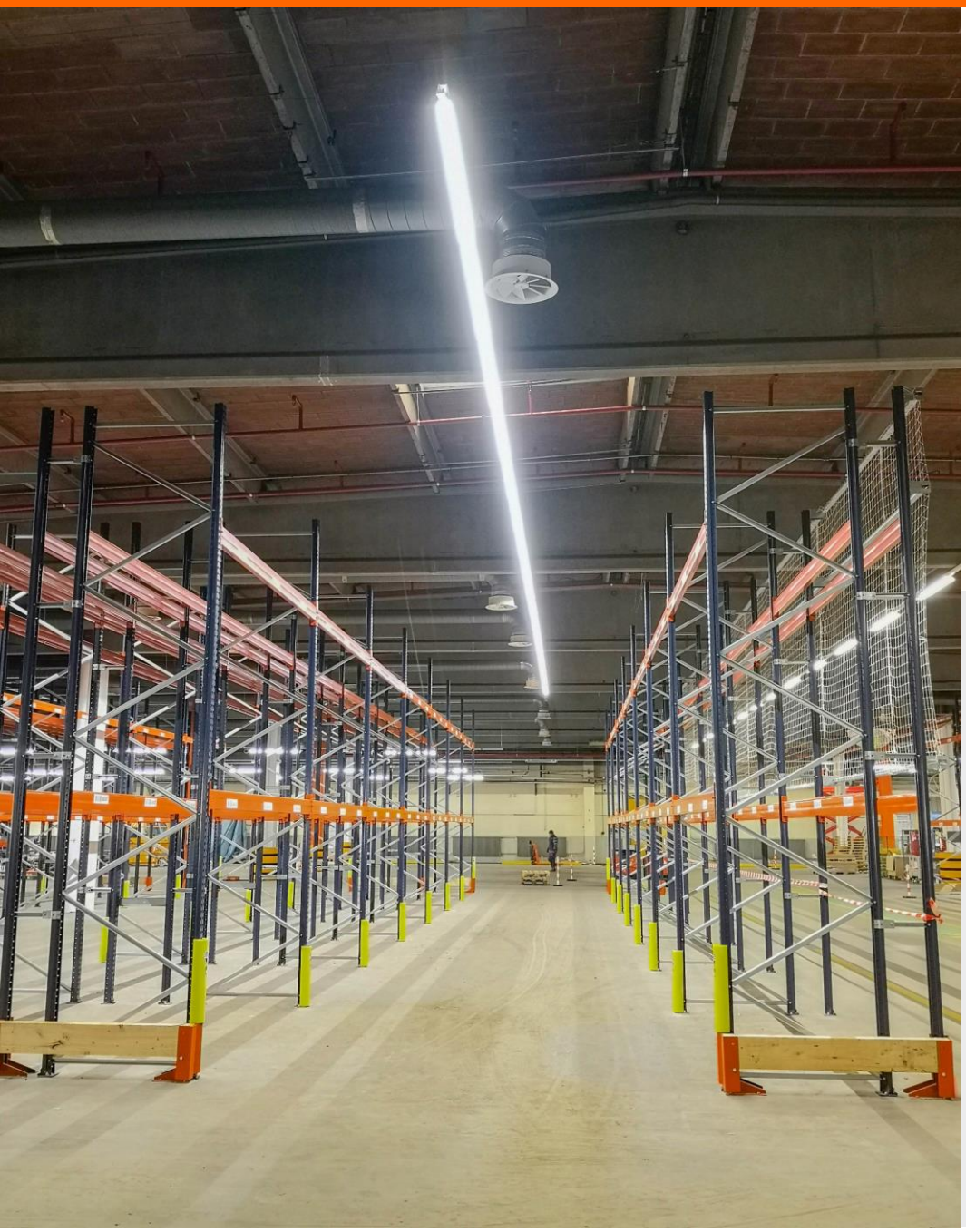
LEDVANCE

OSRAM SubstiTUBE® Advanced EM T8



Highlights

- Traditional T8 tube replacement with G13 base
- High lumen efficacy, up to 120lm/W
- Lifetime up to 50,000h (L70B50)
- Glass tube with plastic end-cap

