

PRODUCT DATASHEET

SubstiTUBE T5 AC HE28 16 W/4000 K 1163 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: ≤ 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 | 16 W |
| Construction wattage | 16.00 W |
| Nominal voltage | 220...240 V |
| Operating mode | AC Mains |
| Nominal current | 74 mA |
| Type of current | AC |
| Inrush current | 5.3 A |
| Operating frequency | 50/60 Hz |
| Mains frequency | 50/60 Hz |
| Max. lamp number on MCB B10 A | 60 |
| Max. lamp number on MCB B16 A | 97 |
| Total harmonic distortion | < 20 % |
| Power factor λ | > 0.90 |

Photometrical data

| | |
|---|---------------------|
| Luminous flux | 2400 lm |
| Luminous efficacy | 150 lm/W |
| Lumen main.fact.at end of nom.life time | 0.70 |
| Light color (designation) | Cool White |
| Color temperature | 4000 K |
| Color rendering index Ra | 83 |
| Light color | 840 |
| Standard deviation of color matching | ≤5 sdc _m |
| Flickering metric (Pst LM) | 1.0 |
| Stroboscope effect metric (SVM) | 0.4 |

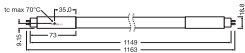


EPREL data spectral diagram PROF
LEDr 4000K

Light technical data

| | |
|---------------------|----------|
| Beam angle | 160 ° |
| Warm-up time (60 %) | < 2.00 s |
| Starting time | < 0.5 s |

Dimensions & Weight



| | |
|---|------------|
| Overall length | 1163.00 mm |
| Length with base excl. base pins/connection | 1149.00 mm |
| Diameter | 19.00 mm |
| Tube diameter | 16 mm |
| Maximum diameter | 19 mm |
| Product weight | 160.00 g |

Temperatures & operating conditions

| | |
|--------------------------------------|--------------|
| Ambient temperature range | -20...+45 °C |
| Maximum temperature at tc test point | 70 °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 |
| Design / version | Frosted |

Capabilities

| | |
|----------|----|
| Dimmable | No |
|----------|----|

Certificates & Standards

| | |
|--|-----------------|
| Energy efficiency class | D ¹⁾ |
| Energy consumption | 16.00 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 AC H |
|-----------------|-----------------|

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 | 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 | 1163.00 mm |
| Height | 19.00 mm |
| Width | 19.00 mm |
| Chromaticity coordinate x | 0.381 |
| Chromaticity coordinate y | 0.379 |
| 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 | 642852 |
| Model number | AC35137 |

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 T_c temperature on the product prior to installation.
- After rewiring of a luminaire the installer will be responsible for all technical and safety consequences.
- All electrical connections must be made by a qualified person.
- Disconnect mains before installation.
- Not suitable for emergency lighting.

DOWNLOAD DATA

| Documents and certificates | Document name |
|--|---------------------------|
|  User instruction / safety instructions | SubstiTUBE T5 220-240V AC |
|  Extended installation guide | SubstiTUBE® T8 T5 |
|  Declarations of conformity | LEDTUBE T5 AC |
|  Declarations of conformity UKCA | LEDTUBE T8 and T5 |

| Photometric and lighting design files | Document name |
|--|---|
|  IES file (IES) | ST5HE28 1.2M 16W 840 220-240V AC G5 OSRAM |
|  LDT file (Eulumdat) | ST5HE28 1.2M 16W 840 220-240V AC G5 OSRAM |
|  Spectral power distribution | EPREL data spectral diagram PROF LEDr 4000K |

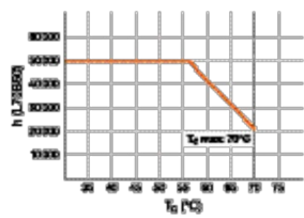
LOGISTICAL DATA

| Product code | Packaging unit (Pieces/Unit) | Dimensions (length x width x height) | Gross weight | Volume |
|---------------|------------------------------|--------------------------------------|--------------|----------------------|
| 4058075543522 | Sleeve 1 | 1,165 mm x 20 mm x 24 mm | 178.00 g | 0.56 dm ³ |

| Product code | Packaging unit (Pieces/Unit) | Dimensions (length x width x height) | Gross weight | Volume |
|---------------|------------------------------|--------------------------------------|--------------|-----------------------|
| 4058075543539 | Shipping box 10 | 1,218 mm x 153 mm x 80 mm | 2201.00 g | 14.91 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.

ADDITIONAL CATALOG INFORMATION



DISCLAIMER

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