

PRODUCT DATASHEET SubstiTUBE T5 HF HE14 7 W/3000 K 549 mm

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



Areas of application

- General illumination within ambient temperatures from -20...+45 $^{\circ}\text{C}$
- 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: ≤ 5 sdcm
- Lifetime up to 50,000 h
- Low flicker according to EU 2019-2020 (SVM ≤ 0.4 / PstLM ≤ 1)
- Type of protection: IP20





- Compatible with many common electronic control gears (see also compatibility list)

TECHNICAL DATA

Electrical data

Nominal wattage	7 W
Construction wattage	7.00 W
Nominal voltage	4070 V
Operating mode	ECG
Nominal current	185 mA
Type of current	AC
Inrush current	17 A
Operating frequency	2075 kHz
Mains frequency	2075 kHz
Total harmonic distortion	< 20 %
Power factor λ	> 0.80

Photometrical data

Luminous flux	900 lm
Luminous efficacy	128 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 sdcm
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 %)	< 2.00 s
Starting time	< 0.5 s

Dimensions & Weight



Overall length	563.00 mm
Length with base excl. base pins/connection	549.00 mm
Diameter	17.00 mm
Tube diameter	16 mm
Maximum diameter	17 mm
Product weight	88.00 g

Temperatures & operating conditions

Ambient temperature range	-20+45 °C
Maximum temperature at tc test point	62 °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)	G5
Mercury content	0.0 mg
Mercury-free	Yes
Design / version	Frosted

Capabilities

|--|

Certificates & Standards

Energy efficiency class	E 1)

Energy consumption	8.00 kWh/1000h
Type of protection	IP20
Standards	CE
Photobiological safety group acc. to EN62778	RG0

