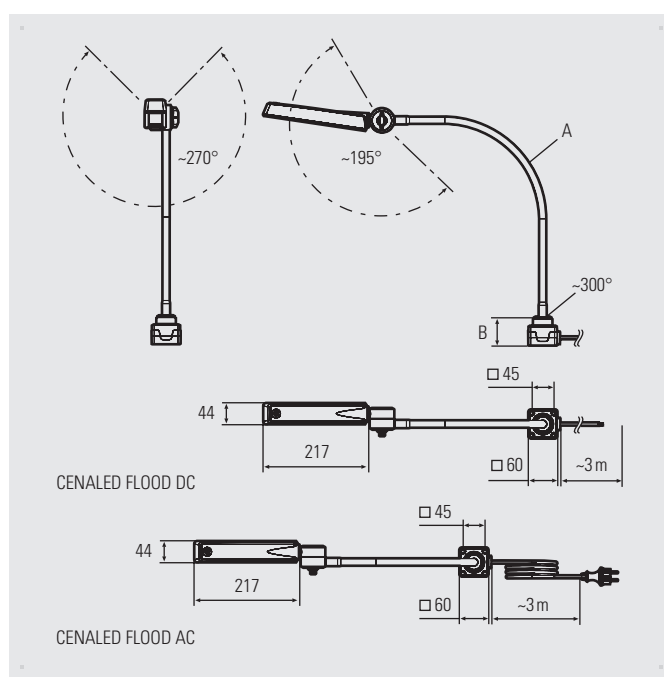
- High-power LED chips for daylight white light
- On/off switch and dimming via push-button on light head
- High-quality 500 mm gooseneck – highly flexible, tested for 20,000 bending cycles and fitted with an oil-resistant sheath
- Available as a 24V DC variant or for direct connection to 100–305V AC,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

#### Your benefits

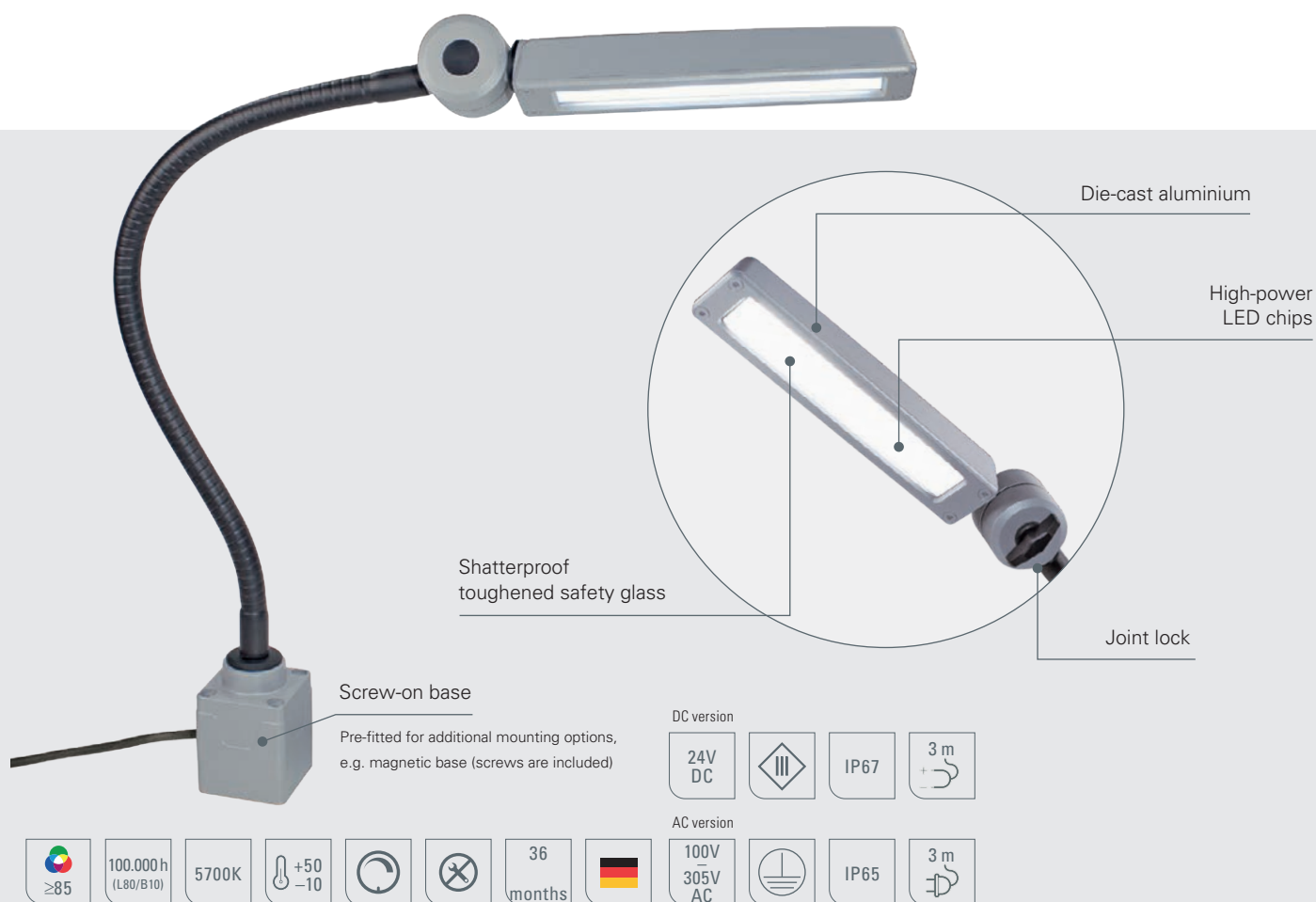
- Compact, powerful, wide-area light with excellent contrast and detail sharpness
- Flicker-free light with no UV or IR content
- Precise adjustment using bendable flex arm

#### Areas of application

- Manual workstations for goldsmiths or watchmakers
- Workstations on drilling, grinding and chipping machines
- Workbenches and testing workstations







LED light	Item no.	Arm length (A)	Base (B)	Optics	E <sub>max</sub> *	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 24V DC power supply units, see the Accessories page in the appendix

\* Maximum level of illumination, measurement field 100 cm x 100 cm at a distance of 50 cm

Accessories	Item no.
Magnetic clamp for CENALED screw-on base (holding force 600 N)	220500-01
Table clamp for CENALED screw-on base	220500-02
Wall bracket for CENALED screw-on base	220500-03

The CENALED FLOOD Flexarm forms part of the CENALED modular system. All housing parts are made of die-cast aluminium in solid industrial quality. The screw-on base for a 24V DC or 100–305V AC connection forms the basis of every light. The light is supplemented by an articulated arm, flex arm or directly mounted articulated head. The light head is the same in all versions and features an on/off switch and brightness control (dimming). The screw-on base can be combined with various mounting options, e.g. a magnetic clamp or table clamp.





### LED workplace light for pinpoint illumination **CENALED SPOT Articulated arm**

The CENALED SPOT Articulated arm light is a precisely adjustable light for manual workstations and smaller machines. The generously sized aluminium articulated arm of this otherwise delicate-looking light guarantees a wide working radius to bring the light right to where it is needed. The smaller beam angle produces focussed illumination. The CENALED SPOT articulated arm LED workplace light is one of the few articulated arm lights that can also be used in metal-cutting applications thanks to its high degree of protection.

#### Technology

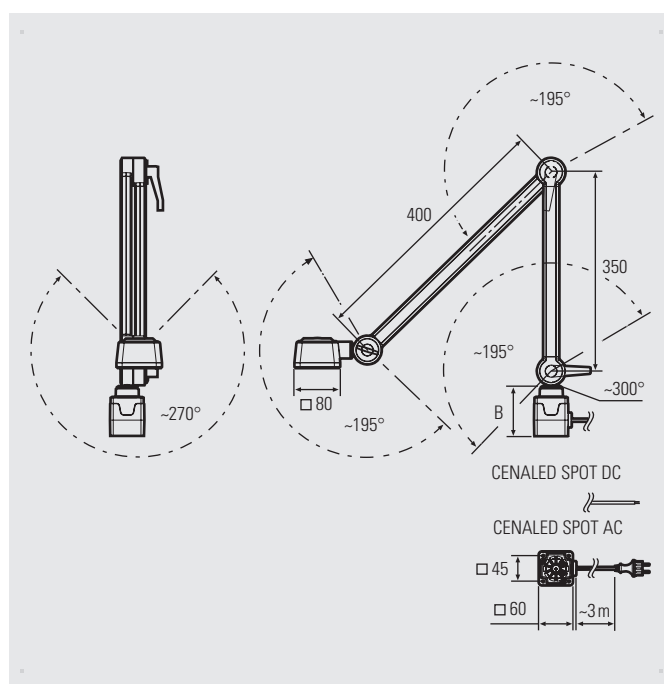
- High-power LED chips for neutral white light
- On/off and dimmable using push-button on light head
- Far-reaching articulated arms made of aluminium, adjustable via joints and with protected, integrated power cords
- Connection, depending on variant, is 24V DC or 100–305V AC, each with a 3 m power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

