

# PRODUCT DATASHEET

## LED TUBE T8 EM P 1500 mm 20W 865

LED TUBE T8 EM P | LED tubes for electromagnetic control gear (CCG), shatterproof



### Areas of application

- General illumination within ambient temperatures from -20...+50 °C
- Illumination of production areas
- Traffic zones and corridors
- Supermarkets and department stores
- Industry

### Product benefits

- No bending thanks to glass tube
- Quick, simple and safe replacement without rewiring
- Energy savings of up to 66 % (compared to T8 fluorescent lamp)
- Instant-on light, therefore ideally suitable in combination with sensor technology
- Very high resistance to switching loads
- Also suitable for operation at low temperatures

### Product features

- LED replacement for classic T8 fluorescent lamps with G13 socket for use in CCG luminaires or on AC mains
- Low flicker according to EU 2019-2020 (SVM  $\leq 0,4$  / PstLM  $\leq 1$ )
- Single and tandem operation on conventional control gear (0.6 m version)
- Lamp tube made of glass with splinter protection e.g. for food industry applications
- Mercury-free and RoHS compliant
- Uniform illumination
- Type of protection: IP20



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**TECHNICAL DATA****Electrical data**

|                                                                  |             |
|------------------------------------------------------------------|-------------|
| Nominal wattage                                                  | 20 W        |
| Construction wattage                                             | 20.00 W     |
| Nominal voltage                                                  | 220...240 V |
| Nominal current                                                  | 90 mA       |
| Type of current                                                  | AC          |
| Inrush current                                                   | 14.2 A      |
| Suitable for DC input                                            | Yes         |
| Input voltage DC                                                 | 186...260 V |
| Operating frequency                                              | 50/60 Hz    |
| Mains frequency                                                  | 50/60 Hz    |
| Max. lamp no. on circuit break. 10 A (B)                         | 42          |
| Max. lamp no. on circuit break. B10 A - CCG without compensation | 44          |
| Max. lamp no. on circuit break. B10 A - CCG with compensation    | 13          |
| Max. lamp no. on circuit break. 16 A (B)                         | 52          |
| Max. lamp no. on circuit break. B16 A - CCG without compensation | 56          |
| Max. lamp no. on circuit break. B16 A - CCG with compensation    | 22          |
| Total harmonic distortion                                        | 16 %        |
| Power factor $\lambda$                                           | 0.90        |

**Photometrical data**

|                                         |               |
|-----------------------------------------|---------------|
| Luminous flux                           | 3100 lm       |
| Luminous efficacy                       | 155 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                | 80            |
| Light color                             | 865           |
| Standard deviation of color matching    | $\leq 5$ sdcm |
| Rated LLMF at 6,000 h                   | 0.80          |
| Flickering metric (Pst LM)              | 1             |
| Stroboscope effect metric (SVM)         | 0,4           |



Light technical data

|                                    |          |
|------------------------------------|----------|
| Beam angle                         | 190 °    |
| Warm-up time (60 %)                | < 0.50 s |
| Starting time                      | < 0.5 s  |
| Rated beam angle (half peak value) | 190.00 ° |

Dimensions & Weight



|                  |            |
|------------------|------------|
| Overall length   | 1513.00 mm |
| Diameter         | 26.70 mm   |
| Tube diameter    | 25.8 mm    |
| Maximum diameter | 27 mm      |
| Product weight   | 225.00 g   |

Temperatures & operating conditions

|                                      |              |
|--------------------------------------|--------------|
| Ambient temperature range            | -20...+50 °C |
| Maximum temperature at tc test point | 75 °C        |

Lifespan

|                                       |         |
|---------------------------------------|---------|
| Lifespan                              | 60000 h |
| Number of switching cycles            | 200000  |
| Lumen maintenance at end of serv      | 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                      |
| Product remark              | Available from June 2023 |

### Capabilities

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

### Certificates & Standards

|                                              |                 |
|----------------------------------------------|-----------------|
| Energy efficiency class                      | D <sup>1)</sup> |
| Energy consumption                           | 20.00 kWh/1000h |
| Type of protection                           | IP20            |
| Standards                                    | CE / EAC / UKCA |
| Photobiological safety group acc. to EN62778 | RG0             |

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

### Country-specific categorizations

|                 |                 |
|-----------------|-----------------|
| Order reference | LEDTUBE T8 EM 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 |
| Standby power                                       | <0.5 W       |
| Claim of equivalent power                           | No           |
| Length                                              | 1513.00 mm   |
| Height                                              | 26.70 mm     |

|                                                      |                 |
|------------------------------------------------------|-----------------|
| Width                                                | 26.70 mm        |
| Chromaticity coordinate x                            | 0.3123          |
| Chromaticity coordinate y                            | 0.3283          |
| R9 Colour rendering index                            | 0.00            |
| Beam angle correspondence                            | SPHERE_360      |
| Survival factor                                      | 0.9             |
| Displacement factor                                  | 0.9             |
| LED light source replaces a fluorescent light source | No              |
| EPREL ID                                             | 1334073,1529727 |
| Model number                                         | AC45372,AC51582 |

## EQUIPMENT / ACCESSORIES

- Suitable for operation with low-loss and conventional control gears

## Safety advice

- Not suitable for operation with electronic control gear.
- Operation in outdoor applications in suitable damp-proof luminaires possible according to data sheet and installation instruction.
- Not suitable for emergency lighting

## DOWNLOAD DATA

| Documents and certificates                                                          |                                 |
|-------------------------------------------------------------------------------------|---------------------------------|
|   | User instruction                |
|   | Declarations Of Conformity CE   |
|   | Declarations Of Conformity UKCA |
| Photometric and lighting design files                                               |                                 |
|  | IES file (IES)                  |
|  | LDT file (Eulumdat)             |
|  | UGR file (UGR table)            |
|   | LDC typ polar                   |

## Photometric and lighting design files



Spectral power distribution

## LOGISTICAL DATA

| Product code  | Packaging unit (Pieces/Unit) | Dimensions (length x width x height) | Gross weight | Volume                |
|---------------|------------------------------|--------------------------------------|--------------|-----------------------|
| 4099854037153 | Sleeve<br>1                  | 1,605 mm x 29 mm x 29 mm             | 259.00 g     | 1.35 dm <sup>3</sup>  |
| 4099854037160 | Shipping box<br>10           | 1,635 mm x 180 mm x 95 mm            | 3242.00 g    | 27.96 dm <sup>3</sup> |

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/ledtube](http://www.ledvance.com/ledtube)

## 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.