PRODUCT DATASHEET
LED TUBE T8 EM SUPERIOR 438 mm 5.1W 830

LED TUBE T8 EM SUPERIOR | High performance LED tubes for electromagnetic control gear (CCG) and AC mains, shatterproof

SUPERIOR CLASS

Areas of application

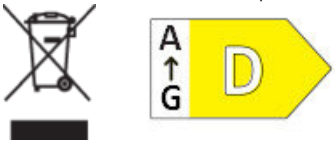
- General illumination within ambient temperatures from -20…+50 °C
- Illumination of production areas
- Traffic zones and corridors
- Supermarkets and department stores
- Industry

Product benefits

- Energy savings of up to 71 % (compared to T8 fluorescent lamp)
- Quick, simple and safe replacement with or without rewiring
- Highly versatile thanks to selectable power/lumen steps (1200 mm, 1500 mm)
- No bending thanks to glass technology
- Support the implementation of the HACCP concepts from production through to presentation
- Very high resistance to switching loads
- 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
- Multi Lumen function: 2 power steps selectable (1200 mm, 1500 mm)



- LED tube made of glass with shatter protection e.g. for food industry applications
- ENEC 10 VDE mark
- Single and tandem operation on conventional control gear (≤ 0.9 m versions)
- Extremely long lifetime: up to 100,000 h
- Type of protection: IP20
- Mercury-free and RoHS compliant
- Low flicker according to EU 2019-2020 (SVM ≤ 0.4 / PstLM ≤ 1)

TECHNICAL DATA

Electrical data

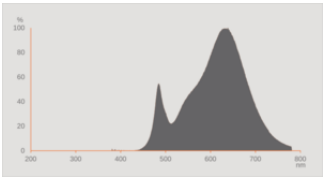
Nominal wattage	5.1 W
Construction wattage	5.10 W
Nominal voltage	220…240 V
Operating mode	CCG, AC Mains
Nominal current	24 mA
Type of current	AC
Inrush current	2.56 A
Suitable for DC input	Yes
Input voltage DC	186…260 V
Operating frequency	50/60 Hz
Mains frequency	50/60 Hz [1)]
Max. lamp number on MCB B10 A	234
Max. lamp number on MCB B10 A - CCG without compensation	102
Max. lamp number on MCB B10 A - CCG with compensation	73
Max. lamp number on MCB B16 A	293
Max. lamp number on MCB B16 A - CCG without compensation	129
Max. lamp number on MCB B16 A - CCG with compensation	91
Total harmonic distortion	< 20 %
Power factor λ	0.90

1) DC 0Hz

Photometrical data

Luminous flux	810 lm
Luminous efficacy	158 lm/W
Lumen main.fact.at end of nom.life time	0.70
Light color (designation)	Warm White
Color temperature	3000 K
Color rendering index Ra	80
Light color	830
Standard deviation of color matching	≤5 sdcm
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	190 °
Warm-up time (60 %)	‹ 0.50 s
Starting time	< 0.5 s

Dimensions & Weight

Overall length	450.00 mm
Length with base excl. base pins/connection	438.00 mm
Diameter	26.70 mm
Product weight	78.00 g

Temperatures & operating conditions

Ambient temperature range	-20…+50 °C [1)]
Maximum temperature at tc test point	60 °C
Performance temp. acc. to IEC 62717	35 °C [2)]

1) Temperature surrounding the lamp - for enclosed luminaires: temperature inside of the luminaire

2) Tp rated. Tp point coincides with Tc point - marked on device

Lifespan

Lifespan L70/B50 at 25 °C	100000 h

Lifespan L80/B50 at 25 °C	100000 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)	G13
Mercury content	0.0 mg
Mercury-free	Yes

Capabilities

Dimmable	No

Certificates & Standards

Energy efficiency class	D [1)]
Energy consumption	6.00 kWh/1000h
Type of protection	IP20
Standards	CE / UKCA / EAC / ENEC / VDE
Photobiological safety group acc. to EN62778	RG0

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

Country-specific categorizations

Order reference	LEDTUBE T8 EM S

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)	G13
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	<0.5 W
Claim of equivalent power	No
Length	450.00 mm
Height	26.70 mm
Width	26.70 mm
Chromaticity coordinate x	0.4339
Chromaticity coordinate y	0.4033
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	2150912,2340248
Model number	AC69440,AC82146

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.
– Not suitable for emergency lighting.
– Disconnect mains before installation.

DOWNLOAD DATA

	Documents and certificates	Document name
PDF	User instruction / safety instructions	LED TUBE T8 EM S
PDF	Extended installation guide	Installation instructions LED TUBE T8, T5 und DULUX LED 2024 10 EN
PDF	Legal information	Informationstext 18 Abs 4 ElektroG
PDF	Declarations of conformity	LEDTUBE

	Documents and certificates	Document name
PDF	Declarations of conformity	LED tube
PDF	Declarations of conformity UKCA	LEDTUBE
PDF	Declarations of conformity UKCA	LED tubes
PDF	Certificates	LEDTUBE T8 EM S 438

	Photometric and lighting design files	Document name
IES	IES file (IES)	LEDTUBE T8 EM S 438 5.1W 830 LEDV
LDT	LDT file (Eulumdat)	LEDTUBE T8 EM S 438 5.1W 830 LEDV
	UGR file (UGR table)	LEDTUBE T8 EM S 438 5.1W 830 LEDV
	Light distribution curve type polar	LEDTUBE T8 EM S 438 5.1W 830 LEDV
	Spectral power distribution	EPREL data spectral diagram PROF LEDr 3000K

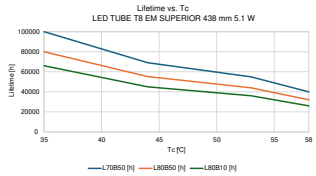
	Tender texts	Document name
TXT	Tender documents	LED TUBE T8 EM SUPERIOR 438 mm 5.1W 830-en

LOGISTICAL DATA

Product code	Packaging unit (Pieces/Unit)	Dimensions (length x width x height)	Gross weight	Volume
4099854432446	Sleeve 1	550 mm x 29 mm x 29 mm	95.00 g	0.46 dm^3
4099854432453	Shipping box 10	580 mm x 180 mm x 95 mm	1214.00 g	9.92 dm^3

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.

ADDITIONAL CATALOG INFORMATION



References / Links

– For Guarantee see www.ledvance.com/guarantee

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.