

## PRODUCT DATASHEET

### SubstiTUBE T9 C EM 32 20 W/6500 K G10q

LED TUBE T9 EM | Circular LED tubes for electromagnetic control gear (CCG)



#### Areas of application

- General illumination within ambient temperatures from -20...+45 °C
- Corridors, stairways, parking garages
- Domestic applications
- Decorative applications

#### Product benefits

- Quick, simple and safe replacement without rewiring
- Energy savings of up to 50 % (compared to T9 fluorescent lamp)
- Also suitable for operation at low temperatures

#### Product features

- LED alternative to classic T9 fluorescent lamps in CCG luminaires
- Uniform illumination
- Lifetime up to 30,000 h
- Mercury-free and RoHS compliant



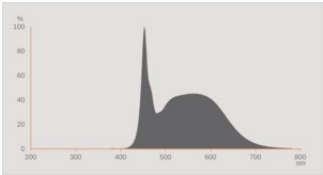
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**TECHNICAL DATA****Electrical data**

|                                                          |               |
|----------------------------------------------------------|---------------|
| Nominal wattage                                          | 20 W          |
| Nominal voltage                                          | 220...240 V   |
| Operating mode                                           | CCG, AC Mains |
| Nominal current                                          | 100 mA        |
| Type of current                                          | AC            |
| Operating frequency                                      | 50/60 Hz      |
| Mains frequency                                          | 50/60 Hz      |
| Max. lamp number on MCB B10 A                            | 21            |
| Max. lamp number on MCB B10 A - CCG without compensation | 65            |
| Max. lamp number on MCB B10 A - CCG with compensation    | 13            |
| Max. lamp number on MCB B16 A                            | 25            |
| Max. lamp number on MCB B16 A - CCG without compensation | 105           |
| Max. lamp number on MCB B16 A - CCG with compensation    | 16            |
| Total harmonic distortion                                | 20 %          |
| Power factor $\lambda$                                   | > 0.90        |

**Photometrical data**

|                                         |               |
|-----------------------------------------|---------------|
| Luminous flux                           | 2200 lm       |
| Luminous efficacy                       | 110 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                | ≥80           |
| Light color                             | 865           |
| Standard deviation of color matching    | ≤6 sdcn       |
| Rated LLMF at 6,000 h                   | 0.80          |
| Flickering metric (Pst LM)              | 1             |
| Stroboscope effect metric (SVM)         | 0.40          |



EPREL data spectral diagram PROF  
LEDr 6500K

Light technical data

|                     |          |
|---------------------|----------|
| Beam angle          | 120 °    |
| Warm-up time (60 %) | < 0.50 s |
| Starting time       | < 0.5 s  |

Dimensions & Weight

|                |           |
|----------------|-----------|
| Overall length | 300.00 mm |
| Diameter       | 300.00 mm |
| Product weight | 220.00 g  |

Temperatures & operating conditions

|                                      |              |
|--------------------------------------|--------------|
| Ambient temperature range            | -20...+45 °C |
| Maximum temperature at tc test point | 75 °C        |

Lifespan

|                                              |         |
|----------------------------------------------|---------|
| Lifespan L70/B50 at 25 °C                    | 30000 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) | G10q    |
| Mercury content             | 0.0 mg  |
| Design / version            | Frosted |

## Capabilities

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

## Certificates &amp; Standards

|                                              |                 |
|----------------------------------------------|-----------------|
| Energy efficiency class                      | E <sup>1)</sup> |
| Energy consumption                           | 20.00 kWh/1000h |
| Type of protection                           | IP20            |
| Standards                                    | CE / EAC        |
| Photobiological safety group acc. to EN62778 | RG0             |

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

## Country-specific categorizations

|                 |                |
|-----------------|----------------|
| Order reference | LEDTUBE T9C EM |
|-----------------|----------------|

## 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) | G10q         |
| 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                                       | 0.00         |
| Claim of equivalent power                           | No           |
| Length                                              | 300.00 mm    |
| Height                                              | 300.00 mm    |
| Width                                               | 300.00 mm    |
| Chromaticity coordinate x                           | 0.312        |
| Chromaticity coordinate y                           | 0.328        |
| R9 Colour rendering index                           | 0.00         |

|                                                      |            |
|------------------------------------------------------|------------|
| Beam angle correspondence                            | SPHERE_360 |
| Survival factor                                      | 0.9        |
| Displacement factor                                  | 0,70       |
| LED light source replaces a fluorescent light source | No         |
| EPREL ID                                             | 716580     |
| Model number                                         | AC36310    |

### 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.

### DOWNLOAD DATA

| Documents and certificates                                                         |                                        | Document name     |
|------------------------------------------------------------------------------------|----------------------------------------|-------------------|
|    | User instruction / safety instructions | SubstiTUBE® T9    |
|   | Declarations of conformity             | LEDTUBE T9C       |
|  | Declarations of conformity UKCA        | LEDTUBE T8 and T5 |

| Photometric and lighting design files                                               |                             | Document name                               |
|-------------------------------------------------------------------------------------|-----------------------------|---------------------------------------------|
|  | Spectral power distribution | EPREL data spectral diagram PROF LEDr 6500K |

### LOGISTICAL DATA

| Product code  | Packaging unit (Pieces/Unit) | Dimensions (length x width x height) | Gross weight | Volume                |
|---------------|------------------------------|--------------------------------------|--------------|-----------------------|
| 4058075604698 | Folding box<br>1             | 38 mm x 308 mm x 348 mm              | 233.00 g     | 4.07 dm <sup>3</sup>  |
| 4058075604704 | Shipping box<br>10           | 397 mm x 329 mm x 386 mm             | 2981.00 g    | 50.42 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)

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### Legal advice

- When used to replace a T9 fluorescent lamp the total energy efficiency and light distribution depends on the design of the lighting system.
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### DISCLAIMER

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