

# PRODUCT DATASHEET

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

LED TUBE T8 UNIVERSAL P | LED tubes for electronic control gear (ECG), electromagnetic control gear (CCG) and AC mains, shatterproof



### Areas of application

- General illumination within ambient temperatures from -20...+45 °C
- Illumination of production areas
- Traffic zones and corridors
- Supermarkets and department stores
- Industry

### Product benefits

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

### Product features

- LED replacement for classic T8 fluorescent lamps with G13 socket for use in CCG, ECG luminaires or on AC mains
- Compatible with conventional and many common electronic control gears (see also compatibility list) and line voltage
- Low flicker according to EU 2019-2020 (SVM ≤ 0,4 / PstLM ≤ 1)
- Lamp tube made of glass with splinter protection
- For especially uniform illumination



- Mercury-free and RoHS compliant
- Type of protection: IP20
- Lifetime: up to 60,000 h

## TECHNICAL DATA

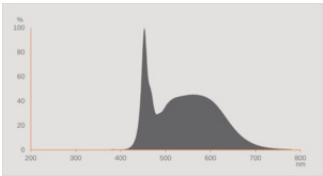
### Electrical data

|                                                                  |                                  |
|------------------------------------------------------------------|----------------------------------|
| Nominal wattage                                                  | 20 W                             |
| Construction wattage                                             | 20.00 W                          |
| Nominal voltage                                                  | 220...240 V                      |
| Operating mode                                                   | ECG, CCG, AC Mains <sup>1)</sup> |
| Nominal current                                                  | 88 mA                            |
| Type of current                                                  | AC                               |
| Inrush current                                                   | 7 A                              |
| Operating frequency                                              | 50/60 Hz                         |
| Mains frequency                                                  | 50/60 Hz                         |
| Max. lamp no. on circuit break. 10 A (B)                         | 70                               |
| Max. lamp no. on circuit break. B10 A - CCG without compensation | 70                               |
| Max. lamp no. on circuit break. B10 A - CCG with compensation    | 28                               |
| Max. lamp no. on circuit break. 16 A (B)                         | 110                              |
| Max. lamp no. on circuit break. B16 A - CCG without compensation | 110                              |
| Max. lamp no. on circuit break. B16 A - CCG with compensation    | 47                               |
| Total harmonic distortion                                        | < 30 %                           |
| Power factor $\lambda$                                           | 0.90                             |

<sup>1)</sup> Check ECG compatibility at [ledvance.com/compatibility](https://www.ledvance.com/compatibility)

### 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 |
| Flickering metric (Pst LM)              | 1.0           |
| Stroboscope effect metric (SVM)         | $\leq 0.4$    |



Light technical data

|                     |          |
|---------------------|----------|
| Beam angle          | 190 °    |
| Warm-up time (60 %) | < 0.50 s |
| Starting time       | < 0.5 s  |

Dimensions & Weight



|                                             |            |
|---------------------------------------------|------------|
| Overall length                              | 1513.00 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                              | 307.00 g   |

Temperatures & operating conditions

|                                      |                     |
|--------------------------------------|---------------------|
| Ambient temperature range            | -20...+45 °C        |
| Maximum temperature at tc test point | 70 °C               |
| Performance temp. acc. to IEC 62717  | 50 °C <sup>1)</sup> |

<sup>1)</sup> In operation with CCG/AC. Tp: 55°C in ECG operation. / Tp rated. Tp point coincides with Tc point - marked on device

Lifespan

|                            |         |
|----------------------------|---------|
| Lifespan L70/B50 at 25 °C  | 60000 h |
| Lifespan L80/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                      | D <sup>1)</sup> |
| Energy consumption                           | 20.00 kWh/1000h |
| Type of protection                           | IP20            |
| Standards                                    | CE              |
| 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 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                                               | 1513.00 mm |
| Height                                               | 27.80 mm   |
| Width                                                | 27.80 mm   |
| Chromaticity coordinate x                            | 0.3123     |
| Chromaticity coordinate y                            | 0.3283     |
| R9 Colour rendering index                            | ≥0         |
| Beam angle correspondence                            | SPHERE_360 |
| Survival factor                                      | ≥0.9       |
| Displacement factor                                  | 0.9        |
| LED light source replaces a fluorescent light source | No         |
| EPREL ID                                             | 1317782    |
| Model number                                         | AC42587    |

### 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                |
|   | Addon Technical Information     |
|   | Declarations Of Conformity CE   |
|   | Declarations Of Conformity UKCA |
| Photometric and lighting design files                                               |                                 |
|  | IES file (IES)                  |
|  | LDT file (Eulumdat)             |

**Photometric and lighting design files**

UGR file (UGR table)



LDC typ polar



Spectral power distribution

**LOGISTICAL DATA**

| Product code  | Packaging unit (Pieces/Unit) | Dimensions (length x width x height) | Gross weight | Volume                |
|---------------|------------------------------|--------------------------------------|--------------|-----------------------|
| 4099854026638 | Sleeve<br>1                  | 1,605 mm x 29 mm x 29 mm             | 341.00 g     | 1.35 dm <sup>3</sup>  |
| 4099854026645 | Shipping box<br>10           | 1,652 mm x 210 mm x 115 mm           | 4250.00 g    | 39.90 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.