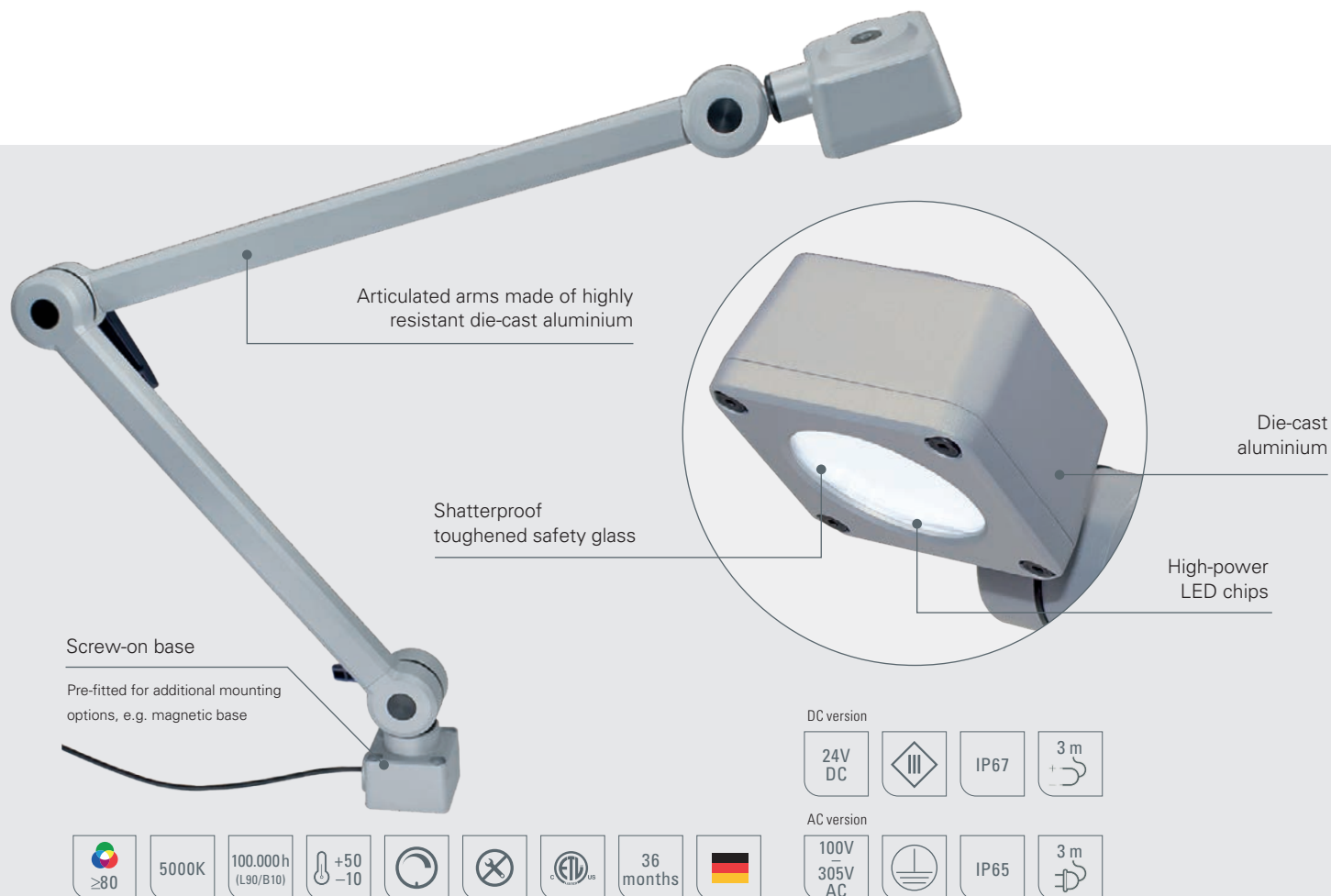
#### Your benefits

- Sturdy LED light for powerful illumination in neutral white with excellent detail sharpness
- Flicker-free light with no UV or IR content
- Can be precisely adjusted using the articulated arm
- 30° beam angle for focused illumination

#### Areas of application

- Workstations on machines, systems or in craft trades
- Goldsmiths, dental laboratories or watchmakers
- Workbenches and testing workstations
- Conventional machine tools





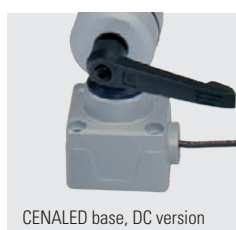
LED light	Item no.	Articulated arm length	Base (B)	Optics	E <sub>max</sub> *	Luminous flux	Power	Connection
CENALED SPOT Articulated arm DC	121012-02	750 mm	59 mm	30°	8584 lx	1120 lm	~8.5 W	24V DC
CENALED SPOT Articulated arm AC	121012-12	750 mm	88 mm	30°	8584 lx	1120 lm	~9 W	100–305V AC

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

\* Maximum level of illumination, measurement field 100 cm x 100 cm at a distance of 50 cm

Accessories	Item no.
Magnetic clamp for CENALED screw-on base (holding force 600 N)	220500-01
Table clamp for CENALED screw-on base	220500-02
Wall bracket for CENALED screw-on base	220500-03

The CENALED SPOT articulated arm is part of the CENALED modular system. All housing parts are made of die-cast aluminium in solid industrial quality. The screw-on base for a 24V DC or 100–305V AC connection forms the basis of every light. The light is supplemented by an articulated arm, flex arm or directly mounted articulated head. The light head is the same in all versions and features an on/off switch and brightness control (dimming). The screw-on base can be combined with various mounting options, e.g. a magnetic clamp or table clamp.







### LED magnifier light LENsled II

The LENSLED II is the king of magnifying lights. Developed for stationary use at assembly or inspection workstations, the LED light with magnifying lens can be adjusted to the desired position using the aluminium spring arm. The scratch-resistant lens is made of glass and provides 1.85x magnification. The bright light for illuminating the magnified area is shadow-free, glare-free and the light intensity can be adjusted by means of continuous dimming.

#### Technology

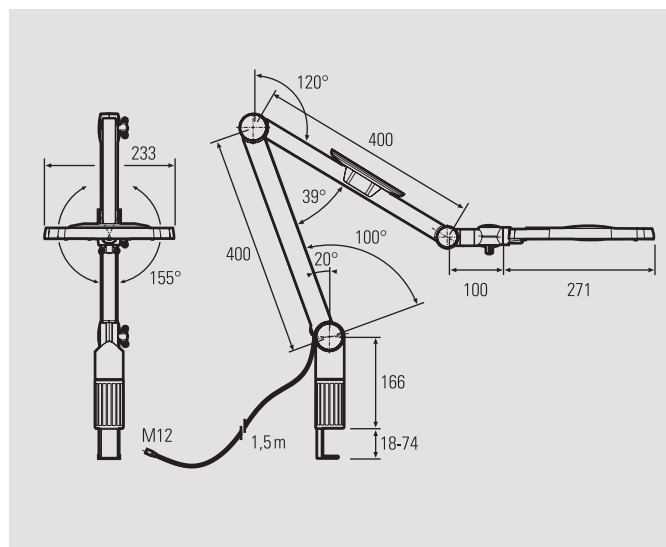
- Aluminium housing, aluminium spring arm, 3D head joint
- Head and spring arm can be swivelled and locked in position
- Magnifying lens with illuminated field of view, glass lens dia. 160 mm, 3.5 dpt, focal length ~286 mm
- Biconvex lens variant with additional embedded bifocal lens, dia. 31.5 mm, 8 dpt, focal length ~87 mm
- Universal power supply unit, table clamp and lens cover included

#### Your benefits

- Scratch-resistant glass lens with high magnification level
- Powerful, glare-free and flicker-free illumination of the magnified area
- Flicker-free light with no UV or IR content
- The articulated arm and 3D head joint give you maximum flexibility for positioning the light
- Continuous dimming with memory function
- Optional accessories for a wide range of mounting options: e.g. wall bracket or bracket for T-slot profiles

#### Areas of application

- Assembly and inspection workstations, manual workstations for goldsmiths, dental laboratories and watchmakers
- Test stations on machines





LENSLED II Articulated arm	Item no.	Arm length	Optics	E <sub>max</sub> *	Luminous flux	Power	Connection
LENSLED II, 3.5 dpt., dimmable	120810-11	800 mm	120°	3821 lx	1570 lm	~15 W	24V DC**
LENSLED II, 3.5 dpt. + 8 dpt., dimmable	120810-12	800 mm	120°	3821 lx	1570 lm	~15 W	24V DC**

\*\*power supply 100-240V and table clamp in the scope of delivery

\* Maximum illumination, 286 mm distance

Accessories	Item no.
Articulated arm light wall bracket	215100-01
Articulated arm light adapter for T-slot profile	215200-01
Articulated arm light screw-on base 60 x 60 mm, plastic, screw dimensions 45 x 45 mm	215400-03





### LED articulated arm light UNILED II

The UNILED II LED articulated arm light combines functionality with powerful light output. The articulated arm technology makes it easy to position and fix the light head in any desired position. The light itself is available in coordinated versions: four power levels, two different light colours and coordinated articulated arms for special applications. There are also variants with integrated dimming. What they all have in common is excellent ergonomic handling and homogeneous, shadow-free and glare-free light for demanding visual tasks.

#### Technology

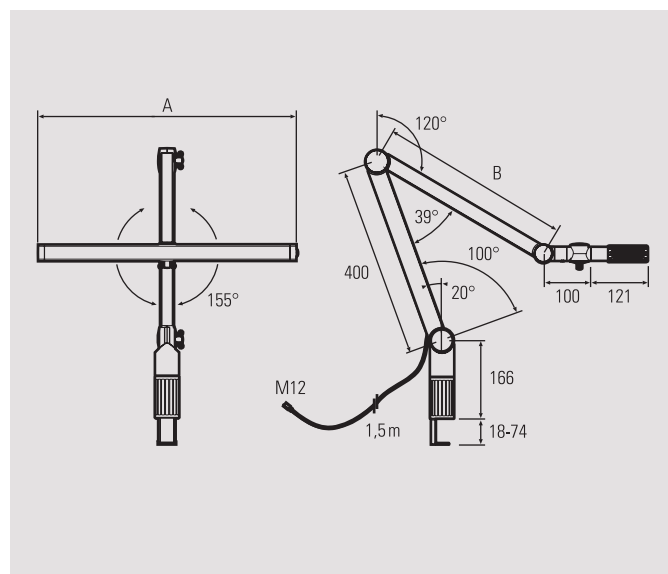
- State-of-the-art and energy-efficient LED technology
- High-quality articulated aluminium arm with a swivel and lockable light head featuring a 3D joint
- Aluminium head with heat dissipation to the rear

#### Your benefits

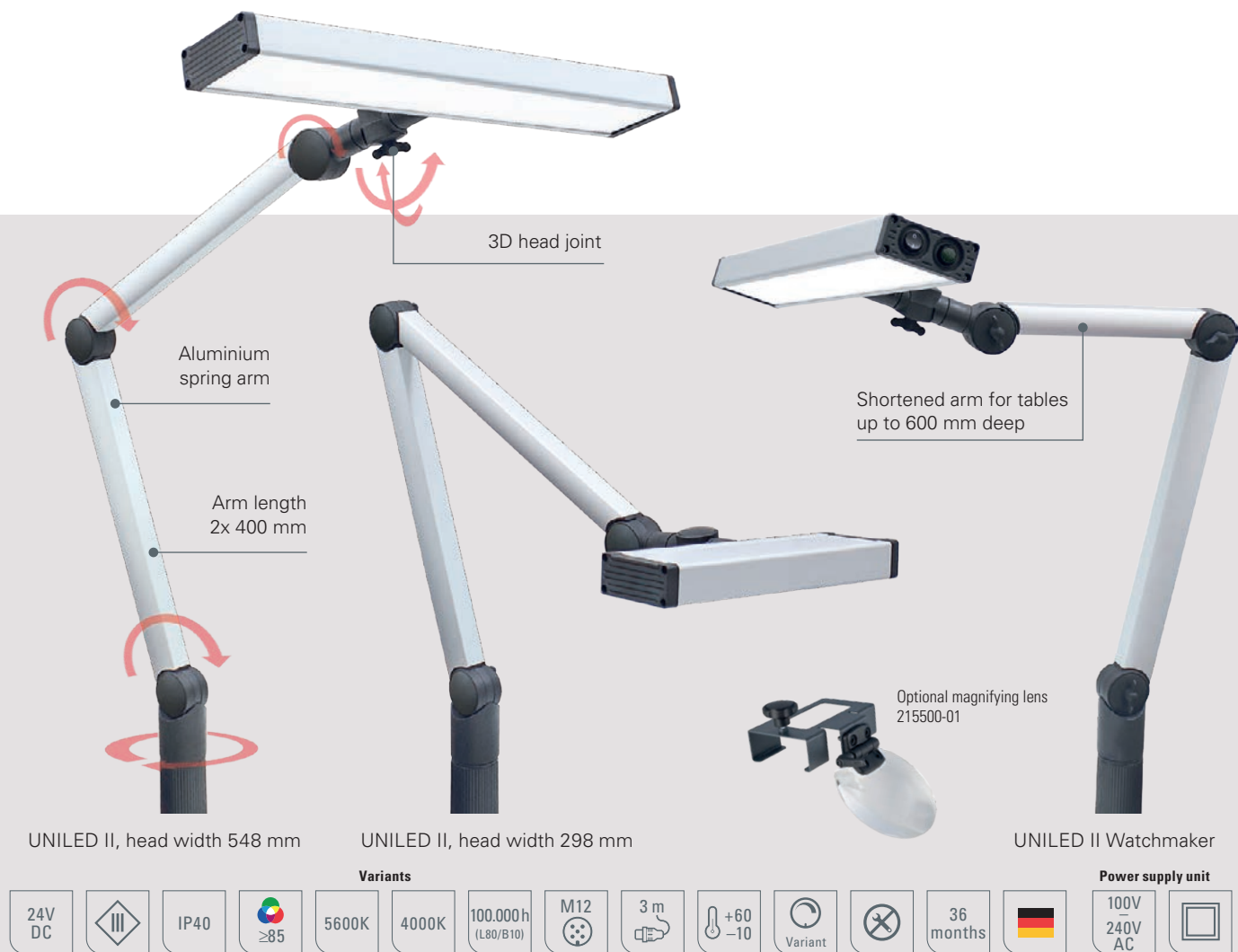
- Homogeneous, shadow-free and glare-free illumination
- Flicker-free light with no UV or IR content
- Choice of two white light colours
- Articulated arm and 3D head joint for maximum positioning flexibility and excellent ergonomic handling
- Light variants with long or short upper arm
- All variants also available with continuous dimming
- Wide range of mounting options with optional accessories

