

# PRODUCT DATASHEET

## ST8PRO-EM 10.3 W/6500 K 900 mm

SubstiTUBE® PRO 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 68 % (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
- Single and tandem operation on conventional control gear (0.6 m version)
- Lifetime: up to 75,000 h
- Type of protection: IP20

## TECHNICAL DATA

### Electrical data

|  |             |
|--|-------------|
| Nominal wattage  | 10.3 W      |
| Construction wattage   | 10.30 W     |
| Nominal voltage  | 220...240 V |
| Claimed equiv. conventional lamp power                           | 30 W        |
| Nominal current  | 49 mA       |
| Type of current  | AC          |
| Operating frequency  | 50...60 Hz  |
| Mains frequency  | 50...60 Hz  |
| Max. lamp no. on circuit break. 10 A (B)                         | 92          |
| Max. lamp no. on circuit break. B10 A - CCG without compensation | 92          |
| Max. lamp no. on circuit break. B10 A - CCG with compensation    | 15          |
| Max. lamp no. on circuit break. 16 A (B)                         | 147         |
| Max. lamp no. on circuit break. B16 A - CCG without compensation | 147         |
| Max. lamp no. on circuit break. B16 A - CCG with compensation    | 25          |
| Total harmonic distortion  | < 20 %      |
| Power factor $\lambda$   | > 0.90      |

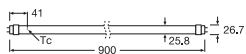
### Photometrical data

|   |               |
|---|---------------|
| Luminous flux                           | 1700 lm       |
| Luminous efficacy                       | 165 lm/W      |
| Lumen main.fact.at end of nom.life time | 0.70          |
| Light color (designation)               | Cool Daylight |
| Color temperature                       | 6500 K        |
| Color rendering index Ra                | 83            |
| Light color                             | 865           |
| Standard deviation of color matching    | $\leq 5$ sdcm |

### Light technical data

|                                    |          |
|------------------------------------|----------|
| Beam angle                         | 190 °    |
| Warm-up time (60 %)                | < 0.50 s |
| Starting time                      | < 0.5 s  |
| Rated beam angle (half peak value) | 190.00 ° |

### Dimensions & Weight



|   |           |
|---|-----------|
| Overall length                              | 908.00 mm |
| Length with base excl. base pins/connection | 900,00 mm |
| Diameter                                    | 26.70 mm  |
| Tube diameter                               | 25.8 mm   |
| Base diameter                               | 26,7 mm   |
| Maximum diameter                            | 27 mm     |
| Product weight                              | 144.00 g  |

### Temperatures & operating conditions

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

### Lifespan

|                                     |         |
|-------------------------------------|---------|
| Nominal lamp life time              | 60000 h |
| Number of switching cycles          | 200000  |
| Lumen maintenance at end of serv    | 0.70    |
| Rated lamp survival factor at 6,000 | ≥ 0.90  |

### Additional product data

|                             |         |
|-----------------------------|---------|
| Base (standard designation) | G13     |
| Mercury content             | 0.0 mg  |
| Mercury-free                | Yes     |
| Design / version            | Frosted |

### Capabilities

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

### Certificates & Standards

|                         |                 |
|-------------------------|-----------------|
| Energy efficiency class | C 1)            |
| Energy consumption      | 11.00 kWh/1000h |
| Type of protection      | IP20            |
| Standards               | CE; VDE         |

|  |     |
|--|-----|
| Photobiological safety group acc. to EN62778 | RG0 |
|--|-----|

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

### Country-specific categorizations

|                 |                 |
|-----------------|-----------------|
| Order reference | ST8PRO-0.9M 10, |
|-----------------|-----------------|

### LOGISTICAL DATA

|                              |              |
|------------------------------|--------------|
| Temperature range at storage | -20...+80 °C |
|------------------------------|--------------|

### Energy labelling regulation data acc EU 2019/2015

|   |           |
|---|-----------|
| Light source cap-type (or other electric interface) | G13       |
| Length  | 908.00 mm |
| Height  | 26.70 mm  |
| Width   | 26.70 mm  |

### 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                |
|---------------|------------------------------|--------------------------------------|--------------|-----------------------|
| 4058075454149 | Sleeve<br>1                  | 1,000 mm x 29 mm x 29 mm             | 173.00 g     | 0.84 dm <sup>3</sup>  |
| 4058075454156 | Shipping box<br>10           | 1,048 mm x 210 mm x 115 mm           | 2230.00 g    | 25.31 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.

## 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.