

SubstiTUBE® EXT Advanced – ST8-EA2

Datasheet



Innovative high brightness SELV LED-lamp with external ECG, easy and safe to use in linear luminaire designs. Energy saving potential more than 60% by replacing 0.6 m T8 fluorescent tube luminaires in 2Step-DIM operation. Instant-on light without flickering. No mercury.

Applicable in offices, warehouses, cold storage, supply rooms, corridors, industry, stairways, garages, indirect illumination, partially in office areas etc; for applications with high operating hours.

Technical operating data

Product	Color	Colortemp. [K]	Lum. Flux [lm]	Input current [mA]	Typ./Max. Power [W]	Beam-Angle [°]
ST8-EA2-115-850	Daylight	5000	1150			
ST8-EA2-115-840	Cool White	4000	1150	350*	11.4/12.5	120°
ST8-EA2-104-830	Warm White	3000	1035			

All Data are related to the entire lamp. Due to the special conditions of the manufacturing processes of LED the typical data of technical parameters can only reflect statistical figures and do not necessarily correspond to the actual parameters of each single product which could differ from the typical data.

*) rated current

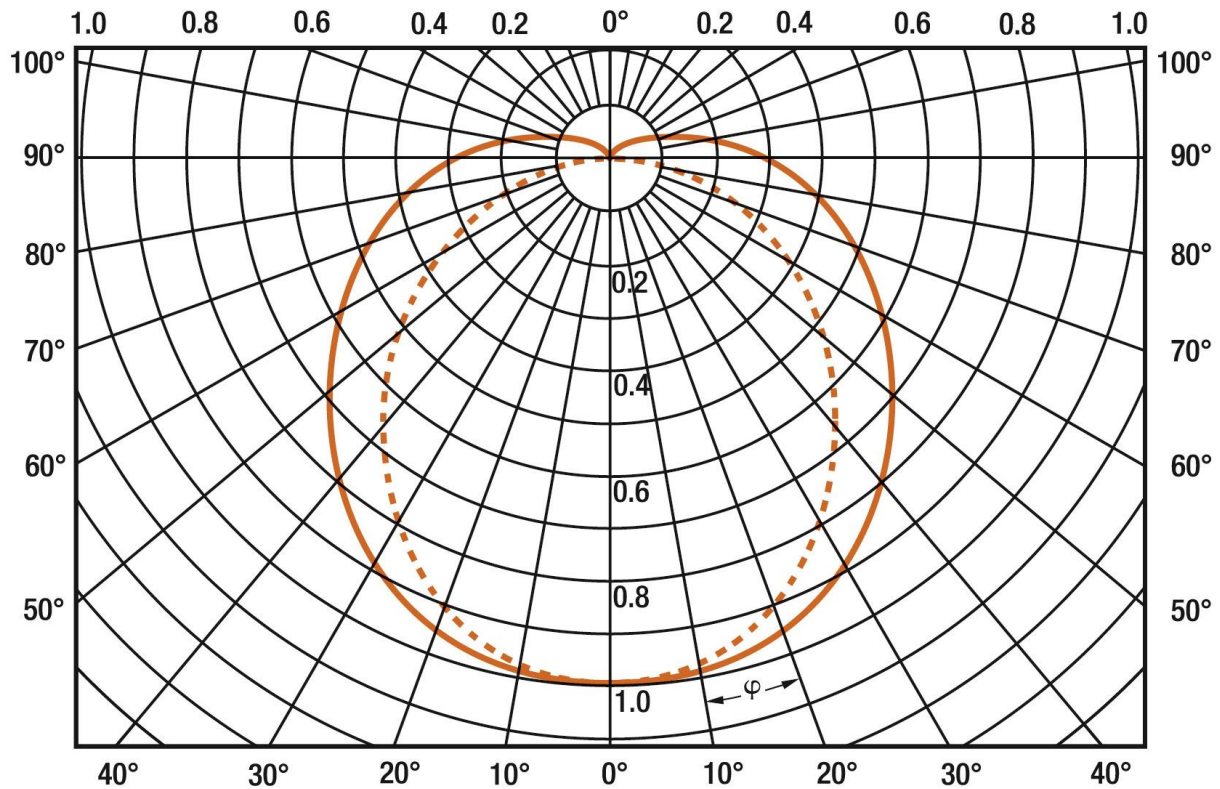
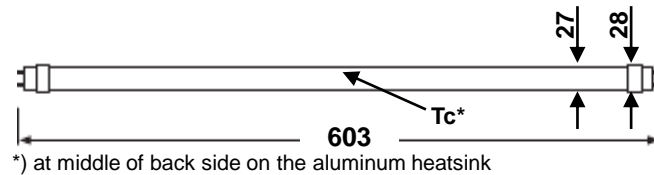
Technical Features