#### Areas of application

- For assembly and inspection workstations, manual workstations, goldsmiths, dental laboratories and watchmakers







LED light	Item no.	Head width (A)	Arm (B)	Optics	E <sub>max</sub> *	Luminous flux	Power	Connection
UNILED II 5600K	120610-01	298 mm	400 mm	100°	2342 lx	1899 lm	~12 W	24V DC**
UNILED II 5600K, dimmable	120610-02	298 mm	400 mm	100°	2342 lx	1899 lm	~12 W	24V DC**
UNILED II 5600K	120710-01	548 mm	400 mm	100°	4249 lx	3798 lm	~25 W	24V DC**
UNILED II 5600K, dimmable	120710-02	548 mm	400 mm	100°	4249 lx	3798 lm	~25 W	24V DC**

LED light	Item no.	Head width (A)	Arm (B)	Optics	E <sub>max</sub> *	Luminous flux	Power	Connection
UNILED II 5600K Watchmaker	120910-01	380 mm	250 mm	100°	2563 lx	2531 lm	~16 W	24V DC**
UNILED II 5600K Watchmaker, dimmable	120910-02	380 mm	250 mm	100°	2563 lx	2531 lm	~16 W	24V DC**

LED light	Item no.	Head width (A)	Arm (B)	Optics	E <sub>max</sub> *	Luminous flux	Power	Connection
UNILED II 4000K	120720-01	548 mm	400 mm	100°	4249 lx	3514 lm	~24 W	24V DC**
UNILED II 4000K, dimmable	120720-02	548 mm	400 mm	100°	4249 lx	3514 lm	~24 W	24V DC**

\*\*power supply 100-240V and table clamp in the scope of delivery

\* Maximum illumination, measurement field 100 cm x 100 cm at 50 cm distance

Accessories	Item no.
Articulated arm light wall bracket	215100-01
Articulated arm light adapter for T-slot profile	215200-01
Articulated arm light screw-on base 60 x 60 mm, plastic, screw dimensions 45 x 45 mm	215400-03
UNILED II additional magnifying lens, 3.39 dpt.	215500-01





### LED articulated arm light **UNILED II TUNABLE WHITE**

Sunlight in the workplace. The light colour of the UNILED II TUNABLE WHITE is continuously adjustable and its colour rendering is almost identical to sunlight. This is known to have a very positive influence on the human organism. Light with this colour rendering also improves contrast and lets workers assess formed components in different light colours. An opal white glare shield over the LED chips produces homogeneous and shadow-free illumination of the work area. The LED light can be positioned anywhere in the workstation thanks to the aluminium spring arm.

#### Technology

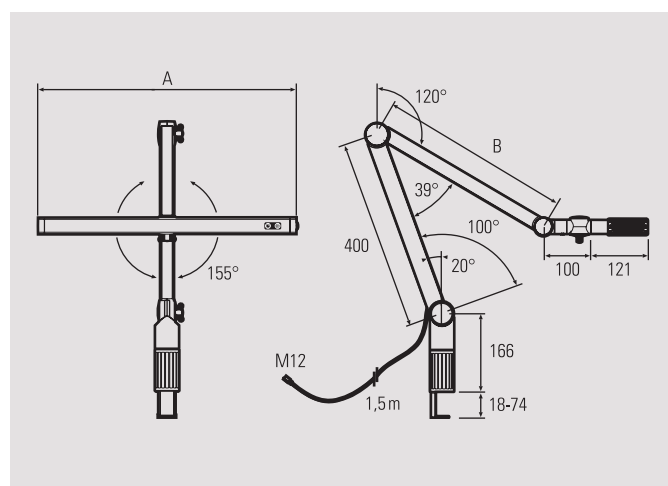
- TRI-R LED chips for light with very high-fidelity colour rendering and a selection of colour temperatures
- Aluminium spring arm with 3D head joint
- High-quality articulated arm and light head can be swivelled and locked in any position even with one hand

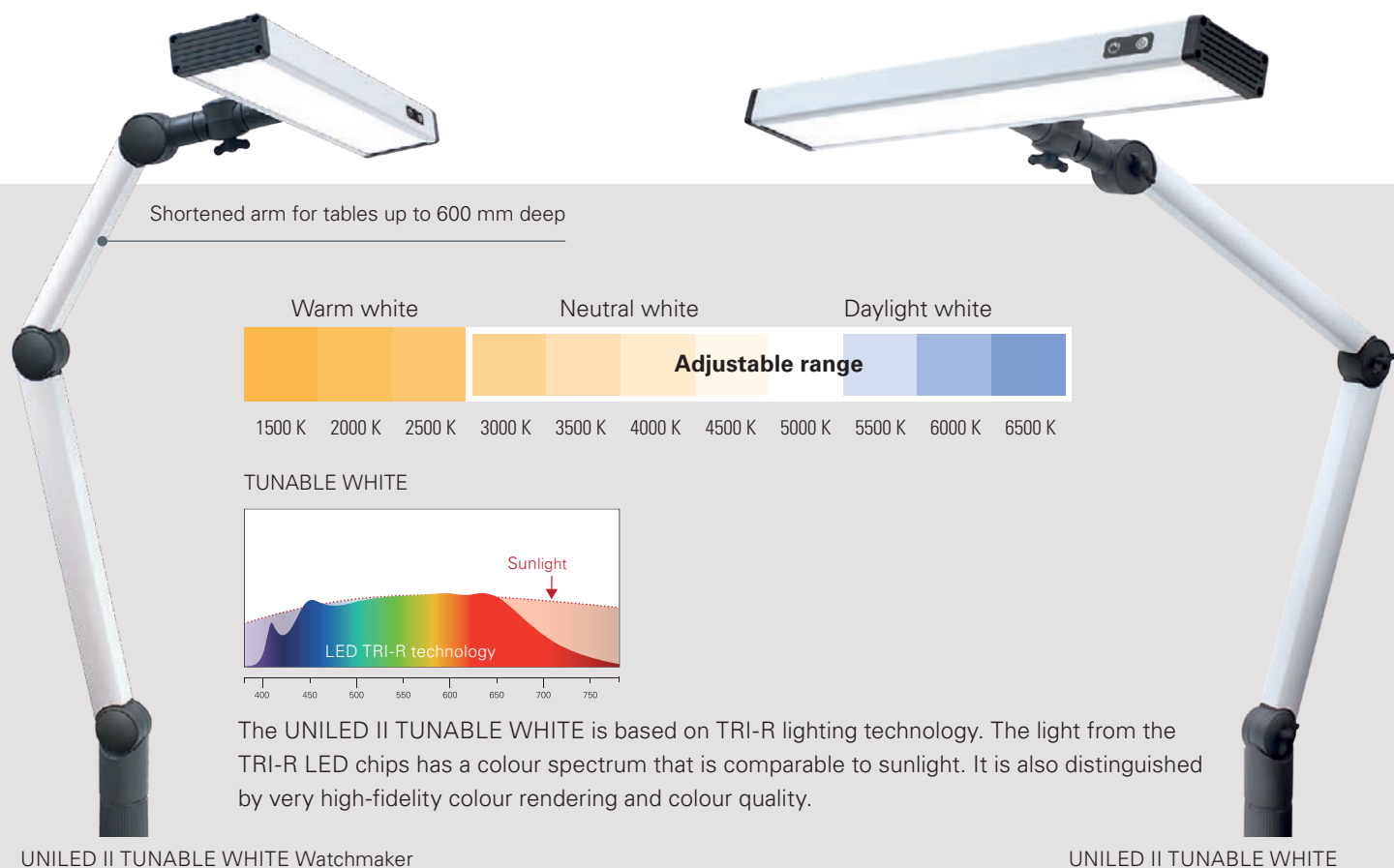
#### Your benefits

- Homogeneous shadow-free and glare-free illumination
- Flicker-free light with no UV or IR content
- Continuous adjustment of colour temperature with an easy-to-use keypad on the light head: Choice of colour temperature from warm white to neutral white to daylight white
- High color fidelity and colour rendering up to  $R_a \geq 98$ , which is almost sunlight quality
- Promotes concentration and reduces signs of fatigue
- Excellent ergonomic handling
- All variants also available with continuous dimming

#### Areas of application

- For assembly and inspection workstations, goldsmiths, dental laboratories, watchmakers and quality control
- Different colour temperatures for assessing surfaces





UNILED II TUNABLE WHITE Watchmaker

UNILED II TUNABLE WHITE



LED light	Item no.	Head width (A)	Arm length (B)	Optics	Light colour	E <sub>max</sub> *	Luminous flux	Power	Connection
UNILED II TUNABLE WHITE	120700-01	548 mm	400 mm	100°	3000 K 6500 K	1995 lx 2279 lx	2244 lm 2418 lm	~25 W	24V DC**
UNILED II TUNABLE WHITE, dimmable	120700-02	548 mm	400 mm	100°	3000 K 6500 K	1995 lx 2279 lx	2244 lm 2418 lm	~25 W	24V DC**
UNILED II TUNABLE WHITE Watchmaker	120900-01	380 mm	250 mm	100°	3000 K 6500 K	1340 lx 1742 lx	1582 lm 1468 lm	~20 W	24V DC**
UNILED II TUNABLE WHITE Watchmaker, dimmable	120900-02	380 mm	250 mm	100°	3000 K 6500 K	1340 lx 1742 lx	1582 lm 1468 lm	~20 W	24V DC**

\*\*power supply 100-240V and table clamp in the scope of delivery

\* Maximum illumination, measurement field 100 cm x 100 cm at 50 cm distance

Accessories	Item no.
Articulated arm light wall bracket	215100-01
Articulated arm light adapter for T-slot profile	215200-01
Articulated arm light screw-on base 60 x 60 mm, plastic, screw dimensions 45 x 45 mm	215400-03
UNILED II additional magnifying lens, 3.39 dpt.	215500-01







The SYSTEMLED EVO LED system light sets new standards for modern lighting technology and design. The clean design of this LED system light blends seamlessly into any industrial environment. Full-surface light emission eliminates all dark areas and shadow lines. The result is very uniform, homogeneous illumination. Optimized glare control creates pleasant light without any annoying glare. The high-quality LED chips also guarantee excellent colour rendering. The SYSTEMLED EVO system light is available in five standard lengths and two wattage variants.

