

## PRODUCT DATASHEET

### LED TUBE T9 C 22 EM 11W 830 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 on CCG)
- 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                                          | 11 W                                      |
| Nominal voltage                                          | 220...240 V                               |
| Operating mode                                           | Conventional control gear (CCG), AC Mains |
| Nominal current                                          | 51 mA                                     |
| Type of current                                          | AC                                        |
| Inrush current                                           | 11 A                                      |
| Operating frequency                                      | 50/60 Hz                                  |
| Mains frequency                                          | 50/60 Hz                                  |
| Max. lamp number on MCB B10 A                            | 25                                        |
| Max. lamp number on MCB B10 A - CCG without compensation | 94                                        |
| Max. lamp number on MCB B10 A - CCG with compensation    | 16                                        |
| Max. lamp number on MCB B16 A                            | 31                                        |
| Max. lamp number on MCB B16 A - CCG without compensation | 150                                       |
| Max. lamp number on MCB B16 A - CCG with compensation    | 20                                        |
| Total harmonic distortion                                | < 20 %                                    |
| Power factor $\lambda$                                   | > 0.90                                    |

**Photometrical data**

|                                         |            |
|-----------------------------------------|------------|
| Luminous flux                           | 1200 lm    |
| Luminous efficacy                       | 109 lm/W   |
| Lumen main.fact.at end of nom.life time | 0.96       |
| Light color (designation)               | Warm White |
| Color temperature                       | 3000 K     |
| Color rendering index Ra                | ≥80        |
| Light color                             | 830        |
| Standard deviation of color matching    | ≤6 sdcn    |
| Rated LLMF at 6,000 h                   | 0.80       |
| Flickering metric (Pst LM)              | 1          |
| Stroboscope effect metric (SVM)         | 0.4        |



EPREL data spectral diagram PROF  
LEDr 3000K

Light technical data

|                     |         |
|---------------------|---------|
| Beam angle          | 110 °   |
| Warm-up time (60 %) | 0.00 s  |
| Starting time       | < 0.5 s |

Dimensions & Weight

|                |           |
|----------------|-----------|
| Overall length | 212.00 mm |
| Diameter       | 212.00 mm |
| Product weight | 158.00 g  |

Temperatures & operating conditions

|                                      |                            |
|--------------------------------------|----------------------------|
| Ambient temperature range            | -20...+45 °C <sup>1)</sup> |
| Maximum temperature at tc test point | 75 °C                      |

<sup>1)</sup> Temperature surrounding the lamp - for enclosed luminaires: temperature inside of the luminaire

Lifespan

|                                              |         |
|----------------------------------------------|---------|
| Lifespan L70/B50 at 25 °C                    | 30000 h |
| Number of switching cycles                   | 200000  |
| Lumen maintenance at end of service lifetime | 0.96    |
| Rated lamp survival factor at 6,000 h        | ≥ 0.90  |

Additional product data

|                             |      |
|-----------------------------|------|
| Base (standard designation) | G10q |
|-----------------------------|------|

|                 |        |
|-----------------|--------|
| Mercury content | 0.0 mg |
| Mercury-free    | Yes    |

### Capabilities

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

### Certificates & Standards

|                                              |                 |
|----------------------------------------------|-----------------|
| Energy efficiency class                      | F <sup>1)</sup> |
| Energy consumption                           | 11.00 kWh/1000h |
| Type of protection                           | IP20            |
| Standards                                    | CE / EAC / UKCA |
| 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 |
| Claim of equivalent power                           | Yes          |
| Length                                              | 212.00 mm    |
| Height                                              | 212.00 mm    |
| Width                                               | 212.00 mm    |
| Chromaticity coordinate x                           | 0.434        |
| Chromaticity coordinate y                           | 0.403        |

|                                                      |                 |
|------------------------------------------------------|-----------------|
| R9 Colour rendering index                            | 1               |
| Beam angle correspondence                            | SPHERE_360      |
| Survival factor                                      | 0.9             |
| Displacement factor                                  | 0.9             |
| LED light source replaces a fluorescent light source | No              |
| EPREL ID                                             | 1340156         |
| Model number                                         | AC45078,AC45078 |

### 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.
- All electrical connections must be made by a qualified person.
- Disconnect mains before installation.
- Not suitable for emergency lighting.
- Do not touch the lamp if broken.
- Must not be used if outer bulb is defective.

### DOWNLOAD DATA

| Documents and certificates                                                         |                                        | Document name                               |
|------------------------------------------------------------------------------------|----------------------------------------|---------------------------------------------|
|  | User instruction / safety instructions | LEDTUBE T9 C OSRAM                          |
|  | Legal information                      | Informationstext 18 Abs 4 ElektroG          |
|  | Declarations of conformity             | LEDTUBE T9C EM                              |
|  | Declarations of conformity UKCA        | UKCA declaration_LED TUBE T9C EM            |
| Photometric and lighting design files                                              |                                        | Document name                               |
|  | IES file (IES)                         | LEDTUBE T9C EM V 22 11W 830 G10Q            |
|  | LDT file (Eulumdat)                    | LEDTUBE T9C EM V 22 11W 830 G10Q LEDV       |
|  | 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                |
|---------------|------------------------------|--------------------------------------|--------------|-----------------------|
| 4099854042607 | Folding box<br>1             | 38 mm x 220 mm x 260 mm              | 242.00 g     | 2.17 dm <sup>3</sup>  |
| 4099854042614 | Shipping box<br>10           | 397 mm x 251 mm x 300 mm             | 2630.00 g    | 29.89 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.

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### References / Links

– For current information see [www.ledvance.com/osram-led-tube](http://www.ledvance.com/osram-led-tube)

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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.