

OSRAM SubstiTUBE® T5 AC Mains



Key Feature

- Replacement of traditional T5 tube with G5 base
- Long lifetime, up to 50000hrs
- High lumen efficacy, up to 150lm/W
- Glass tube with protection film

Advancing Light

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

LEDVANCE is licensee of product trademark OSRAM for lamps products in general lighting.



Product Specifications

- ST5HE14-0.6M 8W/8XX 220-240V AC
- ST5HE28-1.2M 16W/8XX 220-240V AC
- ST5HE35-1.5M 18W/8XX 220-240V AC
- ST5HO49-1.5M 26W/8XX 220-240V AC
- ST5HO54-1.2M 26W/8XX 220-240V AC
- ST5HO80-1.5M 37W/8XX 220-240V AC
- ST5HEV-0.6M 8W/8XX 220-240V AC
- ST5HEV-1.2M 15W/8XX 220-240V AC

*XX = 30, 40, 65



Technical Features

- T5 LED tube made of glass with PET protection
- Weight: <200g
- AC Mains input without external CCG or ECG.
- Up to 50.000 h lifetime (L70B50)
- CCT: 3000K, 4000K, 6500K
- High lumen efficacy: up to 150lm/W
- THD<20%
- Full range of traditional T5 HE&HO replacement (up to 80W replacement)

Quick, simple and safe replacement for traditional T-5 Fluorescent tube.

Reduced operational cost due to lower energy consumption

Lower maintenance cost thanks to longer lifetime than traditional Fluorescent.

IEC62778 complied for eye safety

Suitable for operation at low temperatures:
Ambient temperature : -20° ~ +45° C

Application:

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

	Voltage [V]	Frequency [Hz]	Power [W]	Lumen Flux [lm]	CCT [K]	Life Time [hrs]
ST5HO80-1.5M 37W/840 220-240V AC	220-240	50/60	37	5600	4000	50,000
ST5HO80-1.5M 37W/865 220-240V AC	220-240	50/60	37	5600	6500	50,000
ST5HO54-1.2M 26W/840 220-240V AC	220-240	50/60	26	4000	4000	50,000
ST5HO54-1.2M 26W/865 220-240V AC	220-240	50/60	26	4000	6500	50,000
ST5HO49-1.5M 26W/840 220-240V AC	220-240	50/60	26	4000	4000	50,000
ST5HO49-1.5M 26W/865 220-240V AC	220-240	50/60	26	4000	6500	50,000
ST5HE35-1.5M 18W/840 220-240V AC	220-240	50/60	18	2800	4000	50,000
ST5HE35-1.5M 18W/865 220-240V AC	220-240	50/60	18	2800	6500	50,000
ST5HE14-0.6M 8W/830 220-240V AC	220-240	50/60	8	1080	3000	50,000
ST5HE14-0.6M 8W/840 220-240V AC	220-240	50/60	8	1200	4000	50,000
ST5HE14-0.6M 8W/865 220-240V AC	220-240	50/60	8	1200	6500	50,000
ST5HE28-1.2M 16W/830 220-240V AC	220-240	50/60	16	2160	3000	50,000
ST5HE28-1.2M 16W/840 220-240V AC	220-240	50/60	16	2400	4000	50,000
ST5HE28-1.2M 16W/865 220-240V AC	220-240	50/60	16	2400	6500	50,000
ST5HEV-0.6M 8W/840 220-240V AC	220-240	50/60	8	960	4000	30,000
ST5HEV-0.6M 8W/865 220-240V AC	220-240	50/60	8	960	6500	30,000
ST5HEV-1.2M 15W/840 220-240V AC	220-240	50/60	15	1800	4000	30,000
ST5HEV-1.2M 15W/865 220-240V AC	220-240	50/60	15	1800	6500	30,000

Common Characteristics

Lifetime @L70B50 (hrs) ²	Color Rendering Index	SDCM	Beam Angle (50% light intensity)	Operating Temp.(°C)
50,000 and 30,000	>80	≤5	>160°	-20 ~ +45
Start up time (s)	Tube material	Weight (g)	PF	Dimming
<05	Glass + PET film	<200	>0.9	NO