### Technology

- Latest LED technology and light emitted from entire surface of the light aperture
- Shatterproof microprism cover
- Heat dissipation to the rear through the aluminium body
- T-slot mounting on the back for firmly securing the light to walls, ceilings, machines or system workstations
- Connected using Wieland GST18i components
- Dimming using optional accessories

### Versions

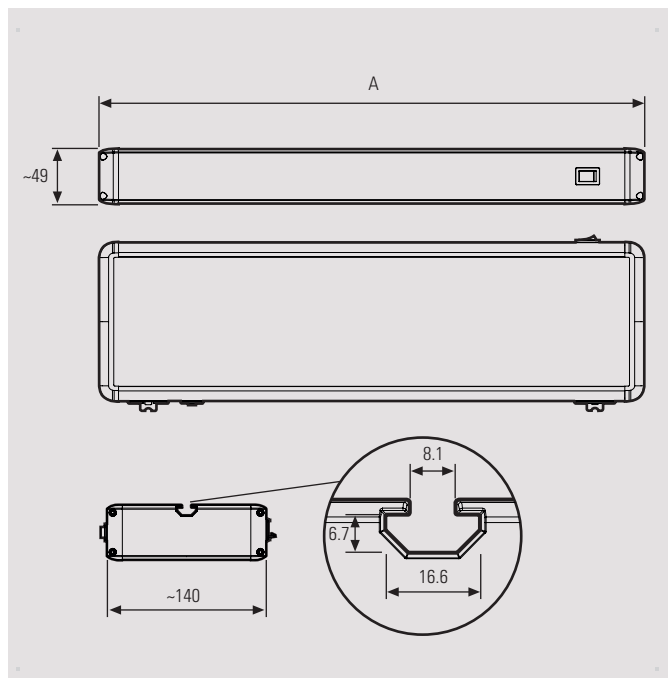
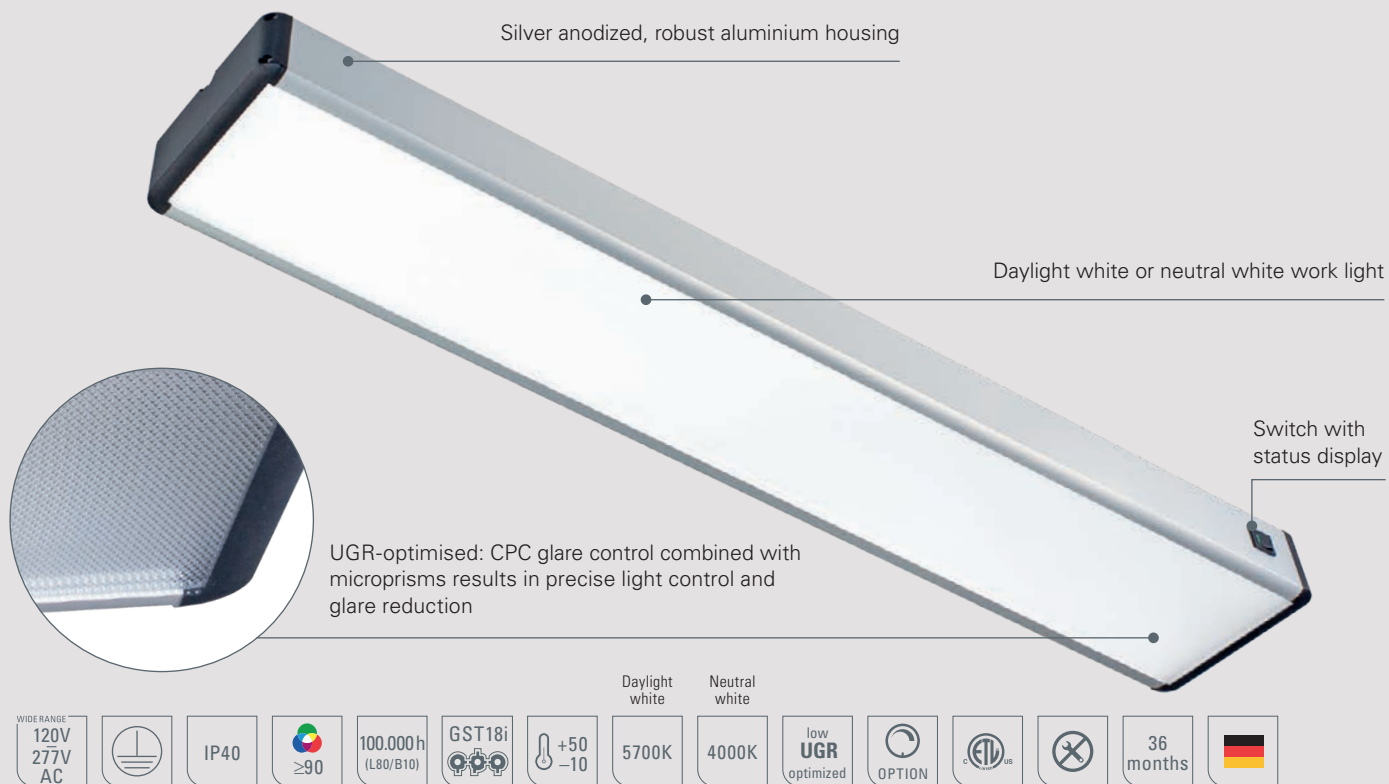
- Five lengths: from 472 mm to 1782 mm – compatible with standard system workstations
- Power variant for optimised luminous flux or ECO variant for optimised power consumption
- Neutral white or daylight white light colour

### Your benefits

- Flicker-free light with no UV or IR content
- High light output and luminous efficacy of up to 184 lm/W
- CPC glare control with microprisms guarantees precise and homogeneous light control
- Glare-free illumination without reflections on surfaces: UGR value  $\leq 22$
- Excellent and stable colour rendering  $R_a \geq 90$  thanks to 3-step MacAdam binning of LED chips
- All lights are cascadable
- Optional: Accessories available for switching, PWM dimming and brightness setting memory
- The only light on the market that is 1782 mm long.

### Areas of application

- Permanently installed lighting solution for system workstations, machines and systems





## LED system lights



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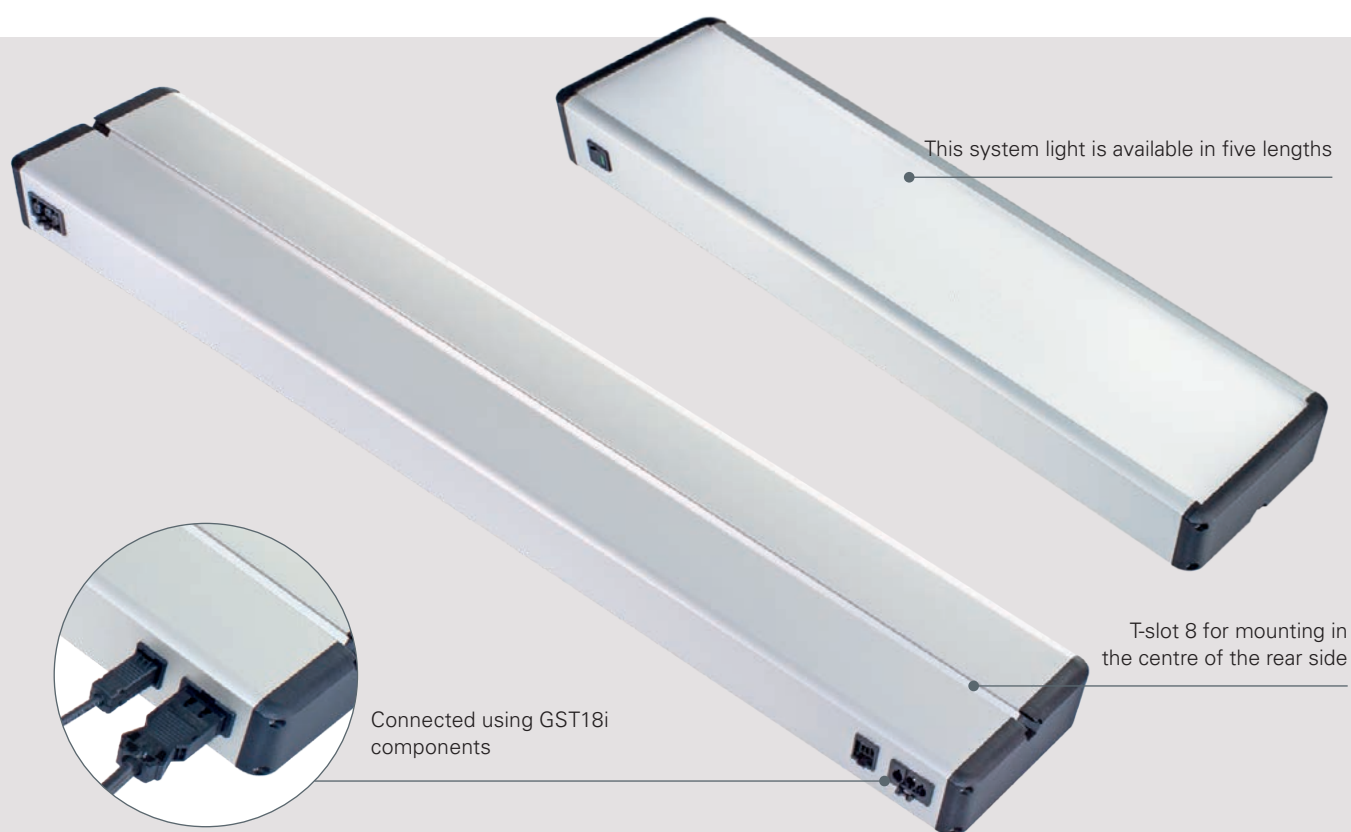
LED light	Item no.	Length (A)	Optics	E <sub>max</sub> *	Luminous flux	Power	Connection
SYSTEMLED EVO Power 5700K	155010-01	472 mm	90°	1239 lx	3250 lm	~21 W	120-277V AC
SYSTEMLED EVO Power 5700K	155110-01	898 mm	90°	2262 lx	6500 lm	~41 W	120-277V AC
SYSTEMLED EVO Power 5700K	155210-01	1120 mm	90°	2652 lx	8125 lm	~51 W	120-277V AC
SYSTEMLED EVO Power 5700K	155310-01	1342 mm	90°	2966 lx	9750 lm	~60 W	120-277V AC
SYSTEMLED EVO Power 5700K	155410-01	1782 mm	90°	3397 lx	13000 lm	~80 W	120-277V AC
SYSTEMLED EVO ECO 5700K	155010-02	472 mm	90°	739 lx	1990 lm	~13 W	120-277V AC
SYSTEMLED EVO ECO 5700K	155110-02	898 mm	90°	1350 lx	3980 lm	~26 W	120-277V AC
SYSTEMLED EVO ECO 5700K	155210-02	1120 mm	90°	1583 lx	4975 lm	~32 W	120-277V AC
SYSTEMLED EVO ECO 5700K	155310-02	1342 mm	90°	1770 lx	5970 lm	~38 W	120-277V AC
SYSTEMLED EVO ECO 5700K	155410-02	1782 mm	90°	2027 lx	7960 lm	~51 W	120-277V AC
SYSTEMLED EVO 4000K	155020-02	472 mm	90°	739 lx	1990 lm	~13 W	120-277V AC
SYSTEMLED EVO 4000K	155120-02	898 mm	90°	1350 lx	3980 lm	~26 W	120-277V AC
SYSTEMLED EVO 4000K	155220-02	1120 mm	90°	1583 lx	4975 lm	~32 W	120-277V AC
SYSTEMLED EVO 4000K	155320-02	1342 mm	90°	1770 lx	5970 lm	~38 W	120-277V AC
SYSTEMLED EVO 4000K	155420-02	1782 mm	90°	2027 lx	7960 lm	~51 W	120-277V AC



