

# PRODUCT DATASHEET

## ST9-EM 22 123 ° 12 W/4000 K G10q

SubstiTUBE® T9 EM | Circular LED tube for electromagnetic control gear (CCG) and AC mains



### 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
- Operation directly on 230 V AC mains possible

### 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



## TECHNICAL DATA

### Electrical data

Nominal wattage	12 W
Construction wattage	12.00 W
Nominal voltage	220...240 V
Claimed equiv. conventional lamp power	22 W
Nominal current	60 mA
Type of current	AC
Operating frequency	50...60 Hz
Mains frequency	50...60 Hz
Max. lamp no. on circuit break. 10 A (B)	80
Max. lamp no. on circuit break. B10 A - CCG without compensation	80
Max. lamp no. on circuit break. 16 A (B)	140
Max. lamp no. on circuit break. B16 A - CCG without compensation	140
Power factor $\lambda$	> 0.90

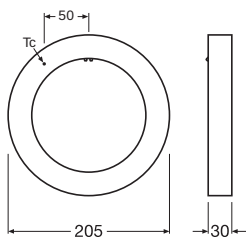
### Photometrical data

Luminous flux	1200 lm
Luminous efficacy	100 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	$\geq 80$
Light color	840
Standard deviation of color matching	$\leq 6$ sdcn

### Light technical data

Beam angle	123 °
Warm-up time (60 %)	< 0.50 s
Starting time	< 0.5 s
Rated beam angle (half peak value)	123.00 °

### Dimensions & Weight



Overall length	205.00 mm
Length	205.00 mm
Width (incl. round luminaires)	30.00 mm
Height (incl. round luminaires)	30.00 mm
Diameter	30.00 mm
Maximum diameter	30 mm
Product weight	143.00 g

### Temperatures & operating conditions

Ambient temperature range	-20...+45 °C
---------------------------	--------------

### Lifespan

Nominal lamp life time	30000 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)	G10q
Mercury content	0.0 mg
Mercury-free	Yes
Design / version	Frosted

### Capabilities

Dimmable	No
----------	----

### Certificates & Standards

Energy efficiency class	A+ <sup>1)</sup>
Energy consumption	12.00 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 E (lowest efficiency)

### Country-specific categorizations

Order reference	ST9-22 12W/840
-----------------	----------------

### LOGISTICAL DATA

Temperature range at storage	-20...+65 °C
------------------------------	--------------

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

Light source cap-type (or other electric interface)	G10q
Correlated colour temperature type	SINGLE_VALUE





### EQUIPMENT / ACCESSORIES

- Suitable for operation with low-loss and conventional control gears
- Suitable for operation with AC mains

### 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

DOWNLOAD DATA	
	User instruction SubstiTUBE T9
	PRODUCT DATASHEET ST9-EM 22 123 12 W 4000K G10q DATASHEET
	IES file (IES) AC11636_ST9-22 12W 840 220-240V EM
	LDT file (Eulumdat) AC11636_ST9-22 12W 840 220-240V EM

### LOGISTICAL DATA

Product code	Packaging unit (Pieces/Unit)	Dimensions (length x width x height)	Gross weight	Volume
4058075135444	Folding box 1	38 mm x 214 mm x 245 mm	194.00 g	1.99 dm <sup>3</sup>
4058075135451	Shipping box 10	385 mm x 232 mm x 237 mm	2608.00 g	21.17 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 T9 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.