

PRODUCT DATASHEET

SubstiTUBE T8 UN Pro Ultra Output 23 W/6500 K 1500 mm

SubstiTUBE T8 UNIVERSAL PRO ULTRA OUTPUT | LED tubes for electronic control gears (ECG), electromagnetic control gears (CCG) and mains, shatterproof



Areas of application

- General illumination within ambient temperatures from -20...+45 °C
- Supermarkets and department stores
- Industry

Product benefits

- No bending thanks to glass technology
- Shatter protection thanks to special PET coating
- Also suitable for operation at low temperatures
- High luminous flux for sophisticated lighting tasks
- Easy installation

Product features

- T8 LED tube made of glass with G13 base
- Compatible with conventional and many common electronic control gears (see also compatibility list) and line voltage
- Low flicker according to EU 2019/2020
- Lamp tube made of glass with splinter protection e.g. for food industry applications
- Mercury-free and RoHS compliant



- Type of protection: IP20
- Lifetime: up to 60,000 h

TECHNICAL DATA

Electrical data

| | |
|--|--------------------|
| Nominal wattage | 23 W |
| Construction wattage | 23.00 W |
| Nominal voltage | 220...240 V |
| Operating mode | ECG, CCG, AC Mains |
| Nominal current | 125 mA |
| Type of current | AC |
| Inrush current | 15 A |
| Operating frequency | 50/60 Hz |
| Mains frequency | 50/60 Hz |
| Max. lamp no. on circuit break. 10 A (B) | 65 |
| Max. lamp no. on circuit break. B10 A - CCG without compensation | 65 |
| Max. lamp no. on circuit break. B10 A - CCG with compensation | 25 |
| Max. lamp no. on circuit break. 16 A (B) | 100 |
| Max. lamp no. on circuit break. B16 A - CCG without compensation | 100 |
| Max. lamp no. on circuit break. B16 A - CCG with compensation | 35 |
| Total harmonic distortion | < 20 % |
| Power factor λ | > 0.90 |

Photometrical data

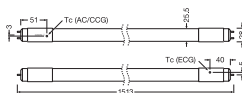
| | |
|---|---------------------------|
| Luminous flux | 3700 lm |
| Luminous efficacy | 160 lm/W |
| Lumen main.fact.at end of nom.life time | 0.70 |
| Light color (designation) | Cool Daylight |
| Color temperature | 6500 K |
| Color rendering index Ra | 83 |
| Light color | 865 |
| Standard deviation of color matching | ≤ 5 sdc _m |
| Flickering metric (Pst LM) | 1.0 |
| Stroboscope effect metric (SVM) | 0.4 |



Light technical data

| | |
|---------------------|----------|
| Beam angle | 190 ° |
| Warm-up time (60 %) | < 2.00 s |
| Starting time | < 0.5 s |

Dimensions & Weight



| | |
|---|------------|
| Overall length | 1513.10 mm |
| Length with base excl. base pins/connection | 1500.00 mm |
| Diameter | 27.80 mm |
| Tube diameter | 25,5 mm |
| Maximum diameter | 28 mm |
| Product weight | 272.00 g |

Temperatures & operating conditions

| | |
|--------------------------------------|---------------------|
| Ambient temperature range | -20...+45 °C |
| Maximum temperature at tc test point | 74 °C ¹⁾ |

¹⁾ at CCG+Mains operation, ECG operation: 73°C

Lifespan

| | |
|--|---------|
| Lifespan L70/B50 at 25 °C | 60000 h |
| Number of switching cycles | 200000 |
| Lumen maintenance at end of service lifetime | 0.70 |
| Rated lamp survival factor at 6,000 h | ≥ 0.90 |

Additional product data

| | |
|-----------------------------|--------|
| Base (standard designation) | G13 |
| Mercury content | 0.0 mg |
| Mercury-free | Yes |

Capabilities

| | |
|----------|----|
| Dimmable | No |
|----------|----|

Certificates & Standards

| | |
|--|-----------------|
| Energy efficiency class | C 1) |
| Energy consumption | 23.00 kWh/1000h |
| Type of protection | IP20 |
| Standards | CE |
| Photobiological safety group acc. to EN62778 | RG0 |

1) Energy efficiency class (EEC) on a scale of A (highest efficiency) to G (lowest efficiency)

Country-specific categorizations

| | |
|-----------------|-----------------|
| Order reference | LEDTUBE T8 UN P |
|-----------------|-----------------|

LOGISTICAL DATA

| | |
|------------------------------|--------------|
| Temperature range at storage | -20...+80 °C |
|------------------------------|--------------|

Energy labelling regulation data acc EU 2019/2015









| | |
|---|--------------|
| Lighting technology used | LED |
| Non-directional or directional | NDLS |
| Mains or non-mains | MLS |
| Light source cap-type (or other electric interface) | G13 |
| Connected light source (CLS) | No |
| Color-tuneable light source | No |
| Envelope | No |
| High luminance light source | No |
| Anti-glare shield | No |
| Correlated colour temperature type | SINGLE_VALUE |
| Claim of equivalent power | No |
| Length | 1513.10 mm |
| Height | 27.80 mm |
| Width | 27.80 mm |

| | |
|--|------------|
| Chromaticity coordinate x | 0.312 |
| Chromaticity coordinate y | 0.328 |
| R9 Colour rendering index | 0.00 |
| Beam angle correspondence | SPHERE_360 |
| Survival factor | 0.90 |
| Displacement factor | 0.90 |
| LED light source replaces a fluorescent light source | No |
| EPREL ID | 519438 |
| Model number | AC33875 |

Safety advice

- Operation in outdoor applications in suitable damp-proof luminaires possible according to data sheet and installation instruction.
- The operating temperature range of LED tube is restricted. In case of doubt regarding suitability of the application please measure Tc max temperature on the product prior to installation.
- For operation of LEDTUBE T8 UN with a conventional control gear, the existing starter must be exchanged with the including LED starter in the LED tube packaging.

DOWNLOAD DATA

| Documents and certificates | |
|---|---------------------------------|
|  | User instruction |
|  | Installation guide |
|  | Declarations Of Conformity CE |
|  | Declarations Of Conformity UKCA |
| Photometric and lighting design files | |
|  | IES file (IES) |
|  | LDT file (Eulumdat) |
|  | LDC typ polar |
|  | Spectral power distribution |

LOGISTICAL DATA

| Product code | Packaging unit (Pieces/Unit) | Dimensions (length x width x height) | Gross weight | Volume |
|---------------|------------------------------|--------------------------------------|--------------|-----------------------|
| 4058075546875 | Sleeve 1 | 1,605 mm x 29 mm x 29 mm | 306.00 g | 1.35 dm ³ |
| 4058075546882 | Shipping box 10 | 1,652 mm x 210 mm x 115 mm | 3900.00 g | 39.90 dm ³ |

The mentioned product code describes the smallest quantity unit which can be ordered. One shipping unit can contain one or more single products. When placing an order, for the quantity please enter single or multiples of a shipping unit.

DISCLAIMER

Subject to change without notice. Errors and omission excepted. Always make sure to use the most recent release.