- LED lamp in T8 shape with G13 socket
- Length: 0.603 m; Weight: <500 g
- For operation at OSRAM OPTOTRONIC® control gear (OTe13-SD, OTe25-SD)
- Extremely robust with aluminum heat sink and polycarbonate cover
- Dimmable with OPTOTRONIC® control gear and OSRAM Sensors
- Easy luminaire integration due to lamp in SELV configuration
- Immediate full brightness
- Complies with draft of relevant safety standards
- Up to 40,000 h lifetime
- Overpower, overheat and short circuit protected by OPTOTRONIC® control gear
- High brightness also in cool conditions
- High color homogeneity
- RoHS-conformity, no mercury
- Not for operation at line voltage

Minimum / Maximum ratings

Product	Operating temperature T_c [°C]	Storage temperature T_s [°C]	Ambient temperature T_a [°C]
ST8-EA2-1xx-xx	-25 ... 75	-25 ... 80	-25 ... 60

Drawings



Height [m]	Diameter \varnothing [m] d_{C0} / d_{C90}	Illumination 4000 K / 6000 K	Illumination 3000 K
		E_{max} [lx]	E_{max} [lx]
1	5,29 / 2,93	298	268
2	10,59 / 5,86	75	67
3	15,88 / 8,80	33	30
4	11,73 / 21,17	19	17
5	26,46 / 14,66	12	11



Safety and Application notes

In order to drive OSRAM SubstiTUBE® EXT Advanced safely, it is absolutely necessary to operate them with an electronically stabilised power supply protecting against short circuits, overload and overheating.

Power supply units must generally bear the CE mark. To also ease the luminaire/installation approval, they should be ENEC certified. In Europe the declarations of conformity must include the following standards:

CE: EC 61347-2-13, EN 55015, IEC 61547 and IEC 61000-3-2 - ENEC: 61347-2-13 and IEC/EN 62384.

Also check for the mark of an independent accredited certification institute.

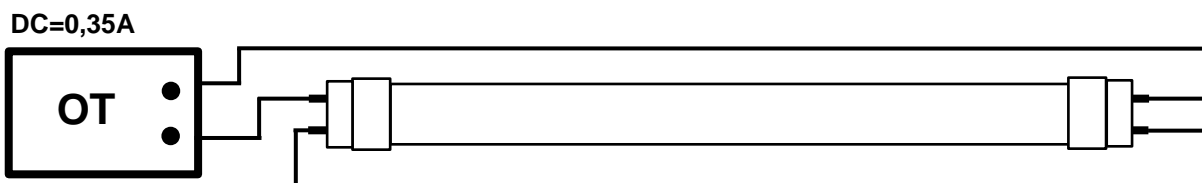
Please see the relevant brochure for more detailed information (see "Related and Further Information")

OSRAM OPTOTRONIC® electronic control gear complies to all relevant standards and guarantees safe operation.

- The SubstiTUBE® EXT Advanced must not be damaged or operated in a damaged condition.
- The SubstiTUBE® EXT Advanced emits light in a smaller angle than fluorescent tubes.
- Due to the characteristic light distribution of the SubstiTUBE® EXT Advanced, the resulting luminaire light characteristic is likely to change. A photometric characterization of the luminaire 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® EXT Advanced is protected according to IP20. Applications with external risk of moisture and dust can be served with an adequately protected luminaire.
- SubstiTUBE® EXT Advanced may only be driven at maximum 350 mA DC.
- SubstiTUBE® EXT Advanced offers reverse polarity protection.
- Serial connection of several tubes is not recommended and could lead to damages.
- The product must not be inserted into a line voltage luminaire. A damage of the LED-tube is very likely.
- Fluorescent tubes being accidentally driven at OPTOTRONIC® will not be damaged.
- The max. current of the G13 lampholder used in the luminaire may not be exceeded.
- Photobiological Safety of Lamps and Lamp Systems according to IEC 62471.
Risk Group: Exempt

Installation Instructions

- Installation must be done from electrically skilled and adequately trained persons.
- Conformity with all applicable legal requirements must be assured for the new SubstiTUBE® EXT luminaire and compliance with all relevant safety requirements and other technical standards (e.g. acc. to IEC 60598) must be established.
- To ensure lamp may be inserted in any orientation, please wire control gear and LED-Tube according to this principle:



- The so built luminaire must be given a type plate accordingly.
- Insert SubstiTUBE® EXT Advanced analog to fluorescent lamps.

Ordering guide

Productname	Light color	EAN*	S-Unit**
ST8-EA2-115-850	Daylight / 5000 K	4008321984630	
ST8-EA2-115-840	Cool White / 4000 K	4008321984616	25
ST8-EA2-104-830	Warm White / 3000 K	4008321984593	

* EAN: Ordering number per single lamp

** S-Unit: Lamps per shipping unit

Sales and Technical Support

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