GST18i connection and connection material, code ■ in appendix

\* Maximum illumination, measuring field 100 cm x 100 cm at 100 cm distance

Multiple SYSTEMLED EVOs can be linked together (cascadable). Mains voltage is applied to the first light and all other lights are connected using Wieland extension cables and the inputs and outputs in the light housings. The total amperage of the interlinked lights must not exceed the fuse protection capacity of the operating-side connection.





Mounting accessories for SYSTEMLED EVO	Item no.
Mounting kit, swivelling, ESD insulation  , 1 pair with T-nuts and screws	240400-02
Slim mounting kit, 1 pair with T-nuts and screws	240400-04
Slim mounting kit, ESD insulation  , 1 pair with T-nuts and screws	240400-05
Mounting kit for fixing to the front of a light up to 500 mm long, 1 mounting bracket with T-nuts and screws	240400-06
1 pair of T-nuts with screws for T-slot 8 (SYSTEMLED EVO)	240400-07



Lighting accessories	Item no.
SYSTEMLED EVO control unit for switching and dimming, external, 3 m connection cable	240700-01
SYSTEMLED EVO control unit for switching and dimming, external, 5 m connection cable	240700-03
SYSTEMLED EVO external memory stick for saving the brightness level set using the control unit	240700-02





### LED system light UNILED SL DC

The UNILED SL DC LED light creates a pleasant and invigorating lighting atmosphere in system workstations. And that's not all. This LED workplace light has a matt cover that creates homogeneous, glare-free and shadow-free illumination with high light output. The UNILED SL DC is the perfect choice if you are looking for an economical system light with 24V DC connection and UL / CSA certification.

#### Technology

- Robust aluminium housing with integrated mounting brackets for horizontal installation
- Opal white, shatterproof and splinter-proof cover or micro-prismatic cover over the entire surface of the light aperture

#### Your benefits

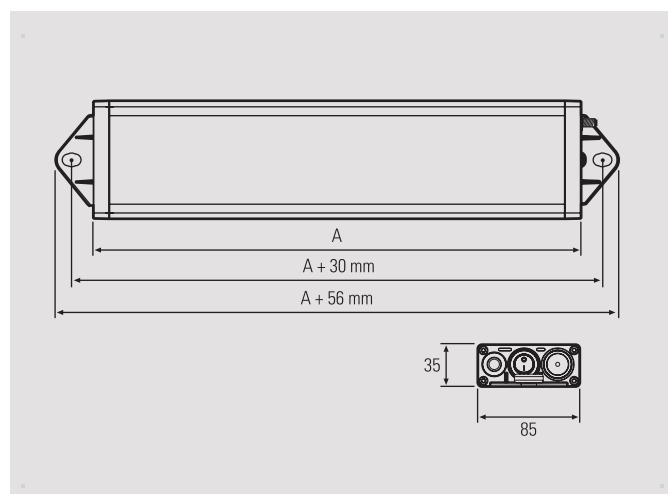
- Creates an invigorating and pleasant atmosphere with daylight white light
- Powerful, homogeneous and low-shadow illumination
- UGR-optimised: Opal white cover for glare reduction or CPC glare control with microprisms
- Heat is dissipated to the rear via the aluminium body

#### Areas of application

- System and assembly workstations, test workstations
- Can be used in machines that do not use cooling lubricants and where there are no flying splinters from cutting
- Assembly lines

#### Versions

- Glare control in opal white or using microprisms
- Four lengths: 295 mm to 1545 mm



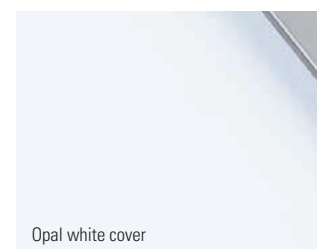
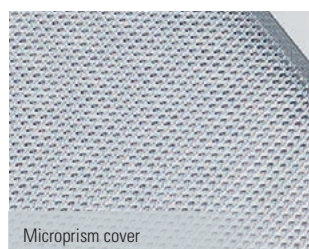


LED light	Item no.	Length (A)	Optics	E <sub>max</sub> *	Luminous flux	Power	Connection
UNILED SL DC, opal white cover	110914-11	295 mm	100°	501 lx	1899 lm	~12 W	24V DC
UNILED SL DC, opal white cover	110914-12	545 mm	100°	966 lx	3798 lm	~24 W	24V DC
UNILED SL DC, opal white cover	110914-13	1045 mm	100°	1705 lx	7596 lm	~48 W	24V DC
UNILED SL DC, opal white cover	110914-14	1545 mm	100°	2180 lx	11394 lm	~72 W	24V DC
UNILED SL DC, microprism cover	110914-21	295 mm	100°	605 lx	1899 lm	~12 W	24V DC
UNILED SL DC, microprism cover	110914-22	545 mm	100°	1171 lx	3798 lm	~24 W	24V DC
UNILED SL DC, microprism cover	110914-23	1045 mm	100°	2086 lx	7596 lm	~48 W	24V DC
UNILED SL DC, microprism cover	110914-24	1545 mm	100°	2680 lx	11394 lm	~72 W	24V DC

For connection material, code ■, lighting accessories and power supply units, see accessories in appendix

\* Maximum illumination, measuring field 100 cm x 100 cm at 100 cm distance

Accessories	Item no.
UNILED SL light holder articulated bracket, 1 pair	210200-02







### LED system light with signal function UNILED SL RGB-W

UNILED SL RGB-W – a system light for lighting and signalling. The LED light sends signals using coloured light and illuminates the workplace directly with white light. The UNILED SL RGB-W LED light creates a pleasant, invigorating lighting atmosphere. The high light output of the LED technology is filtered through the matt, opal white cover. This creates homogeneous, glare-free and shadow-free illumination for system workstations or production facilities. Changes in status are clearly signalled by the light changing to coloured light.

#### Technology

- LED system light with LED chips arranged in clusters to generate white light and coloured light
- Robust aluminium housing with mounting lugs

#### Your benefits

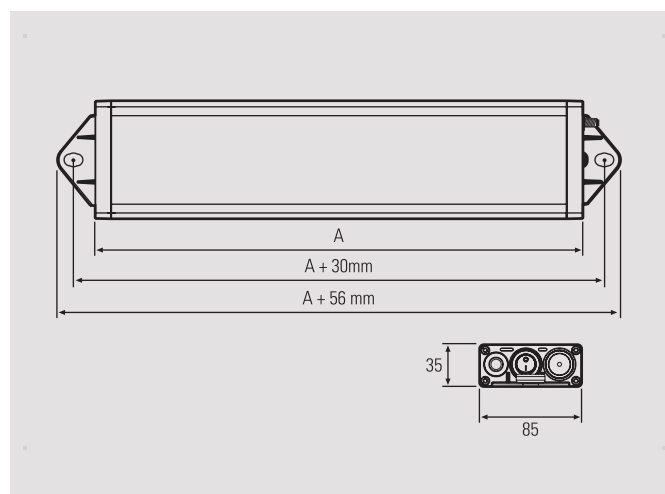
- Two in one: flicker-free, neutral white lighting without UV and IR components and a free choice of signalling colours from the RGB colour space
- Homogeneous, low-shadow, glare-free illumination of work areas
- Coloured light can visibly signal changes to system workstations or production facilities from a distance

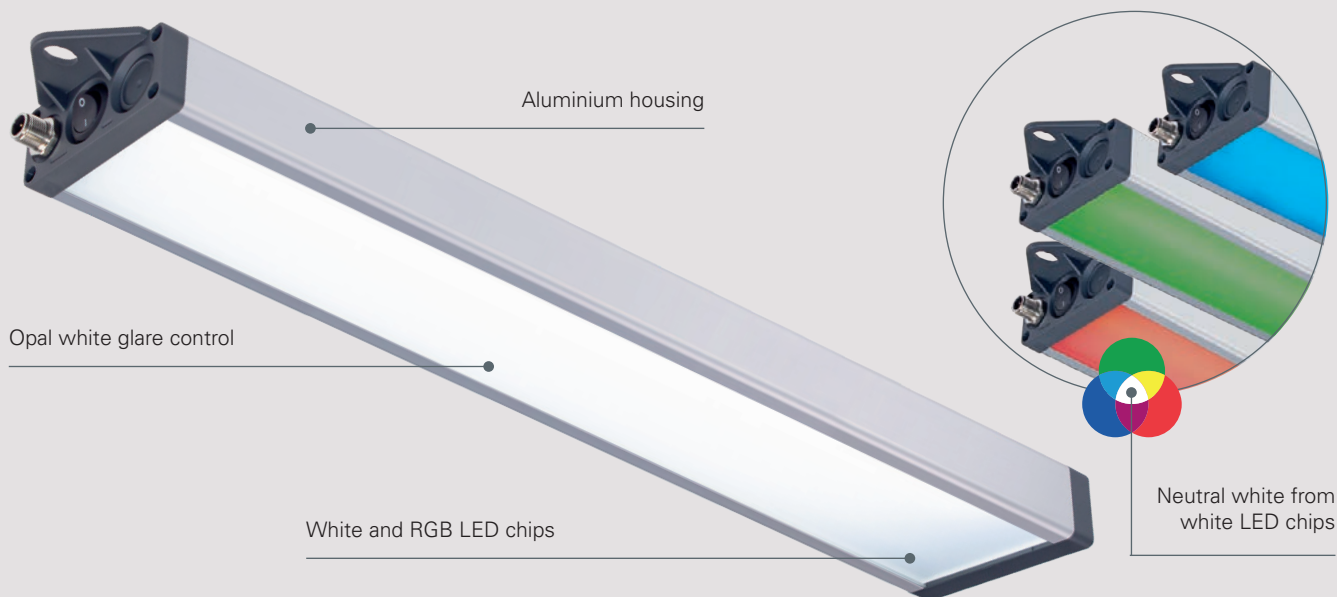
#### Areas of application

- System and assembly workstations, test workstations
- Can be used in machines that do not use cooling lubricants and where there are no flying splinters from cutting
- Assembly lines