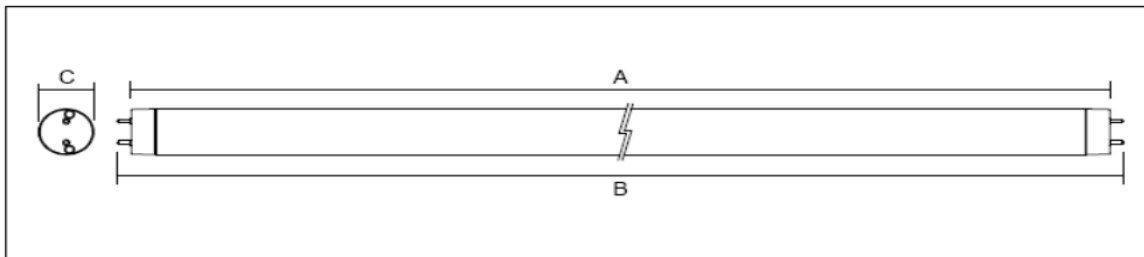
¹ Typical values. All the technical parameters apply to the entire lamp. In view of the complex manufacturing process for light emitting diodes, the typical values given above for the technical LED parameters are merely statistical values that do not necessarily correspond to the actual technical parameters of an individual product; individual product may vary from the typical values. 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.

³ The Tc is defined as the highest permissible temperature which may occur on the outer surface of the LED lamp (in the indicated position) under normal operating conditions and at the rated voltage/current/power or the maximum of the rated voltage/current/power range (DIN EN 62031: 2009-01)

Minimum / Maximum ratings and Drawings

Models	Ambient temperature T_a	B (mm)	C (mm)	Net Weight (g)
2FT	-20~45° C	<563.2	<19	<200
4FT	-20~45° C	<1163.2	<19	<200
5FT	-20~45° C	<1463.2	<19	<200



Safety and Application notes

- The SubstiTUBE® T5 AC Mains Tube must not be damaged or operated in a damaged condition.
- The SubstiTUBE® T5 AC Mains Tube are only can be operated with direct AC input.



Lamp not suitable for emergency operation



Lamp suitable for 50Hz or 60Hz operation



Dimming not allowed



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

- **Do not use SubstiTUBE® T5 AC Mains Tube in CCG or ECG luminaire !**
- In order to grant a safe operation mode please refer to the installation instructions for further information
- The SubstiTUBE® T5 AC Mains Tube emits light only with a limited angle, not like a fluorescent tube with 360° output.
- Due to the characteristic light distribution of the SubstiTUBE® T5 AC Mains Tube, the resulting luminaire light characteristic is likely to change. It is not guaranteed that e.g. standards for lighting at working places will be complied to after replacement. A photometric check of the installation is recommended.
- The effective energy savings depend on the efficiency of the luminaire setup to be replaced and should be considered individually in each case.
- The SubstiTUBE® T5 AC Mains Tube is protected according to IP20. Applications with external risk of moisture and dust can be served with an adequately protected luminaire.
- SubstiTUBE® T5 AC Mains 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.
- Photobiological Safety of lamps and lamp systems according to IEC 62778. Risk Group: Exempt

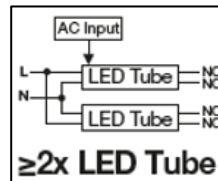
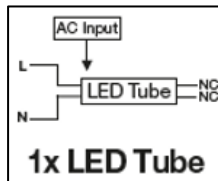
Installation Guide

1) Installation guide1:

- Directly on line-voltage

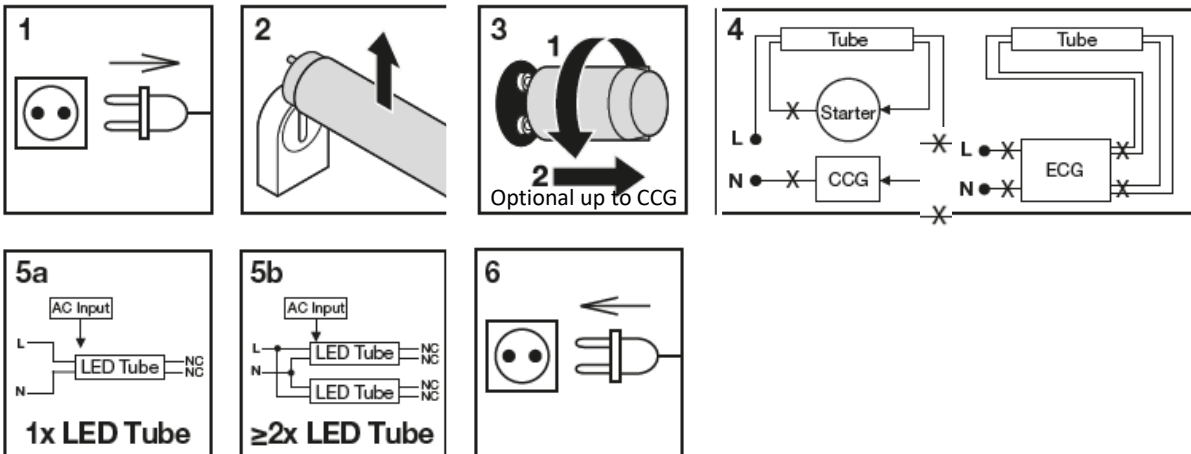
SubstiTUBE® T5 AC Mains is driven directly on line-voltage. **Please check the L/N markings on the LED tube.** In order to grant a safe operation mode please refer to the installation instructions for further information. Installation must be done by qualified Electricians and all security described should be strictly followed.

Diagram show on below are the references



- Installation of an ECG or CCG luminaire with SubstiTUBE® T5 AC Mains

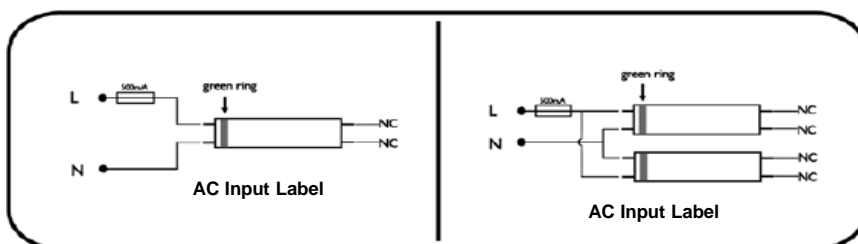
SubstiTUBE® T5 AC Mains is not for use with ECG (electronic control gear) or CCG (conventional control gear). Rewiring of the luminaire is necessary for replacing fluorescent tube by SubstiTUBE® T5 AC Mains in ECG or CCG luminaires. Installation must be done by qualified Electricians and all security described should be strictly followed.



CAUTIONS: Installation Instructions for SubstiTUBE® T5 AC Mains Alternative

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

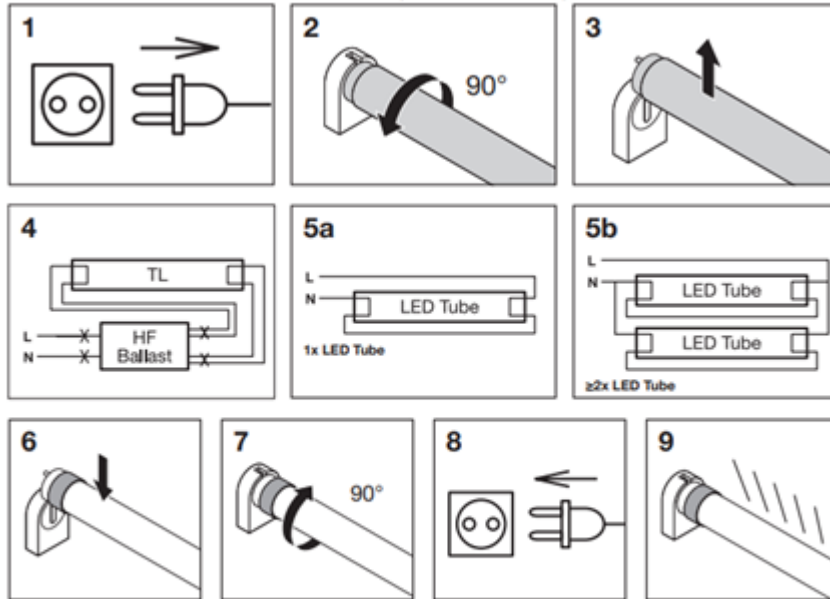
Tube side with the marking "AC input" around the cap should be facing the lampholder with mains connection otherwise lamp will not be functionally ON



Installation Guide

1) Installation guide2:

Instructions on AC mains 220-240V (without ballast):



Warning! The fixture electrical circuit/wiring has been modified and can no longer operate originally specified T5 Fluorescent lamp. Use only approved OSRAM SubstiTUBE® T5 LED tubes.