Application Areas:

- Train Station
- Office
- Underground subway
- Supermarket, retail store
- Parking lot
- Warehouse

Advancing Light

LEDVANCE is one of the World's leaders in general lighting for lighting professionals as well as end users, offering

- A broad variety of LED luminaires
- Advanced LED lamps
- Intelligent, networked Smart Home & Smart Building solutions
- Traditional light sources

OSRAM

SubstiTUBE® Advanced EM T8

ST8A-0.6M 8.7W
ST8A-1.2M 17.5W

Benefit:

innovative LED-lamp, easy and safe to use with direct AC input

SDCM ≤6, provides excellent light quality

High lumen efficiency: up to 120lm/W

Lower maintenance cost thanks to longer lifetime than traditional Fluorescent.

Quick, simple and safe replacement. Correct operation temperature --20° … +45°C

Technical Features

- T8 LED tube made of glass with G13 base
- Weight: <500g
- Replace for fluorescent T8 tube
- Up to 50.000 h lifetime (L70B50 at Ta=25°C)
- CCT: 3000K, 4000K, 6500K
- Length: 2FT (0.6m) / 4FT(1.2m)

Application:

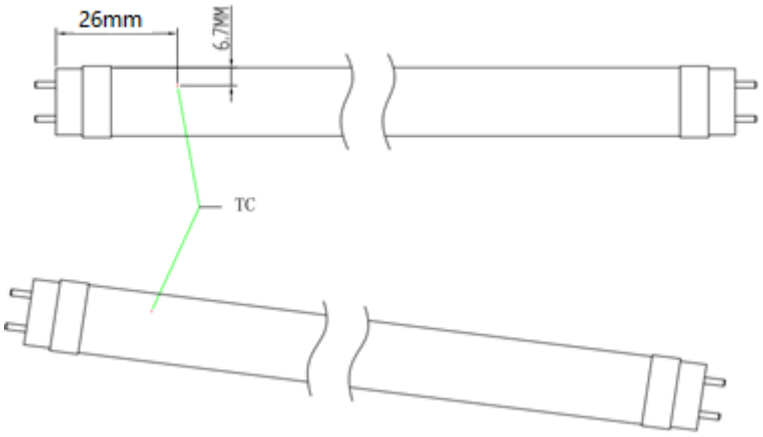
- Train Station
- Underground subway
- Supermarket, retail store
- Parking lot
- Office

Electrical and photometric data (rated value)

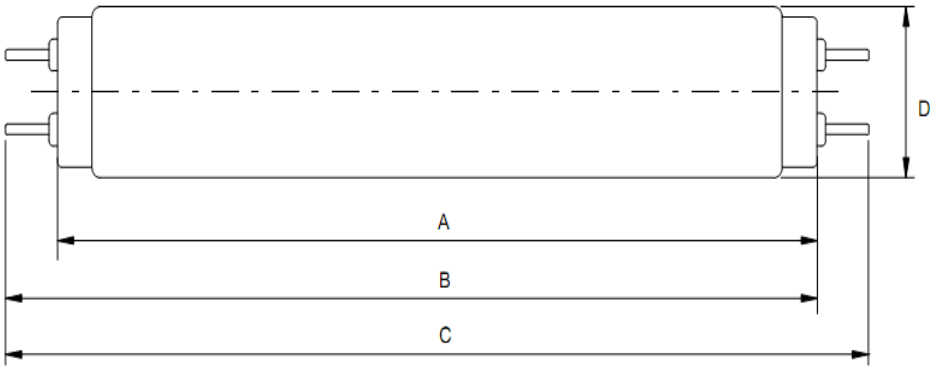
	Voltage [V]	Frequency [Hz]	Power (100%) [W]	Lumen Flux(100%) [lm]	CCT [K]	PF	CRI (Ra)	Beam Angle (C0/180)
ST8A-0.6M 8,7W/865 230V	220-240	50/60	8.7	1050	6500	0.9 +/-5%	≥80	>160°
ST8A-0.6M 8,7W/840 230V	220-240	50/60	8.7	1050	4000	0.9 +/-5%	≥80	>160°
ST8A-0.6M 8,7W/830 230V	220-240	50/60	8.7	945	3000	0.9 +/-5%	≥80	>160°
ST8A-1.2M 17,5W/865 230V	220-240	50/60	17.5	2100	6500	0.9 +/-5%	≥80	>160°
ST8A-1.2M 17,5W/840 230V	220-240	50/60	17.5	2100	4000	0.9 +/-5%	≥80	>160°
ST8A-1.2M 17,5W/830 230V	220-240	50/60	17.5	1890	3000	0.9 +/-5%	≥80	>160°