#### Versions

- Four lengths: 295 mm to 1545 mm



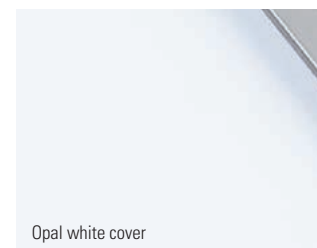


LED light	Item no.	Length (A)	Optics	E <sub>max</sub> * [W]	Luminous flux [W]	[R]	[G]	[B]	[W]	Connection
UNILED SL RGB-W	110994-11	295 mm	100°	370 lx	1215 lm	~9 W	~2.5 W	~9 W	~9.5 W	24V DC
UNILED SL RGB-W	110994-12	545 mm	100°	714 lx	2430 lm	~18 W	~5 W	~18 W	~19 W	24V DC
UNILED SL RGB-W	110994-13	1045 mm	100°	1264 lx	4860 lm	~36 W	~10 W	~36 W	~38 W	24V DC
UNILED SL RGB-W	110994-14	1545 mm	100°	1616 lx	7290 lm	~54 W	~15 W	~54 W	~57 W	24V DC

For connection material, code ■, lighting accessories and power supply units, see accessories in appendix

\* Maximum illumination, measuring field 100 cm x 100 cm at 100 cm distance

Accessories	Item no.
UNILED SL light holder articulated bracket, 1 pair	210200-02





**AC variant with WIDE RANGE voltage connection**

### LED workplace and system light **PROFILED**

PROFILED was developed as a flexible workplace light. It is a powerful light for standard-compliant illumination of separate workstations and assembly areas. PROFILED LED light can also be used to illuminate systems, packing stations and workbenches. The microprism cover distributes light with precision. The light body gives you the option of mounting the LED light horizontally or vertically on a T-slot profile. With the version of the up and down adjustable pendant light is suspended from above and the light is adjusted to suit the work area by pulling down or pushing up.

#### **Technology**

- State-of-the-art LED technology with 24V DC or 120-277V AC for powerful illumination of work areas
- Microprisms and CPC geometry in the cover and robust aluminium profile housing with rear T-slot for mounting
- Up/down pendant light: height-adjustable ceiling suspension with spiral cable

#### **Your benefits**

- Powerful light in daylight white
- Homogeneous, glare-free illumination with minimal shadows
- UGR-optimised: CPC geometry and additional microstructure in the anti-glare cover provide precise light control, glare reduction and homogeneous light distribution

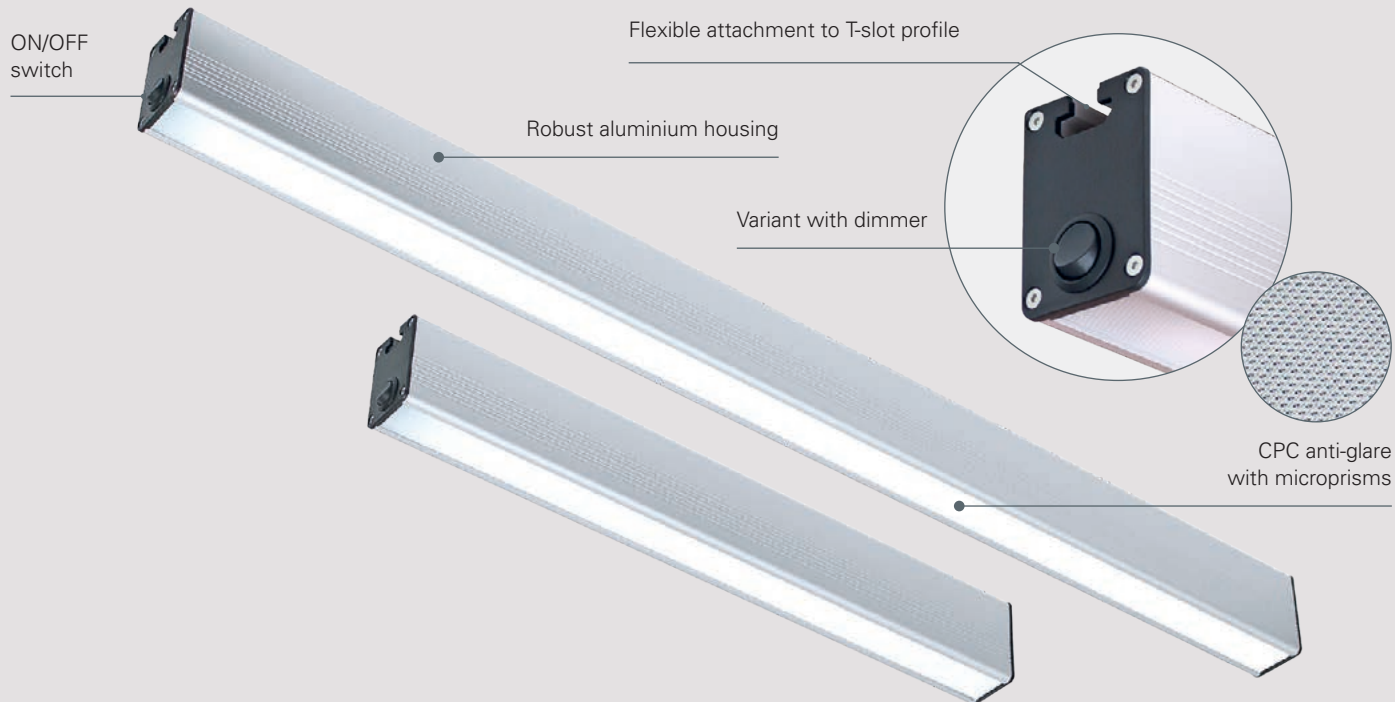
#### **Areas of application**

- System, assembly and separate workstations
- Packaging stations and storage areas
- Technical systems, test stations and workbenches
- Manual workstations in laboratories and in the dental and jewellery industries

#### **Versions**

- 24V DC with M12 plug connector or 120-277V AC direct connection using Wieland GST18i cable with mains plug or ceiling connection in the canopy of the up/down pendant
- Side ON/OFF switch plus variants with dimming push-button in the same place on the housing
- Five standard lengths (other lengths on request)

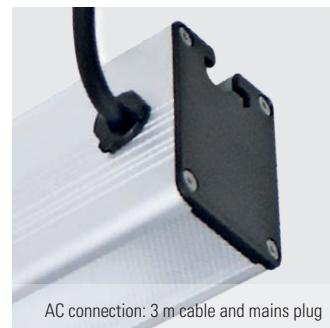
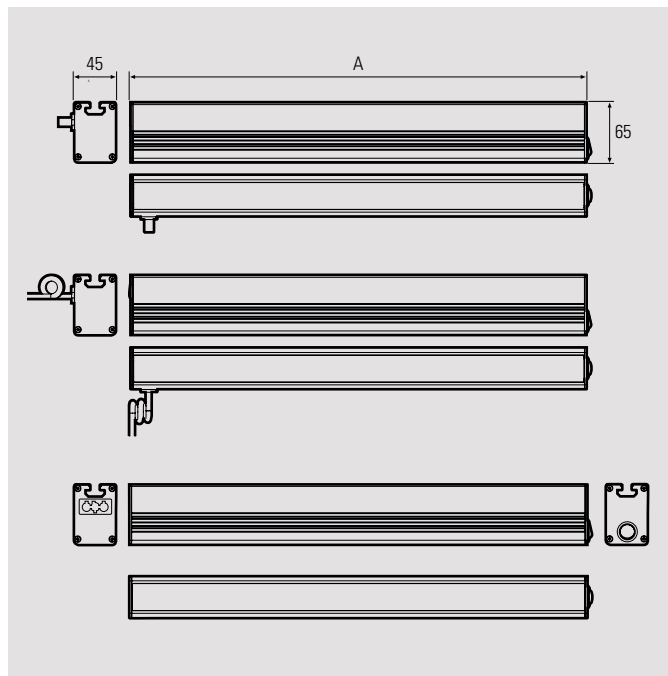




#### PROFILED DC



#### PROFILED AC



## LED workplace and system lights

LED system light with M12	Item no.	Length (A)	Optics	E <sub>max</sub> *	Luminous flux	Power	Connection	
PROFILED DC	150314-01	500 mm	100°	575 lx	1670 lm	~11 W	24V DC	M12-A sensor plug
PROFILED DC	150614-01	900 mm	100°	980 lx	3340 lm	~21 W	24V DC	M12-A sensor plug
PROFILED DC	150714-01	1000 mm	100°	1041 lx	3674 lm	~23 W	24V DC	M12-A sensor plug
PROFILED DC	150814-01	1200 mm	100°	1272 lx	4676 lm	~30 W	24V DC	M12-A sensor plug
PROFILED DC	150914-01	1500 mm	100°	TBA**	5678 lm	~37 W	24V DC	M12-A sensor plug
PROFILED DC, dimmable	150314-02	500 mm	100°	575 lx	1670 lm	~11 W	24V DC	M12-A sensor plug
PROFILED DC, dimmable	150614-02	900 mm	100°	980 lx	3340 lm	~21 W	24V DC	M12-A sensor plug
PROFILED DC, dimmable	150714-02	1000 mm	100°	1041 lx	3674 lm	~23 W	24V DC	M12-A sensor plug
PROFILED DC, dimmable	150814-02	1200 mm	100°	1272 lx	4676 lm	~30 W	24V DC	M12-A sensor plug
PROFILED DC, dimmable	150914-02	1500 mm	100°	TBA**	5678 lm	~37 W	24V DC	M12-A sensor plug

For connection material, code ■ and lighting accessories and PSU, see accessories in appendix

\* Maximum illumination level, measurement field 100 cm x 100 cm at distance of 100 cm | \*\*See data sheet for values

