

## PRODUCT DATASHEET

# SubstiTUBE T5 AC HE21 10 W/3000 K 849 mm

SubstiTUBE T5 220-240V AC | LED tubes for operation on AC mains connection



### Areas of application

- Offices, public buildings
- Supermarkets and department stores
- Industry
- General illumination within ambient temperatures from -20...+45 °C

### Product benefits

- No bending thanks to glass technology
- Shatter protection thanks to special PET coating
- High luminous flux for sophisticated lighting tasks

### Product features

- LED replacement for T5 fluorescent lamps with G5 base on AC mains
- Lamp tube made of glass with splinter protection e.g. for food industry applications
- High color consistency:  $\leq 5$  SDCM
- Lifetime: up to 50,000 h
- Low flicker according to EU 2019/2020
- Type of protection: IP20



## TECHNICAL DATA

### Electrical data

Nominal wattage	10 W
Construction wattage	10.00 W
Nominal voltage	220...240 V
Operating mode	AC Mains
Nominal current	72 mA
Type of current	AC
Inrush current	4.96 A
Operating frequency	50/60 Hz
Mains frequency	50/60 Hz
Max. lamp no. on circuit break. 10 A (B)	97
Max. lamp no. on circuit break. B10 A - CCG without compensation	101
Max. lamp no. on circuit break. 16 A (B)	155
Max. lamp no. on circuit break. B16 A - CCG without compensation	162
Total harmonic distortion	< 20 %
Power factor $\lambda$	> 0.90

### Photometrical data

Luminous flux	1350 lm
Luminous efficacy	135 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	80
Light color	830
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	160 °
Warm-up time (60 %)	< 2.00 s
Starting time	< 0.5 s

### Dimensions & Weight



Overall length	849.00 mm
Diameter	19.00 mm
Tube diameter	16 mm
Maximum diameter	19 mm
Product weight	113.00 g

### Temperatures & operating conditions

Ambient temperature range	-20...+45 °C
Maximum temperature at tc test point	73 °C

### Lifespan

Lifespan L70/B50 at 25 °C	50000 h
Number of switching cycles	50000
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)	G5
Mercury content	0.0 mg
Mercury-free	Yes

### Capabilities

Dimmable	No
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### Certificates & Standards

Energy efficiency class	D <sup>1)</sup>
Energy consumption	10.00 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 T5 AC H
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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)	G5
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
Networked standby power for CLS	0 W
Claim of equivalent power	No
Length	849.00 mm
Height	19.00 mm

Width	19.00 mm
Chromaticity coordinate x	0.434
Chromaticity coordinate y	0.403
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	1168776
Model number	AC41522

### 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.
- 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.
- After rewiring of a luminaire the installer will be responsible for all technical and safety consequences.

### 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

## 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
4058075771741	Sleeve 1	865 mm x 20 mm x 24 mm	128.00 g	0.42 dm <sup>3</sup>
4058075771758	Shipping box 10	918 mm x 153 mm x 80 mm	1624.00 g	11.24 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.

## DISCLAIMER

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