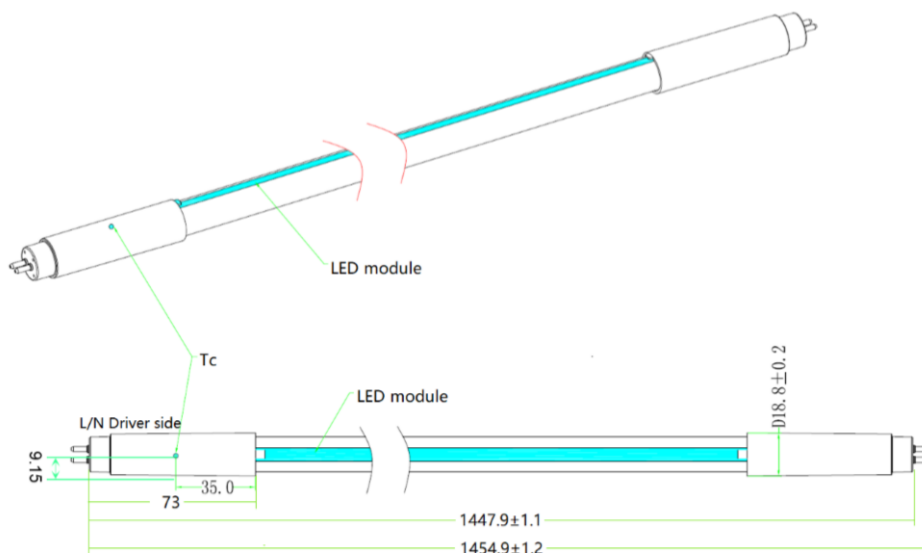
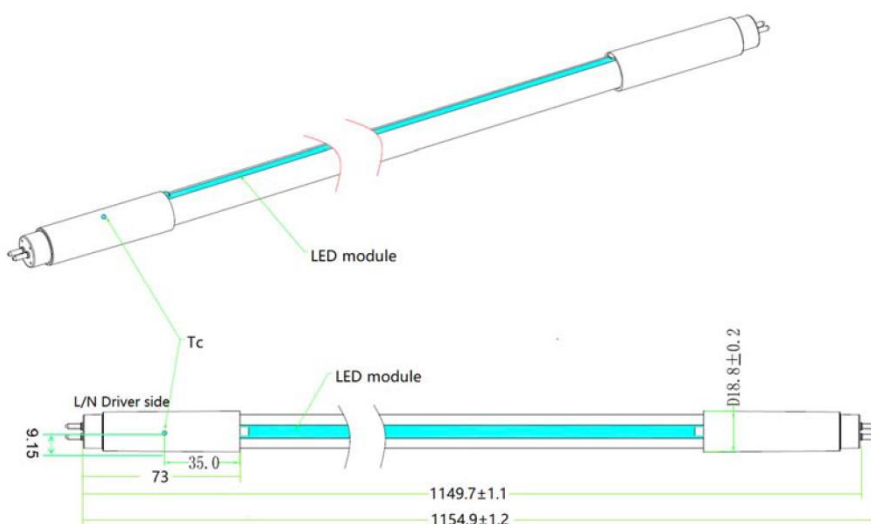
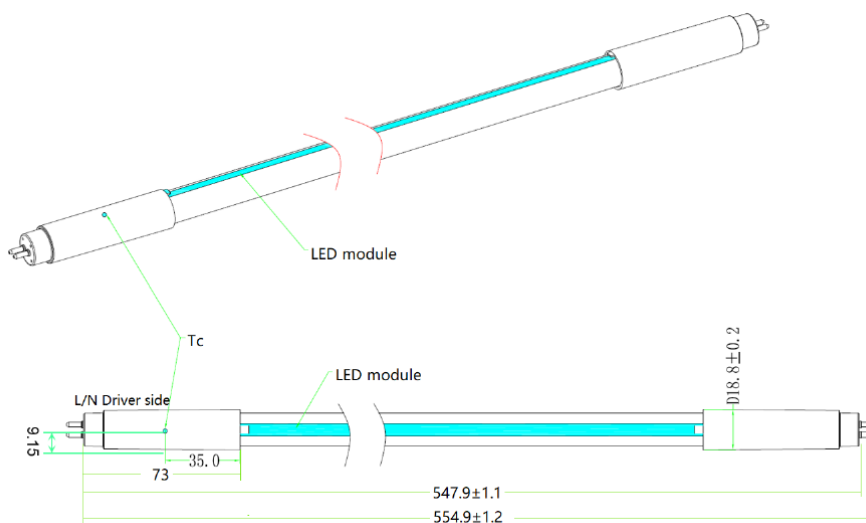