LED system lights with 3 m connection cable	Item no.	Length (A)	Optics	E <sub>max</sub> *	Luminous flux	Power	Connection	
PROFILED AC	150314-03	500 mm	100°	575 lx	1670 lm	~14 W	120–277V AC	3 m cable and mains plug
PROFILED AC	150614-03	900 mm	100°	980 lx	3340 lm	~24 W	120–277V AC	3 m cable and mains plug
PROFILED AC	150714-03	1000 mm	100°	1041 lx	3674 lm	~27 W	120–277V AC	3 m cable and mains plug
PROFILED AC	150814-03	1200 mm	100°	1272 lx	4676 lm	~34 W	120–277V AC	3 m cable and mains plug
PROFILED AC	150914-03	1500 mm	100°	TBA**	5678 lm	~39 W	120–277V AC	3 m cable and mains plug
PROFILED AC, dimmable	150314-04	500 mm	100°	575 lx	1670 lm	~14 W	120–277V AC	3 m cable and mains plug
PROFILED AC, dimmable	150614-04	900 mm	100°	980 lx	3340 lm	~24 W	120–277V AC	3 m cable and mains plug
PROFILED AC, dimmable	150714-04	1000 mm	100°	1041 lx	3674 lm	~27 W	120–277V AC	3 m cable and mains plug
PROFILED AC, dimmable	150814-04	1200 mm	100°	1272 lx	4676 lm	~34 W	120–277V AC	3 m cable and mains plug
PROFILED AC, dimmable	150914-04	1500 mm	100°	TBA**	5678 lm	~39 W	120–277V AC	3 m cable and mains plug

\* Maximum illumination level, measurement field 100 cm x 100 cm at distance of 100 cm | \*\*See data sheet for values

LED light with adjustable pull pendant	Item no.	Length (A)	Optics	E <sub>max</sub> *	Luminous flux	Power	Connection	
PROFILED AC adjustable pull pendant	150714-05	1000 mm	100°	1041 lx	3674 lm	~27 W	120–277V AC	Top suspension
PROFILED AC adjustable pull pendant	150814-05	1200 mm	100°	1272 lx	4676 lm	~34 W	120–277V AC	Top suspension
PROFILED AC adjustable pull pendant, dimmable	150714-06	1000 mm	100°	1041 lx	3674 lm	~27 W	120–277V AC	Top suspension
PROFILED AC adjustable pull pendant, dimmable	150814-06	1200 mm	100°	1272 lx	4676 lm	~34 W	120–277V AC	Top suspension

\* Maximum illumination level, measurement field 100 cm x 100 cm at distance of 100 cm

LED system light with Wieland GST18i	Item no.	Length (A)	Optics	E <sub>max</sub> *	Luminous flux	Power	Connection	
PROFILED AC	150314-07	500 mm	100°	575 lx	1670 lm	~14 W	120–277V AC	GST18i
PROFILED AC	150614-07	900 mm	100°	980 lx	3340 lm	~24 W	120–277V AC	GST18i
PROFILED AC	150714-07	1000 mm	100°	1041 lx	3674 lm	~27 W	120–277V AC	GST18i
PROFILED AC	150814-07	1200 mm	100°	1272 lx	4676 lm	~34 W	120–277V AC	GST18i
PROFILED AC	150914-07	1500 mm	100°	TBA**	5678 lm	~39 W	120–277V AC	GST18i
PROFILED AC, dimmable	150314-08	500 mm	100°	575 lx	1670 lm	~14 W	120–277V AC	GST18i
PROFILED AC, dimmable	150614-08	900 mm	100°	980 lx	3340 lm	~24 W	120–277V AC	GST18i
PROFILED AC, dimmable	150714-08	1000 mm	100°	1041 lx	3674 lm	~27 W	120–277V AC	GST18i
PROFILED AC, dimmable	150814-08	1200 mm	100°	1272 lx	4676 lm	~34 W	120–277V AC	GST18i
PROFILED AC, dimmable	150914-08	1500 mm	100°	TBA**	5678 lm	~39 W	120–277V AC	GST18i

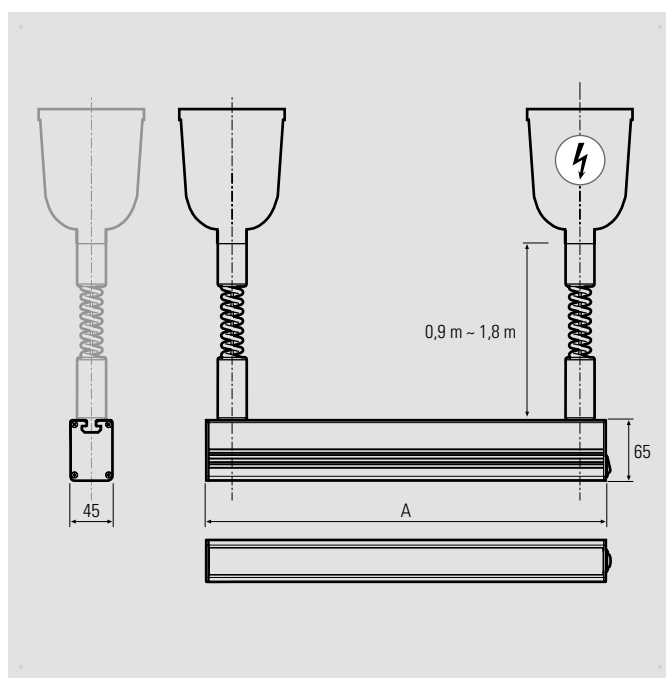
For GST18i connection material, code ■ see accessories in appendix

\* Maximum illumination level, measurement field 100 cm x 100 cm at distance of 100 cm | \*\*See data sheet for values

Mounting accessories	Item no.
Mounting kit, swivelling, ESD insulation 🛡️, 1 pair with T-nuts and screws	240400-02
1 pair of T-nuts with screws for T-slot 10 (PROFILED)	240400-03
Slim mounting kit, 1 pair with T-nuts and screws	240400-04
Slim mounting kit, ESD insulation 🛡️, 1 pair with T-nuts and screws	240400-05
Mounting kit for fixing to the front of a light up to 500 mm long, 1 mounting bracket with T-nuts and screws	240400-06



The PROFILED AC LED workplace light with adjustable pull pendant can be used to vary the intensity of the light in a work area by pulling it down or pushing it up. Once the light has been suspended, it can be pulled down from 900 mm to 1800 mm on the up/down pendant fitting.





### Power connection of LED lights

Item	Item no.		Length of power cord	Cable material	Version	Operating voltage
Sensor cable M12, 4-wire	200100-01	■	5 m	PUR	M12 socket/M12 plug, A-coded	24V DC
Sensor cable M12, 4-wire	200100-02	■	2.5 m	PUR	M12 socket/M12 plug, A-coded	24V DC
Sensor cable M12, 4-wire	200100-03	■	10 m	PUR	M12 socket/M12 plug, A-coded	24V DC
Sensor cable M12, 4-wire	200100-04	■	5 m	PUR	M12 socket/open cable ends, 4-wire, A-coded	24V DC
Sensor cable M12, 4-wire	200100-05	■	2.5 m	PUR	M12 socket/open cable ends, 4-wire, A-coded	24V DC
Sensor cable M12, 4-wire	200100-06	■	10 m	PUR	M12 socket/open cable ends, 4-wire, A-coded	24V DC
Sensor cable M12, 4-wire	200100-07	■	5 m	PUR	M12 socket, angled/open cable ends, 4-wire, A-coded	24V DC
Sensor cable M12, 5-wire	200100-09	■	2.5 m	PUR	M12 socket/open cable ends, 5-wire, A-coded	24V DC
Sensor cable M12, 5-wire	200100-10	■	5 m	PUR	M12 socket/open cable ends, 5-wire, A-coded	24V DC
Sensor cable M12, 5-wire	200100-11	■	10 m	PUR	M12 socket/open cable ends, 5-wire, A-coded	24V DC

### Customisable plug connectors

Item	Item no.		Version	Operating voltage
M12 socket, 4-wire	200200-01	■	M12 socket, straight, 4-pin, A-coded, customisable	24V DC
M12 socket, 4-wire	200200-02	■	M12 socket, angled, 4-pin, A-coded, customisable	24V DC
Plug M12, 4-pin	200200-04	■	M12 plug, straight, 4-pin, A-coded, customisable	24V DC
Plug M12, 4-pin	200200-05	■	M12 plug, angled, 4-pin, A-coded, customisable	24V DC

### Distributors, adapters and others

Item	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 socket	24V DC
Y-distributor M12	200200-08	■	1x M12 plug on 2x 1 m cables with M12 socket, 3-wire, max. 4 A	24V DC
Sensor/actuator box M12	200300-01	■	Sensor/actuator box with connection cable, 4 slots, A-coded, max. 4 A	24V DC

### Dimmer and lighting accessories for 24V DC lights

Item	Item no.	Protection rating	Current	Input voltage	Power
DIMM module, external, M12-A plug/socket (except RGB)	210700-04	IP40	Max. 6 A	24V DC	~144 W
PWM module, external, M12-A plug/socket	210700-05	IP40	Max. 4 A	24V DC	~96 W
DIMM module, external, M12-A plug/socket with 3 m connection cable (except RGB)	210700-06	IP54	Max. 4 A	24V DC	~96 W
PIR sensor, external, M12-A plug/socket	210700-07	IP54	Max. 4 A	24V DC	~96 W
DIMM module, external, M12-A plug/socket, for RGB-W	210700-08	IP54	Max. 4 A	24V DC	~96 W

### Connection accessories for SYSTEMLED EVO and PROFILED AC GST18i

Item	Item no.		Operating voltage
Wieland GST18i socket / mains plug cable, 5 m	240100-01	■	220 to 240V AC
Wieland GST18i socket / mains plug cable, 3 m	240100-02	■	220 to 240V AC
Wieland GST18i CH socket / mains plug cable, 5 m	240100-03	■	220 to 240V AC
Wieland GST18i socket / open ends cable, 5 m	240200-01	■	220 to 240V AC
Wieland GST18i extension cable, 1 m	240300-01	■	220 to 240V AC
Wieland GST18i extension cable, 2 m	240300-02	■	220 to 240V AC
Wieland GST18i extension cable, 5 m	240300-03	■	220 to 240V AC

## Lighting accessories for SYSTEMLED EVO

Accessories	Item no.
SYSTEMLED EVO control unit for switching and dimming, external, 3 m connection cable	240700-01
SYSTEMLED EVO control unit for switching and dimming, external, 5 m connection cable	240700-03
SYSTEMLED EVO external memory stick for saving the brightness level set using the control unit	240700-02

## Keep up to date!

You can find more information, data sheets and figures about our accessories here:



<https://shop.led2work.com> >>> Product accessories





















## Operating equipment with fixed voltage

LED drivers	Item no.	Power consumption	Input voltage	Output voltage	Version
Top-hat rail power supply unit	210100-01	~72 W	88 to 264V AC	24V DC	–
Table power supply unit, M12 socket	210100-02	~60 W	90 to 264V AC	24V DC	M12-A
Plug power supply unit, M12 socket, protection class II	210100-03	~36 W	100 to 240V AC	24V DC	M12-A
Top-hat rail power supply unit	210100-04	~480 W	90 to 264V AC	24V DC	–
Table power supply unit, M12 socket	210100-05	~120 W	90 to 264V AC	24V DC	M12-A
Switching power supply unit, IP67, M12 socket, open ends	210100-06	~60 W	90 to 305V AC	24V DC	M12-A
Switching power supply unit, IP67, M12 socket, open ends	210100-07	~100 W	90 to 305V AC	24V DC	M12-A
Switching power supply unit, IP67, M12 socket, open ends	210100-08	~150 W	90 to 305V AC	24V DC	M12-A
Top-hat rail power supply unit	210100-09	~120 W	88 to 264V AC	24V DC	–
Top-hat rail power supply unit	210100-10	~240 W	88 to 264V AC	24V DC	–
Switching power supply unit, M12 socket, protection class II	210100-11	~60 W	100 to 240V AC	24V DC	M12-A
Plug PSU, M12 socket, angled, protection class II	210100-13	~36 W	100 to 240V AC	24V DC	M12-A
Top-hat rail PSU, protection class II   NEC class 2	210100-14	~100 W (~92 W)	88 to 264V AC	24V DC	–
Switching power supply unit, IP67, M12 socket, open ends	210100-15	~240 W	90 to 305V AC	24V DC	M12-A
Plug power supply unit, M12 socket, protection class II	210100-16	~60 W	90 to 264V AC	24V DC	M12-A
Plug PSU, interchangeable adapter, M12 socket, protection class II	210100-17	~40 W	90 to 264V AC	24V DC	M12-A

## Holders and mounting brackets

Light holders	Item no.
UNILED SL articulated bracket, 1 pair	213200-02
Mounting accessories, cable suspension for lights with T-slot profile: 2x wire cables, nickel-plated, 3 m, dia. 1.5 mm, with cylinder nipple on one end (can be shortened on site), 2x ceiling fastening set, 2x grippers (wire cable holder) with knurling and M6 external thread, 8 mm long (requires 1 pair of T-nuts with M6 internal thread)	213300-02
UNILED II / LENSLED II Articulated arm light wall bracket	215100-01
UNILED II / LENSLED II Articulated arm light adapter for T-slot profile	215200-01
UNILED II / LENSLED II Articulated arm light screw-on base, plastic (for existing screws with screw dimensions 60 x 60 mm)	215400-03
CENALED holding magnet for screw-on base (holding force 600 N)	220500-01
CENALED table clamp for screw-on base	220500-02
CENALED wall bracket for screw-on base	220500-03
SYSTEMLED EVO / PROFILED mounting kit, swivelling, ESD insulation  , 1 pair with T-nuts and screws	240400-02
1 pair T-nuts with screws for T-slot 10 for PROFILED	240400-03
PROFILED slim mounting kit, 1 pair with T-nuts and screws	240400-04
SYSTEMLED EVO / PROFILED slim mounting kit, ESD insulation  , 1 pair with T-nuts and screws	240400-05
SYSTEMLED EVO / PROFILED mounting kit, for fixing to the front of a light up to 500 mm long, 1 mounting bracket with T-nuts and screws	240400-06
1 pair T-nuts with screws for T-slot 8 for SYSTEMLED EVO	240400-07

### Explanation of symbols




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

### Power 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 connections 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 power connections of 120–270V AC or 100–305V AC also cover power ranges below or above the commonly used 220-240V AC. Lights with this kind of connection withstand voltage fluctuations better and can be used all over the world, just like all 24V DC lights.

### Electrical protection class of LED lights

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

Symbol	Meaning
	Protection class I applies for lights for which a protective conductor terminal is required.
	Protection class II describes a higher protective insulation without protective conductor terminal.
	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	2nd code-number	Protection against the ingress of water
0	Not protected	0	Not 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



## 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 lighting planning.

Beam angle	Planned use
15° to 30°	Focused light planning (spot light)
40° to 65°	Accentuated light with wide-area effect
100° to 120°	Homogeneous, flat light planning

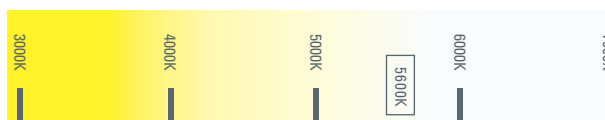
## Colour rendering index of an LED light

The colour rendering index  $R_a$  describes the presentation of the colours in artificial lighting compared to 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 to 100	excellent
80 to 90	good
70 to 80	satisfactory
60 to 70	sufficient
50 to 60	deficient
0 to 50	insufficient

## Light colour of an LED light

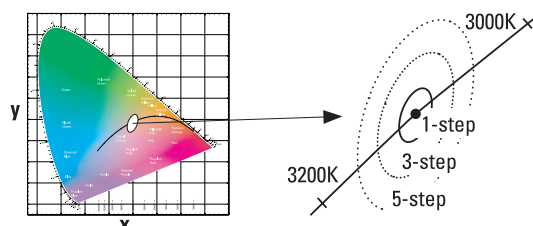
The light colour in Kelvin (K) describes the colour temperature of a light source and characterises the appearance of the light it radiates. The higher the measurement unit in Kelvin, the cooler the light is perceived. In industrial lighting, colour temperatures of between 3500 and 6500 are normal – light in this range is perceived as bright and stimulating. Daylight white (5200–6500K) is particularly suitable for environments that require bright and intense lighting.



## 3-step MacAdam ellipse colour sorting

LEDs are sorted according to light colour and brightness level. This process is known as binning. They are sorted into bins or groups according to finely graded parameters. All LEDs in a bin have the same lighting intensity.

In the CIE chromaticity diagram, the chromaticity coordinates of a colour are described exactly as x and y coordinates. Within this diagram, areas are covered by MacAdam ellipses containing multiple steps. The steps become smaller towards the centre of the ellipse. They indicate the colour distance to the described x and y coordinates. The lower the number of steps, the more homogeneous is the light colour of the LEDs in the binning. LED lights with LED chips selected through 3-step MacAdam ellipse color binning ensure consistent white light.



## Service life of an LED light

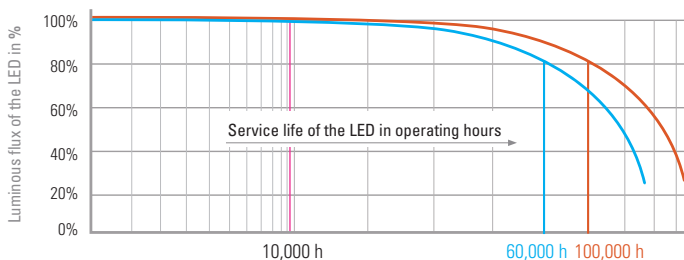
Service life is an important variable for LED lights. The light sources built into the light are connected to the housing in such a special way that they are described as *non-replaceable*. But saying that, LED sources have almost five times the life expectancy of conventional light sources.

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.



## ETL listed (UL / CSA standard)

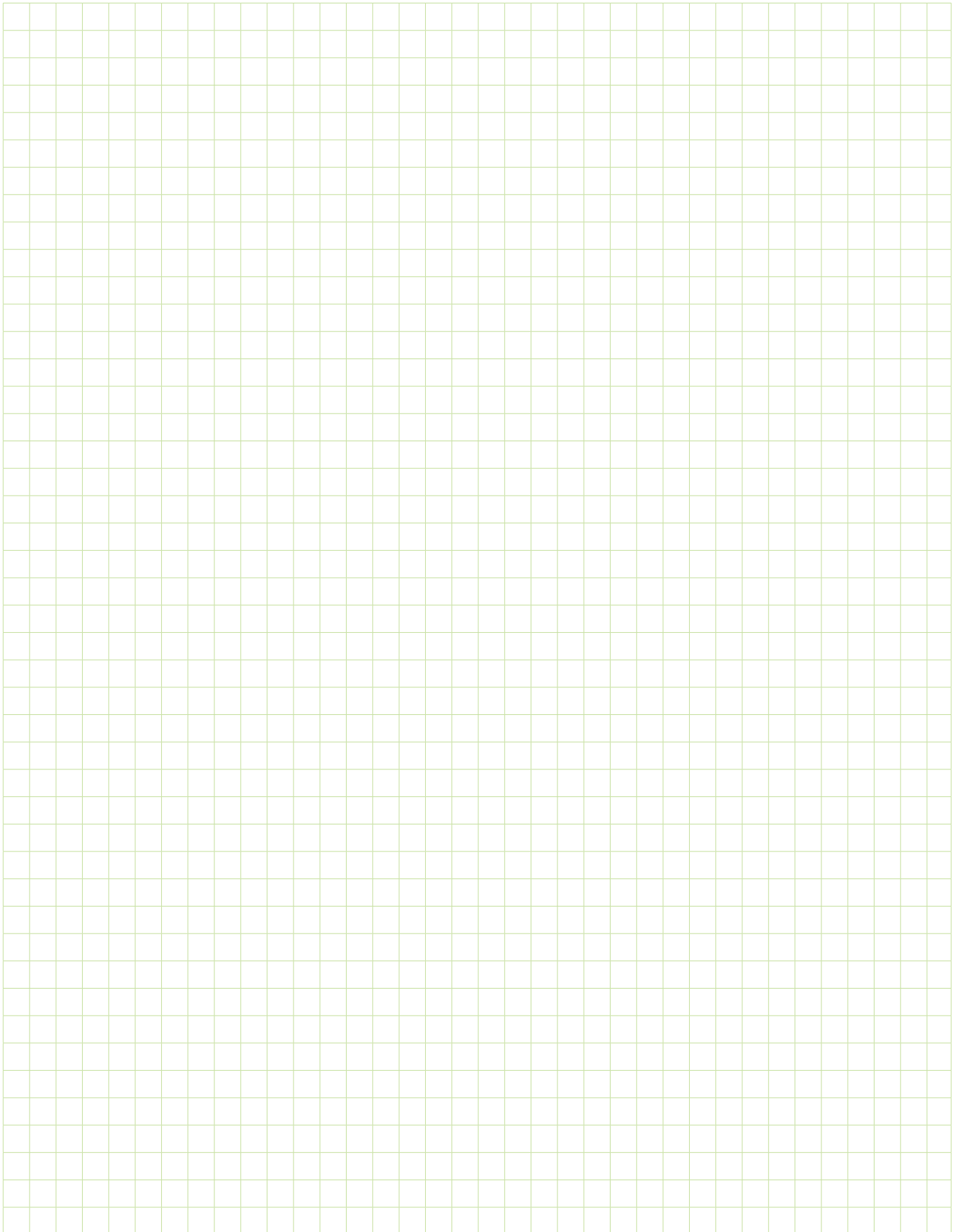
This test symbol indicates that the product has undergone extensive testing and meets the relevant safety and performance standards. The ETL test is based on standards set out by organisations such as the American National Standards Institute (ANSI) or other internationally recognised safety organisations. 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 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 or lux) is a unit of measurement for the level of illumination and describes how much light hits an area of up to one square meter. One lux corresponds to one lumen per square metre.



**Information?**

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**www.led2work.com**



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