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

Country-specific categorizations

Order reference LEDTUBE T5 HF H LOGISTICAL DATA Temperature range at storage -20+80 °C Energy labelling regulation data acc EU 2019/2015 Lighting technology used Non-directional or directional Mains or non-mains NMLS Light source cap-type (or other electric interface) G5 Connected light source (CLS) No Color-tuneable light source No High luminance light source No Anti-glare shield No Correlated colour temperature type Single_VALUE Standby power O W Networked standby power for CLS O W Claim of equivalent power No Length 17.00 mm Width 17.00 mm Chromaticity coordinate x O.403 R9 Colour rendering index O .00	LOGISTICAL DATA Temperature range at storage -20+80 °C Energy labelling regulation data acc EU 2019/2015 Lighting technology used LED Non-directional or directional NDLS Mains or non-mains NMLS Light source cap-type (or other electric interface) G5 Connected light source (CLS) No Color-tuneable light source No High luminance light source No Anti-glare shield No Correlated colour temperature type SINGLE_VALU Standby power 0 W Networked standby power for CLS 0 W Claim of equivalent power No Length 563.00 mm Height 17.00 mm Width 17.00 mm Chromaticity coordinate x 0.433 Chromaticity coordinate y 0.403 R9 Colour rendering index 0.90 Energy labelling regulation data acc EU 2019/2015 LED NDLS ANDLS ANDLS ANDLS SINGLE_VALU SINGLE_VALU 17.00 mm Vidth 17.00 mm Chromaticity coordinate x 0.433 Chromaticity coordinate y 0.403 R9 Colour rendering index 0.00 Beam angle correspondence SPHERE_360 Survival factor 0.90	
Energy labelling regulation data acc EU 2019/2015 Lighting technology used Non-directional or directional Mains or non-mains NMLS Light source cap-type (or other electric interface) Connected light source (CLS) No Color-tuneable light source No High luminance light source No Anti-glare shield No Correlated colour temperature type Standby power No Networked standby power for CLS Ow Claim of equivalent power Length Height 17.00 mm Width 17.00 mm Chromaticity coordinate x 0.403	Temperature range at storage -20+80 °C Energy labelling regulation data acc EU 2019/2015 Lighting technology used Non-directional or directional Mains or non-mains NMLS Light source cap-type (or other electric interface) G5 Connected light source (CLS) No Color-tuneable light source No High luminance light source No Anti-glare shield No Correlated colour temperature type SINGLE_VALU Standby power O W Networked standby power for CLS O W Claim of equivalent power No Length Height 17.00 mm Whidth 17.00 mm Chromaticity coordinate x 0.433 Chromaticity coordinate y R9 Colour rendering index Beam angle correspondence SPHERE_360 Survival factor Displacement factor	HFH
Energy labelling regulation data acc EU 2019/2015 Lighting technology used Non-directional or directional Mains or non-mains 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 O W Networked standby power for CLS O W Claim of equivalent power Height 17.00 mm Width 17.00 mm Chromaticity coordinate x O.403	Energy labelling regulation data acc EU 2019/2015 Lighting technology used LED Non-directional or directional NDLS Mains or non-mains NMLS 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_VALU Standby power 0 W Networked standby power for CLS 0 W Claim of equivalent power No Length 563.00 mm Height 17.00 mm Width 17.00 mm Chromaticity coordinate x 0.433 Chromaticity coordinate y 0.403 R9 Colour rendering index 0.90 Beam angle correspondence SPHERE_360 Survival factor 0.90 Displacement factor	
Lighting technology used Non-directional or directional Non-directional or directional or	Lighting technology used Non-directional or directional NoLS Mains or non-mains Light source cap-type (or other electric interface) Connected light source (CLS) No Color-tuneable light source Envelope No High luminance light source Anti-glare shield No Correlated colour temperature type Single_VALU Standby power No Networked standby power for CLS Claim of equivalent power Height 17.00 mm Width 17.00 mm Chromaticity coordinate x Chromaticity coordinate y R9 Colour rendering index Survival factor Displacement factor	
Non-directional or directional Mains or non-mains NMLS Light source cap-type (or other electric interface) Connected light source (CLS) No Color-tuneable light source No High luminance light source No Anti-glare shield No Correlated colour temperature type SINGLE_VALUE Standby power O W Networked standby power for CLS O W Claim of equivalent power No Length Height 17.00 mm Width 17.00 mm Chromaticity coordinate x O.433 Chromaticity coordinate y O.403	Non-directional or directional Mains or non-mains NMLS Light source cap-type (or other electric interface) Connected light source (CLS) No Color-tuneable light source Envelope No High luminance light source No Anti-glare shield No Correlated colour temperature type SINGLE_VALU Standby power No Networked standby power for CLS Claim of equivalent power Length Height 17.00 mm Width 17.00 mm Chromaticity coordinate x Chromaticity coordinate y R9 Colour rendering index Beam angle correspondence SPHERE_360 Survival factor Displacement factor	