CAUTIONS: Tc max. value for warranty @ Ta=25 °C

	Tc Max. for Warranty
ST5HO80-1.5M 37W/8XX 220-240V AC	57°C
ST5HO54-1.2M 26W/8XX 220-240V AC	50°C
ST5HO49-1.5M 26W/8XX 220-240V AC	50°C
ST5HE35-1.5M 18W/8XX 220-240V AC	47°C
ST5HE14-0.6M 8W/8XX 220-240V AC	39°C
ST5HE28-1.2M 16W/8XX 220-240V AC	45°C
ST5HEV-0.6M 8W/8XX 220-240V AC	39°C
ST5HEV-1.2M 15W/8XX 220-240V AC	45°C

*XX = 30, 40, 65

CAUTIONS: Tc position on tube



Ordering Guide

Product	EAN-10*	EAN-40**	S-Unit***
ST5HE14-0.6M 8W/830 230V ACG510X1APOSRAM	4058075556232	4058075556249	10x1
ST5HE14-0.6M 8W/840 230V AC G5 10X1OSRAM	4058075543560	4058075543577	10x1
ST5HE14-0.6M 8W/865 230V AC G5 10X1OSRAM	4058075543584	4058075543591	10x1
ST5HE28-1.2M 16W/830 230VACG510X1APOSRAM	4058075556379	4058075556386	10x1
ST5HE28-1.2M 16W/840 230V AC G510X1OSRAM	4058075543522	4058075543539	10x1
ST5HE28-1.2M 16W/865 230V AC G510X1OSRAM	4058075543546	4058075543553	10x1
ST5HE35-1.5M 18W/840 230V AC G510X1OSRAM	4058075543485	4058075543492	10x1
ST5HE35-1.5M 18W/865 230V AC G510X1OSRAM	4058075543508	4058075543515	10x1
ST5HO49-1.5M 26W/840 230V AC G510X1OSRAM	4058075543447	4058075543454	10x1
ST5HO49-1.5M 26W/865 230V AC G510X1OSRAM	4058075543461	4058075543478	10x1
ST5HO54-1.2M 26W/840 230V AC G510X1OSRAM	4058075543409	4058075543416	10x1
ST5HO54-1.2M 26W/865 230V AC G510X1OSRAM	4058075543423	4058075543430	10x1
ST5HO80-1.5M 37W/840 230V AC G510X1OSRAM	4058075543362	4058075543379	10x1
ST5HO80-1.5M 37W/865 230V AC G510X1OSRAM	4058075543386	4058075543393	10x1
ST5HEV-0.6M 8W/840 230V AC G510X1APOSRAM	4058075556393	4058075556409	10x1
ST5HEV-0.6M 8W/865 230V AC G510X1APOSRAM	4058075556416	4058075556423	10x1
ST5HEV-1.2M 15W/840 230V ACG510X1APOSRAM	4058075556430	4058075556447	10x1
ST5HEV-1.2M 15W/865 230V ACG510X1APOSRAM	4058075556454	4058075556461	10x1

* 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.

WWW.ledvance.com

WWW.osram-lamps.com/substitube

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Data is subject to change without notice.
Please contact LEDVANCE for detailed information