

## PRODUCT DATASHEET

# SubstiTUBE T8 EM Advanced 20.6 W/4000 K 1500 mm

SubstiTUBE T8 EM ADVANCED | LED tubes for electromagnetic control gear (CCG)



### 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 64 % (compared to T8 fluorescent lamp on CCG)
- 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)
- Tube made of glass
- Mercury-free and RoHS compliant



- Uniform illumination
- Type of protection: IP20

## TECHNICAL DATA

### Electrical data

Nominal wattage	20.6 W
Construction wattage	20.60 W
Nominal voltage	220...240 V
Nominal current	92 mA
Type of current	AC
Operating frequency	50/60 Hz
Mains frequency	50/60 Hz
Max. lamp no. on circuit break. 10 A (B)	49
Max. lamp no. on circuit break. B10 A - CCG without compensation	49
Max. lamp no. on circuit break. B10 A - CCG with compensation	8
Max. lamp no. on circuit break. 16 A (B)	78
Max. lamp no. on circuit break. B16 A - CCG without compensation	78
Max. lamp no. on circuit break. B16 A - CCG with compensation	13
Total harmonic distortion	16 %
Power factor $\lambda$	> 0.90

### Photometrical data

Luminous flux	3100 lm
Luminous efficacy	150 lm/W
Lumen main.fact.at end of nom.life time	0.70
Light color (designation)	Cool white
Color temperature	4000 K
Color rendering index Ra	83
Light color	840
Standard deviation of color matching	$\leq 5$ sdc <sub>m</sub>
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

### Dimensions & Weight

Overall length	1513.00 mm
Diameter	26.70 mm
Tube diameter	25.3 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	70 °C

### Lifespan

Lifespan L70/B50 at 25 °C	50000 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
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### Capabilities

Dimmable	No
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### Certificates & Standards

Energy efficiency class	D <sup>1)</sup>
Energy consumption	21.00 kWh/1000h
Type of protection	IP20
Standards	CE / EAC
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 A
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### LOGISTICAL DATA

Temperature range at storage	-20...+80 °C
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### 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 W
Claim of equivalent power	No
Length	1513.00 mm
Height	26.70 mm
Width	26.70 mm
Chromaticity coordinate x	0.382
Chromaticity coordinate y	0.380

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	563378
Model number	AC34968

## 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.

## 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)



UGR file (UGR table)



LDC typ polar



Spectral power distribution

## Photometric and lighting design files

## LOGISTICAL DATA

Product code	Packaging unit (Pieces/Unit)	Dimensions (length x width x height)	Gross weight	Volume
4058075611870	Sleeve 1	1,605 mm x 29 mm x 29 mm	259.00 g	1.35 dm <sup>3</sup>
4058075611887	Shipping box 10	1,652 mm x 210 mm x 115 mm	3410.00 g	39.90 dm <sup>3</sup>
4099854009266	Shipping box 10	1,635 mm x 180 mm x 95 mm	3480.00 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/substitute](http://www.ledvance.com/substitute)

## 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.