1. All technical parameters apply to the entire lamp. Because of the complex manufacturing process for light-emitting diodes (LEDs), the specified typical values for LED technical parameters represent only purely statistical variables. They do not necessarily correspond to the actual technical parameters for each individual product which can deviate from the typical value. For parameter of Lumen and Watt, production control tolerance with ±10% in delivery.
2. L70B50 is the average operating life of the LED Lamp during which the luminous flux is greater than or equal to 70% of the initial luminous flux, for 50% of the population. The lifetime is estimated at room temperature (25deg C), free air burning, base up position.

Minimum / Maximum ratings	Ambient temperature Ta	Maximum temperature Tc	Storage temperature Ts [C°]
ST8A-0.6M 8.7W	-20~45°C	<75 °C	-20°… 80°C
ST8A-1.2M 17.5W	-20~45°C	<75 °C	-20°… 80°C



Models	A (mm)	B (mm)	C (mm)	D (mm)	Net Weight (g)
ST8A-0.6M 8.7W	≤589.8	≤596.9	≤604	≤28	<500
ST8A-1.2M 17.5W	≤1199.4	≤1206.5	≤1213.6	≤28	<500

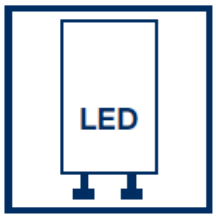


Safety and application notes

- The SubstiTUBE® Advanced EM T8 Tube must be handled with care. Do not operate product in a damaged condition.
- When operating with double side input wiring, SubstiTUBE® Starter has to be inserted to replace the conventional fluorescent lamp starter. If the conventional starter is not replaced, the SubstiTUBE® Advanced EM T8 Tube will start blinking and be damaged!
- Do not use SubstiTUBE® Advanced EM T8 Tube in luminaires which do not have any conventional starter or whereby the conventional starter cannot be replaced. Otherwise, rewiring is needed.
- Not suitable for luminaires with serial lamp connection i.e. more than one tube at one magnetic ballast.
- The SubstiTUBE® Advanced EM T8 Tube emits light at a limited angle, unlike conventional fluorescent tubes in 360° omni-direction.
- Due to the light distribution characteristic of the SubstiTUBE® Advanced EM T8 Tube the resulting luminaires light characteristic is likely to change. It is not guaranteed that e.g. standards for lighting at working places will be complied with after replacement. A photometric check of the installation is highly recommended.
- The effective energy savings depend on the efficiency of the luminaire setup to be replaced and should be considered individually in each case. Particularly magnetic ballast losses are reduced to ohmic losses and are normally only about 1W.
- The SubstiTUBE® Advanced EM T8 Tube is protected according to IP20. Applications with external risk of moisture and dust can be served with an adequately protected luminaire.
- SubstiTUBE® Advanced EM T8 Tube products differ in their diameters and geometries from fluorescent lamps. Their use in open batten luminaires with gaskets is possible if no excessive force is expended during the fixing. Obtaining the necessary IP protection in open batten luminaires with gaskets cannot be ensured.
- SubstiTUBE® Advanced EM T8 Tube can be driven directly on line voltage. In order to grant a safe operation mode please refer to the installation instructions for further information.
- Photobiological Safety of lamps and lamp systems according to IEC 62471. Risk Group: Exempt
- This lamp may not be suitable for use in all applications where a traditional fluorescent lamp has been used. The temperature range of this lamp is more restricted. In cases of doubt regarding the suitability of the application the manufacturer of this lamp should be consulted.
- This lamp is not suitable to be used in emergency luminaires designed for double-capped fluorescent lamp(s).

