# PRODUCT DATASHEET
# LED TUBE T8 36 EM ULTRA OUTPUT 1200 mm 20W 830

LED TUBE T8 EM ULTRA OUTPUT | LED tubes with extra high light output for electromagnetic control gear (CCG)


## Areas of application

- General illumination within ambient temperatures from -20…+45 °C
- Corridors, stairways, parking garages
- Domestic applications

## Product benefits

- High luminous flux for sophisticated lighting tasks
- High color homogeneity
- Energy savings of up to 50 % compared to conventional T8 fluorescent lamps
- Instant flickerfree starting

## Product features

- LED replacement for classic T8 fluorescent lamps with G13 socket for use in CCG luminaires
- T8 LED tube made of glass with G13 base
- Low flicker according to EU 2019-2020 (SVM ≤ 0.4 / PstLM ≤ 1)
- Mercury-free and RoHS compliant
- Type of protection: IP20

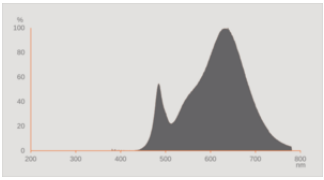
## TECHNICAL DATA

### Electrical data

| | |
|---|---|
| Nominal wattage | 20 W |
| Construction wattage | 20.00 W |
| Nominal voltage | 220…240 V |
| Operating mode | Conventional control gear (CCG), AC Mains |
| Nominal current | 100 mA |
| Type of current | AC |
| Inrush current | 15.6 A |
| Suitable for DC input | Yes |
| Input voltage DC | 186…260 V |
| Operating frequency | 50/60 Hz |
| Mains frequency | 50/60 Hz |
| Max. lamp number on MCB B10 A | 41 |
| Max. lamp number on MCB B10 A - CCG without compensation | 57 |
| Max. lamp number on MCB B10 A - CCG with compensation | 13 |
| Max. lamp number on MCB B16 A | 66 |
| Max. lamp number on MCB B16 A - CCG without compensation | 92 |
| Max. lamp number on MCB B16 A - CCG with compensation | 20 |
| Total harmonic distortion | < 55 % |
| Power factor λ | 0.90 |

### Photometrical data

| | |
|---|---|
| Luminous flux | 2160 lm |
| Luminous efficacy | 108 lm/W |
| Lumen main.fact.at end of nom.life time | 0.70 |
| Light color (designation) | Warm White |
| Color temperature | 3000 K |
| Color rendering index Ra | 80 |
| Light color | 830 |
| Standard deviation of color matching | ≤6 sdcm |
| Rated LLMF at 6,000 h | 0.80 |
| Flickering metric (Pst LM) | 1 |
| Stroboscope effect metric (SVM) | 0.4 |

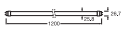


EPREL data spectral diagram PROF LEDr 3000K

## Light technical data

| | |
|---|---|
| Beam angle | 190 ° |
| Starting time | < 0.5 s |

## Dimensions & Weight



| | |
|---|---|
| Overall length | 1213.00 mm |
| Length with base excl. base pins/connection | 1200.00 mm |
| Diameter | 26.80 mm |
| Tube diameter | 25.8 mm |
| Maximum diameter | 28 mm |
| Product weight | 175.00 g |

## Temperatures & operating conditions

| | |
|---|---|
| Ambient temperature range | -20…+45 °C [1)] |
| Maximum temperature at tc test point | 70 °C |
| Performance temp. acc. to IEC 62717 | 60 °C [2)] |

1) Temperature surrounding the lamp - for enclosed luminaires: temperature inside of the luminaire

2) Tp rated. Tp point coincides with Tc point - marked on device

## Lifespan

| | |
|---|---|
| Lifespan L70/B50 at 25 °C | 30000 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 | F [1)] |
| Energy consumption | 20.00 kWh/1000h |
| Type of protection | IP20 |
| Standards | CE / EAC / UKCA |
| 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 36 E |

## 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 |
| Standby power | <0.5 W |
| Claim of equivalent power | No |

| | |
|---|---|
| Length | 1213.00 mm |
| Height | 26.80 mm |
| Width | 26.80 mm |
| Chromaticity coordinate x | 0.44 |
| Chromaticity coordinate y | 0.403 |
| R9 Colour rendering index | 1 |
| Beam angle correspondence | SPHERE_360 |
| Survival factor | 0.9 |
| Displacement factor | 0.9 |
| LED light source replaces a fluorescent light source | No |
| EPREL ID | 1333993,1529786,2167622 |
| Model number | AC45400,AC51412,AC69498 |

## EQUIPMENT / ACCESSORIES

– Suitable for operation on magnetic control gear

## Safety advice

– Operation in outdoor applications in suitable damp-proof luminaires possible according to data sheet and installation instruction.
– The Tc Point is located underneath the product label on the front side of the lamp.
– Not suitable for emergency lighting.
– All electrical connections must be made by a qualified person.
– Disconnect mains before installation.

## DOWNLOAD DATA

| | Documents and certificates | Document name |
|---|---|---|
| PDF | User instruction / safety instructions | LEDTUBE T8 EM UO OSRAM |
| PDF | Legal information | Informationstext 18 Abs 4 ElektroG |
| PDF | Declarations of conformity | LEDTUBE T8 EM |
| PDF | Declarations of conformity | LED TUBE T8 EM |
| PDF | Declarations of conformity | LED Tube |

| | Documents and certificates | Document name |
|---|---|---|
| PDF | Declarations of conformity UKCA | LED TUBE T8 EM |
| PDF | Declarations of conformity UKCA | LEDTUBE T8 EM |
| PDF | Declarations of conformity UKCA | asset-13265483 |

| | Photometric and lighting design files | Document name |
|---|---|---|
| IES | IES file (IES) | LEDTUBE T8 36 EM UO 1200 20W 830 OSRAM |
| LDT | LDT file (Eulumdat) | LEDTUBE T8 36 EM UO 1200 20W 830 OSRAM |
| | UGR file (UGR table) | LEDTUBE T8 36 EM UO 1200 20W 830 OSRAM |
| | Light distribution curve type polar | LEDTUBE T8 36 EM UO 1200 20W 830 OSRAM |
| | Spectral power distribution | EPREL data spectral diagram PROF LEDr 3000K |

## LOGISTICAL DATA

| Product code | Packaging unit (Pieces/Unit) | Dimensions (length x width x height) | Gross weight | Volume |
|---|---|---|---|---|
| 4099854038341 | Sleeve<br>1 | 27 mm x 27 mm x 1,310 mm | 252.00 g | 0.95 $dm^3$ |
| 4099854038358 | Shipping box<br>8 | 1,355 mm x 143 mm x 100 mm | 2320.00 g | 19.38 $dm^3$ |

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.

## References / Links

– For current information see www.ledvance.com/osram-led-tube

## Legal advice

– When used to replace a T8 fluorescent lamp the total energy efficiency and light distribution depends on the design of the lighting system.

## DISCLAIMER

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