Mains or non-mains Light source cap-type (or other electric interface) G5 Connected light source (CLS) No Color-tuneable light source 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 Olaim of equivalent power No Length Height 17.00 mm Width 17.00 mm Chromaticity coordinate x 0.433 Chromaticity coordinate y 0.403	Mains or non-mains Light source cap-type (or other electric interface) G5 Connected light source (CLS) No Color-tuneable light source No High luminance light source Anti-glare shield No Correlated colour temperature type SINGLE_VALU Standby power No Networked standby power for CLS O W Claim of equivalent power Length Height 17.00 mm Width 17.00 mm Chromaticity coordinate x Chromaticity coordinate y R9 Colour rendering index Beam angle correspondence SPHERE_360 Survival factor Displacement factor	
Light source cap-type (or other electric interface) 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 O W Claim of equivalent power No Length Height 17.00 mm Width 17.00 mm Chromaticity coordinate x 0.433 Chromaticity coordinate y 0.403	Light source cap-type (or other electric interface) Connected light source (CLS) No Color-tuneable light source Envelope No High luminance light source No Anti-glare shield No Correlated colour temperature type Standby power No Networked standby power for CLS Claim of equivalent power Length Height 17.00 mm Width 17.00 mm Chromaticity coordinate x Chromaticity coordinate y R9 Colour rendering index Beam angle correspondence Sundanticity coordinate contents of the poor o	
Connected light source (CLS) Color-tuneable light source No Envelope No High luminance light source No Anti-glare shield No Correlated colour temperature type SINGLE_VALUE Standby power O W Networked standby power for CLS O W Claim of equivalent power No Length Height 17.00 mm Width 17.00 mm Chromaticity coordinate x O.433 Chromaticity coordinate y No	Connected light source (CLS) Color-tuneable light source Envelope No High luminance light source No Anti-glare shield Correlated colour temperature type Standby power No No Claim of equivalent power Length Height Width 17.00 mm Chromaticity coordinate x Chromaticity coordinate y R9 Colour rendering index Beam angle correspondence Sunvival factor Displacement factor	
Color-tuneable light source 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 Length 563.00 mm Height 17.00 mm Width 17.00 mm Chromaticity coordinate x 0.433 Chromaticity coordinate y 0.403	Color-tuneable light source Envelope No High luminance light source Anti-glare shield No Correlated colour temperature type Standby power 0 W Networked standby power for CLS 0 W Claim of equivalent power No Length Height 17.00 mm Width 17.00 mm Chromaticity coordinate x 0.433 Chromaticity coordinate y R9 Colour rendering index Beam angle correspondence SPHERE_360 Survival factor 0.90 Displacement factor	
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 563.00 mm Height 17.00 mm Width 17.00 mm Chromaticity coordinate x 0.433 Chromaticity coordinate y 0.403	Envelope No High luminance light source No Anti-glare shield No Correlated colour temperature type SINGLE_VALU Standby power 0 W Networked standby power for CLS 0 W Claim of equivalent power No Length 563.00 mm Height 17.00 mm Width 17.00 mm Chromaticity coordinate x 0.433 Chromaticity coordinate y 0.403 R9 Colour rendering index 0.00 Beam angle correspondence SPHERE_360 Survival factor 0.90 Displacement factor	
High luminance light source 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 563.00 mm Height 17.00 mm Width 17.00 mm Chromaticity coordinate x 0.433 Chromaticity coordinate y	High luminance light source Anti-glare shield No Correlated colour temperature type SINGLE_VALU Standby power 0 W Networked standby power for CLS 0 W Claim of equivalent power Length 563.00 mm Height 17.00 mm Width 17.00 mm Chromaticity coordinate x 0.433 Chromaticity coordinate y R9 Colour rendering index Beam angle correspondence SPHERE_360 Survival factor 0.90 Displacement factor	
Anti-glare shield Correlated colour temperature type SINGLE_VALUE Standby power 0 W Networked standby power for CLS 0 W Claim of equivalent power No Length 563.00 mm Height 17.00 mm Width 17.00 mm Chromaticity coordinate x 0.433 Chromaticity coordinate y 0.403	Anti-glare shield Correlated colour temperature type Standby power 0 W Networked standby power for CLS Claim of equivalent power Length Height 17.00 mm Width 17.00 mm Chromaticity coordinate x 0.433 Chromaticity coordinate y R9 Colour rendering index Beam angle correspondence Survival factor 0.90 Displacement factor	