Dimming not allowed

Lamp suitable for 50 Hz or 60 Hz operation



LED replacement starter

Lamp to be used in dry conditions or in a luminaire that provides protection

Lamp not suitable for emergency operation

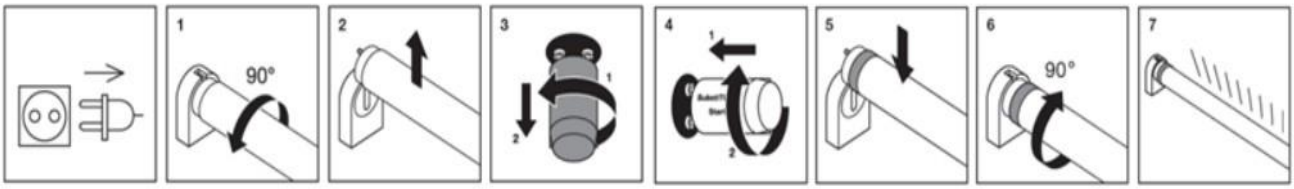
Installation Guide

1) Retrofitting a CCG luminaire accord. to EN 62776

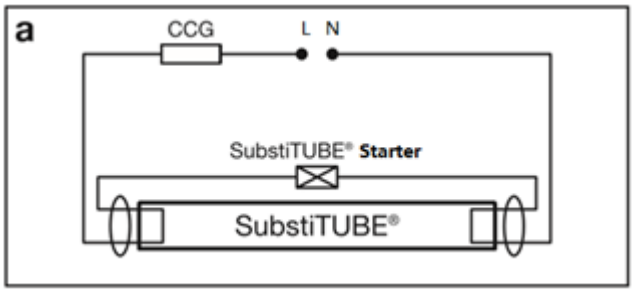
Replacing fluorescent T8 tube and installed starter by SubstiTUBE® Advanced EM T8 Tube and SubstiTUBE® Starter

Below is an example for typical lamp holder types

- ✓ Please ensure that the voltage supply is disconnected.
- ✓ Carefully remove the fluorescent tube and conventional starter according to the lamp holder type
- ✓ Insert SubstiTUBE® Advanced EM T8 Tube and SubstiTUBE® Starter properly.



- ✓ Turn the conventional lamp 90° and take it out of the socket.
- ✓ Remove the conventional starter by turning it.
- ✓ Insert and latch the SubstiTUBE® Starter into starter socket.
- ✓ Insert SubstiTUBE® Advanced EM T8 Tube into socket and locate into position by turning 90°.
- ✓ Check light the emission direction



NOTE:

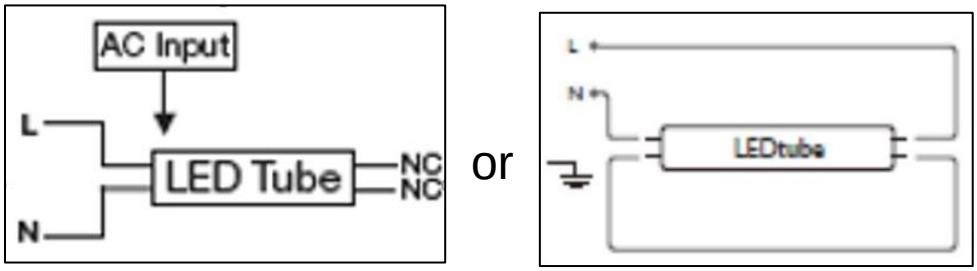
- If a luminaire contains a power factor correction capacitor, it is recommended to remove it from the circuit to avoid impact to power factor. This should only be carried out by a licensed electrician.

