

## PRODUCT DATASHEET

### ST8PRO-EM 12.1 W/6500 K 1100 mm

SubstiTUBE T8 EM PRO | High performance LED tubes for electromagnetic control gears (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
- Shatter protection thanks to special PET coating
- Support the implementation of the HACCP concepts from production through to presentation
- Very high resistance to switching loads
- High luminous flux for sophisticated lighting tasks
- Quick, simple and safe replacement without rewiring
- Energy savings of up to 68 % (compared to T8 fluorescent lamp on CCG)
- Instant-on light, therefore ideally suitable in combination with sensor technology
- 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  $\leq 1$ )
- Lamp tube made of glass with splinter protection e.g. for food industry applications
- VDE certified according to IEC62776



- Single and tandem operation on conventional control gear (0.6 m version)
- Type of protection: IP20

## TECHNICAL DATA

### Electrical data

Nominal wattage	12.1 W
Construction wattage	12.10 W
Nominal voltage	220...240 V
Operating mode	Conventional control gear (CCG), Line voltage
Nominal current	57 mA
Type of current	AC
Operating frequency	50...60 Hz
Mains frequency	50...60 Hz
Max. lamp number on MCB B10 A	79
Max. lamp number on MCB B10 A - CCG without compensation	79
Max. lamp number on MCB B10 A - CCG with compensation	15
Max. lamp number on MCB B16 A	126
Max. lamp number on MCB B16 A - CCG without compensation	126
Max. lamp number on MCB B16 A - CCG with compensation	24
Total harmonic distortion	< 20 %
Power factor $\lambda$	> 0.90

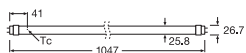
### Photometrical data

Luminous flux	2000 lm
Luminous efficacy	165 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 <sub>m</sub>

### Light technical data

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

### Dimensions & Weight



Overall length	1061.00 mm
Length with base excl. base pins/connection	1047 mm
Diameter	26.70 mm
Tube diameter	25.8 mm
Base diameter	26,7 mm
Maximum diameter	27 mm
Product weight	164.00 g

### Temperatures & operating conditions

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

### Lifespan

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
Design / version	Frosted

### Capabilities

Dimmable	No
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### Certificates & Standards

Energy efficiency class	C <sup>1)</sup>
Energy consumption	13.00 kWh/1000h
Type of protection	IP20
Standards	CE; VDE
Photobiological safety group acc. to EN62778	RG0

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

Country-specific categorizations

Order reference	ST8PRO-1M 12,1W
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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

Light source cap-type (or other electric interface)	G13
Length	1061.00 mm
Height	26.70 mm
Width	26.70 mm




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		Document name
	User instruction	SubstiTUBE PRO
	Installation guide	SubstiTUBE® T8 T5
	Declarations Of Conformity CE	LED SubstiTUBE T8 EM PRO

LOGISTICAL DATA

Product code	Packaging unit (Pieces/Unit)	Dimensions (length x width x height)	Gross weight	Volume
4058075454187	Sleeve 1	1,147 mm x 29 mm x 29 mm	195.00 g	0.96 dm <sup>3</sup>
4058075454194	Shipping box 10	1,195 mm x 210 mm x 115 mm	2620.00 g	28.86 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.

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### References / Links

– For current information see [www.ledvance.com/substitute](http://www.ledvance.com/substitute)

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### 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.

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### DISCLAIMER

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