

# PRODUCT DATASHEET

## ST8PROUO-EM 21.1 W/6500K 1500 mm

SubstiTUBE PRO Ultra Output EM | 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 ( $SVM \leq 0,4$  /  $PstLM \leq 1$ )
- 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
- For especially uniform illumination

## TECHNICAL DATA

### Electrical data

|  |             |
|--|-------------|
| Rated wattage  | 21.10 W     |
| Nominal voltage  | 220...240 V |
| Operating frequency  | 50...60 Hz  |
| Nominal wattage  | 21.10 W     |
| Nominal current  | 0.097 A     |
| Type of current  | AC          |
| Max. lamp no. on circuit break. 10 A (B)                         | 46          |
| Max. lamp no. on circuit break. B10 A - CCG without compensation | 46          |
| Max. lamp no. on circuit break. B10 A - CCG with compensation    | 8           |
| Max. lamp no. on circuit break. B16 A - CCG without compensation | 74          |
| Max. lamp no. on circuit break. B16 A - CCG with compensation    | 14          |
| Max. lamp no. on circuit break. 16 A (B)                         | 74          |
| Total harmonic distortion  | < 20 %      |
| Power factor $\lambda$   | > 0.90      |

### Photometrical data

|   |                           |
|---|---------------------------|
| Rated color temperature                 | 6500 K                    |
| Nominal luminous flux                   | 3700 lm                   |
| Rated luminous flux                     | 3700 lm                   |
| Lumen main.fact.at end of nom.life time | 0.70                      |
| Light color (designation)               | Cool Daylight             |
| Color temperature                       | 6500 K                    |
| Luminous flux                           | 3700 lm                   |
| Color rendering index Ra                | 83                        |
| Standard deviation of color matching    | $\leq 5$ sdc <sub>m</sub> |

### Light technical data

|                                    |          |
|------------------------------------|----------|
| Starting time                      | < 0.5 s  |
| Warm-up time (60 %)                | < 0.50 s |
| Rated beam angle (half peak value) | 190.00 ° |

Dimensions & weight



|  |            |
|--|------------|
| <b>Length with base excl. base pins/connection</b> | 1500.00 mm |
| <b>Tube diameter</b>                               | 25.8 mm    |
| <b>Base diameter</b>                               | 26.7 mm    |
| <b>Product weight</b>                              | 263.00 g   |
| <b>Overall length</b>                              | 1513 mm    |

Temperatures & operating conditions

|   |              |
|---|--------------|
| <b>Ambient temperature range</b>            | -20...+50 °C |
| <b>Maximum temperature at tc test point</b> | 75 °C        |

Lifespan

|                                   |         |
|-----------------------------------|---------|
| <b>Nominal lamp life time</b>     | 60000 h |
| <b>Rated lamp life time</b>       | 60000 h |
| <b>Number of switching cycles</b> | 200000  |

Additional product data

|                                    |     |
|------------------------------------|-----|
| <b>Base (standard designation)</b> | G13 |
| <b>Mercury-free</b>                | Yes |

Capabilities

|                 |    |
|-----------------|----|
| <b>Dimmable</b> | No |
|-----------------|----|

Certificates & standards

|                                |              |
|--------------------------------|--------------|
| <b>Type of protection</b>      | IP20         |
| <b>Standards</b>               | CE; VDE      |
| <b>Energy efficiency class</b> | A++          |
| <b>Energy consumption</b>      | 22 kWh/1000h |

Country-specific categorizations

|                        |                 |
|------------------------|-----------------|
| <b>Order reference</b> | ST8PROU-1.5M21, |
|------------------------|-----------------|

## Logistical data

|                                     |              |
|-------------------------------------|--------------|
| <b>Temperature range at storage</b> | -20...+80 °C |
|-------------------------------------|--------------|

**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.

**LOGISTICAL DATA**

| Product code  | Packaging unit (Pieces/Unit) | Dimensions (length x width x height) | Gross weight | Volume                |
|---------------|------------------------------|--------------------------------------|--------------|-----------------------|
| 4058075454064 | Sleeves<br>1                 | 1605 mm x 29 mm x 29 mm              | 297.00 g     | 1.35 dm <sup>3</sup>  |
| 4058075454071 | Shipping carton box<br>10    | 1652 mm x 210 mm x 115 mm            | 3820.00 g    | 39.90 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/substitute](http://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.