Installation Guide

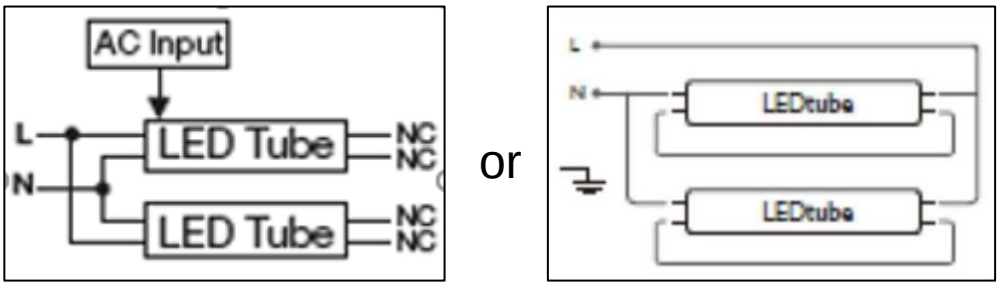
2) Installation directly on line voltage

SubstiTUBE® Advanced EM T8 Tube may also be driven directly on line voltage. **Please check the L/N markings on the LED tube**. In order to grant a safe operation mode please refer to the installation instructions for further information. Installation must be done by licensed electricians.

2.1) Two different wiring configurations for single tube



2.2) Two different wiring configurations for double tubes.



3) Installation of an ECG luminaire with EM tube

WARNING: SubstiTUBE® Advanced EM T8 Tube is not compatible for use with electronic control gear (ECG). If there is an existing ECG, bypass the ballast and re-wire* according to “2) Installation directly on line voltage” and diagrams above.

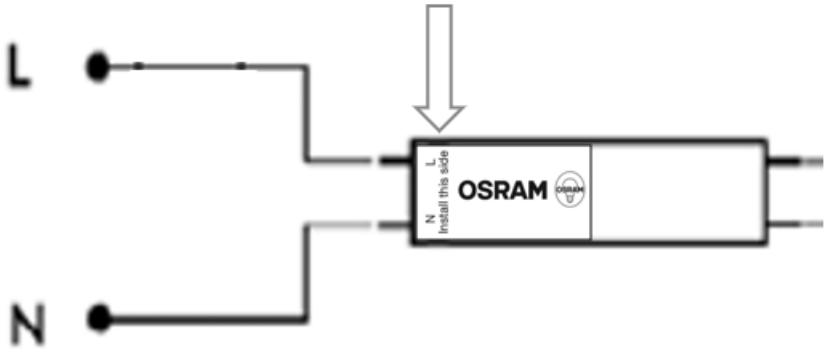
***WARNING:** Modifications to the wiring of an existing luminaire must be carried out by qualified personnel only. Any modifications made to the original luminaire will alter the safety aspects of the original luminaire; hence compliance certification of the original luminaire will no longer be applicable to the modified luminaire.

Installation Guide

CAUTIONS: Installation Instructions for SubstiTUBE ® Advanced EM T8 LED tube

Connect both line (L) and neutral (N) power to one lampholder as below diagram.

Tube side with the marking “AC input” around the cap should be facing the lampholder with mains connection otherwise the lamps will not be functionally ON, and AC line in might short circuit.



Ordering Guide

Product	EAN-10*	EAN-40**	S-Unit***
ST8A-0.6M 8,7W/830 230VEM25X1G10APMOSRAM	4058075710610	4058075710627	25X1
ST8A-0.6M 8,7W/840 230VEM25X1G10APMOSRAM	4058075710597	4058075710603	25X1
ST8A-0.6M 8,7W/865 230VEM25X1G10APMOSRAM	4058075710573	4058075710580	25X1
ST8A-1.2M 17,5W/830230VEM25X1G10APMOSRAM	4058075710672	4058075710689	25X1
ST8A-1.2M 17,5W/840230VEM25X1G10APMOSRAM	4058075710658	4058075710665	25X1
ST8A-1.2M 17,5W/865230VEM25X1G10APMOSRAM	4058075710634	4058075710641	25X1

* EAN-10: ordering code for single unit
** EAN-40: ordering code for shipping unit
*** S-Unit: Lamps per shipping unit

Sales and Technical Support

Sales and technical support is given by the local LEDVANCE subsidiaries.
On our worldwide homepage all LEDVANCE subsidiaries are listed with complete address and phone numbers.

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WWW.osram-lamps.com/substitube

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