

PRODUCT DATASHEET

ST8PROUO-EM 21.1 W/3000 K 1500 mm

SubstiTUBE T8 EM PRO ULTRA OUTPUT | 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 60 % (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 ≤ 1)
- Lamp tube made of glass with splinter protection e.g. for food industry applications



- VDE certified according to IEC62776
- For especially uniform illumination
- Lifetime: up to 75,000 h
- Type of protection: IP20
- Mercury-free and RoHS compliant

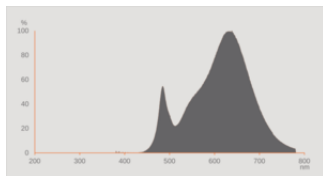
TECHNICAL DATA

Electrical data

Nominal wattage	21.1 W
Construction wattage	21.10 W
Nominal voltage	220...240 V
Operating mode	Conventional control gear (CCG), Line voltage
Nominal current	97 mA
Type of current	AC
Operating frequency	50...60 Hz
Mains frequency	50...60 Hz
Max. lamp number on MCB B10 A	46
Max. lamp number on MCB B10 A - CCG without compensation	46
Max. lamp number on MCB B10 A - CCG with compensation	8
Max. lamp number on MCB B16 A	74
Max. lamp number on MCB B16 A - CCG without compensation	74
Max. lamp number on MCB B16 A - CCG with compensation	14
Total harmonic distortion	< 20 %
Power factor λ	> 0.90

Photometrical data

Luminous flux	3330 lm
Luminous efficacy	158 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	83
Light color	830
Standard deviation of color matching	≤5 sdcn
Flickering metric (Pst LM)	1
Stroboscope effect metric (SVM)	0.4

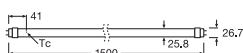


EPREL data spectral diagram PROF LEDr 3000K

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 mm
Diameter	26.70 mm
Tube diameter	25.8 mm
Base diameter	26,7 mm
Maximum diameter	27 mm
Product weight	263.00 g

Temperatures & operating conditions

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

Lifespan

Lifespan L70/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
Design / version	Frosted

Capabilities

Dimmable	No
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Certificates & Standards

Energy efficiency class	D ¹⁾
Energy consumption	22.00 kWh/1000h
Type of protection	IP20
Standards	CE; VDE
Photobiological safety group acc. to EN62778	RG0

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

Country-specific categorizations

Order reference	ST8PROU-1.5M21,
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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	<0.5 W
Claim of equivalent power	No
Length	1513.00 mm

Height	26.70 mm
Width	26.70 mm
Chromaticity coordinate x	0.4339
Chromaticity coordinate y	0.4033
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	Yes
EPREL ID	1505290
Model number	AC26945






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 UO
	Installation guide	SubstiTUBE® T8 T5
	Declarations Of Conformity CE	LED SubstiTUBE T8 EM PRO
Photometric and lighting design files		Document name
	IES file (IES)	ST8PROU-1.5M 21,1W 220-240V EM 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
4058075454026	Sleeve 1	1,605 mm x 29 mm x 29 mm	297.00 g	1.35 dm ³
4058075454033	Shipping box 10	1,652 mm x 210 mm x 115 mm	3840.00 g	39.90 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/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.