

## PRODUCT DATASHEET

# SubstiTUBE T5 HF HE28 16 W/3000 K 1149.00 mm

SubstiTUBE TUBE T5 HF | LED tubes for electronic high frequency control gears



### Areas of application

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

### Product benefits

- No bending thanks to glass technology
- Quick, simple and safe replacement without rewiring
- High luminous flux for sophisticated lighting tasks
- Also suitable for operation at low temperatures

### Product features

- Retrofit replacement of existing T5 lamps on HF ballast installations
- 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 ( $SVM \leq 0.4$  /  $PstLM \leq 1$ )
- Type of protection: IP20
- Compatible with many common electronic control gears (see also compatibility list)

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## TECHNICAL DATA

### Electrical data

Nominal wattage	16 W
Construction wattage	16.00 W
Nominal voltage	220...240 V
Nominal current	200 mA
Type of current	AC
Operating frequency	20...60 kHz
Mains frequency	20...60 kHz
Power factor $\lambda$	> 0.80

### Photometrical data

Luminous flux	2200 lm
Luminous efficacy	137 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	≤4 sdc <sub>m</sub>

### Light technical data

Beam angle	160 °
Warm-up time (60 %)	≤ 2.00 s
Starting time	< 1.0 s

### Dimensions & Weight

Overall length	1149.00 mm
Length with base excl. base pins/connection	1149 mm
Diameter	15.00 mm
Base diameter	15,0 mm
Maximum diameter	17 mm
Product weight	160.00 g

### Temperatures & operating conditions

Ambient temperature range	-20...+50 °C
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## 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)	G5
Mercury content	0.0 mg
Mercury-free	Yes

## Capabilities

Dimmable	No
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## Certificates & Standards

Energy efficiency class	A++ <sup>1)</sup>
Energy consumption	18.00 kWh/1000h
Type of protection	IP20
Standards	CE

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

## Country-specific categorizations

ILCOS	DR-16/830-G5-15/1500
Order reference	ST5HE28-1.2M 16

## 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)	G5
Length	1149.00 mm
Height	15.00 mm
Width	15.00 mm

## 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 T<sub>c</sub> temperature on the product prior to installation.
- All electrical connections must be made by a qualified person.

– Not suitable for emergency lighting.

## DOWNLOAD DATA

Documents and certificates		Document name
	Extended installation guide	Installation instructions for SubstiTube T8 EM UN HF, T5 HF AC May.2018 (EN)
	Extended installation guide	Installation instructions for SubstiTube
	Declarations of conformity	EC declaration - LED tube Gen7

## LOGISTICAL DATA

Product code	Packaging unit (Pieces/Unit)	Dimensions (length x width x height)	Gross weight	Volume
4058075819931	Sleeve 1	1,165 mm x 20 mm x 24 mm	178.00 g	0.56 dm <sup>3</sup>
4058075819948	Shipping box 10	1,218 mm x 153 mm x 80 mm	2190.00 g	14.91 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/osram-substitute](http://www.ledvance.com/osram-substitute)

## Legal advice

– When used to replace a T5 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.