Correlated colour temperature type Standby power O W Networked standby power for CLS O W Claim of equivalent power No Length 563.00 mm Height 17.00 mm Width 17.00 mm Chromaticity coordinate x 0.433 Chromaticity coordinate y	Correlated colour temperature type SINGLE_VALU Standby power 0 W Networked standby power for CLS 0 W Claim of equivalent power No Length 563.00 mm Height 17.00 mm Width 17.00 mm Chromaticity coordinate x 0.433 Chromaticity coordinate y 0.403 R9 Colour rendering index Beam angle correspondence SPHERE_360 Survival factor 0.90 Displacement factor	
Standby power 0 W Networked standby power for CLS 0 W Claim of equivalent power No Length 563.00 mm Height 17.00 mm Width 17.00 mm Chromaticity coordinate x 0.433 Chromaticity coordinate y 0.403	Standby power 0 W Networked standby power for CLS 0 W Claim of equivalent power No Length 563.00 mm Height 17.00 mm Width 17.00 mm Chromaticity coordinate x 0.433 Chromaticity coordinate y 0.403 R9 Colour rendering index 0.00 Beam angle correspondence SPHERE_360 Survival factor 0.90	
Networked standby power for CLS Claim of equivalent power No Length 563.00 mm Height 17.00 mm Width 17.00 mm Chromaticity coordinate x 0.433 Chromaticity coordinate y 0.403	Networked standby power for CLS Claim of equivalent power Length 563.00 mm Height 17.00 mm Width 17.00 mm Chromaticity coordinate x 0.433 Chromaticity coordinate y 89 Colour rendering index Beam angle correspondence SPHERE_360 Survival factor 0.90 Displacement factor	.UE
Claim of equivalent power Length 563.00 mm Height 17.00 mm Width 17.00 mm Chromaticity coordinate x 0.433 Chromaticity coordinate y 0.403	Claim of equivalent power No Length 563.00 mm Height 17.00 mm Width 17.00 mm Chromaticity coordinate x 0.433 Chromaticity coordinate y 0.403 R9 Colour rendering index 0.00 Beam angle correspondence SPHERE_360 Survival factor 0.90 Displacement factor 0.90	
Length 563.00 mm Height 17.00 mm Width 17.00 mm Chromaticity coordinate x 0.433 Chromaticity coordinate y 0.403	Length563.00 mmHeight17.00 mmWidth17.00 mmChromaticity coordinate x0.433Chromaticity coordinate y0.403R9 Colour rendering index0.00Beam angle correspondenceSPHERE_360Survival factor0.90Displacement factor0.90	
Height 17.00 mm Width 17.00 mm Chromaticity coordinate x 0.433 Chromaticity coordinate y 0.403	Height 17.00 mm Width 17.00 mm Chromaticity coordinate x 0.433 Chromaticity coordinate y 0.403 R9 Colour rendering index 0.00 Beam angle correspondence SPHERE_360 Survival factor 0.90 Displacement factor 0.90	
Width 17.00 mm Chromaticity coordinate x 0.433 Chromaticity coordinate y 0.403	Width 17.00 mm Chromaticity coordinate x 0.433 Chromaticity coordinate y 0.403 R9 Colour rendering index 0.00 Beam angle correspondence SPHERE_360 Survival factor 0.90 Displacement factor 0.90	
Chromaticity coordinate x 0.433 Chromaticity coordinate y 0.403	Chromaticity coordinate x 0.433 Chromaticity coordinate y 0.403 R9 Colour rendering index 0.00 Beam angle correspondence SPHERE_360 Survival factor 0.90 Displacement factor 0.90	
Chromaticity coordinate y 0.403	Chromaticity coordinate y 0.403 R9 Colour rendering index 0.00 Beam angle correspondence SPHERE_360 Survival factor 0.90 Displacement factor 0.90	
	R9 Colour rendering index 0.00 Beam angle correspondence SPHERE_360 Survival factor 0.90 Displacement factor 0.90	
R9 Colour rendering index 0.00	Beam angle correspondence SPHERE_360 Survival factor 0.90 Displacement factor 0.90	
	Survival factor 0.90 Displacement factor 0.90	
Beam angle correspondence SPHERE_360	Displacement factor 0.90)
Survival factor 0.90		
Displacement factor 0.90	LED light source replaces a fluorescent light source	
LED light source replaces a fluorescent light source No	The section replaced a matrice series and respective series and replaced a matrice series and replaced and replaced a matrice series and replaced a matrice	

EPREL ID	642875
Model number	AC35160

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 Tc 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
PDF	User instruction / safety instructions	SubstiTUBE T5 HF (ECG) LED TUBE
PDF	Extended installation guide	SubstiTUBE® T8 T5
PDF	Declarations of conformity	LEDTUBE T5 HF
PDF	Declarations of conformity UKCA	LEDTUBE T8 and T5

Photometric and lighting design files	Document name
IES file (IES)	ST5HE14 0.6M 7W 830 HF G5 OSRAM
LDT file (Eulumdat)	ST5HE14 0.6M 7W 830 HF G5 OSRAM
Light distribution curve type polar	ST5HE14 0.6M 7W 830 HF G5 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
4058075543300	Sleeve 1	565 mm x 20 mm x 24 mm	101.00 g	0.27 dm ³
4058075543317	Shipping box 10	618 mm x 153 mm x 80 mm	1277.00 g	7.56 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/osram-substitube

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.