

PRODUCT FAMILY DATASHEET

SubstiTUBE STAR

Economic LED tubes for electromagnetic control gears



AREAS OF APPLICATION

- Corridors, stairways, parking garages
- Cooling and storage rooms
- Warehouses
- Domestic applications
- General illumination within ambient temperatures from –20...+45 °C

PRODUCT BENEFITS

- High color homogeneity
- Energy savings of up to 68 % compared to conventional 1,500 mm T8 fluorescent lamp
- Instant flickerfree starting

PRODUCT FEATURES

- T8 LED tube made of glass with G13 base
- Mercury-free and RoHS compliant
- Luminous efficacy: up to 105 lm/W
- Type of protection: IP20



TECHNICAL DATA

Product description	Electrical data								Photometrical data	
	Nominal wattage	Rated wattage	Nominal voltage	Operating frequency	Nominal current	Type of current	Max. lamp no. on circuit break. 10 A (B)	Max. lamp no. on circuit break. 16 A (B)	Light color (designation)	Color temperature
ST8S-EM 8 W/830 600 mm ¹⁾	8.00 W	8.00 W	220...240 V	50...60 Hz	0.036 A	AC	170 / 20 / 180 ²⁾	280 / 30 / 290 ²⁾	Warm White	3000 K
ST8S-EM 8 W/840 600 mm ¹⁾	8.00 W	8.00 W	220...240 V	50...60 Hz	0.036 A	AC	170 / 20 / 180 ²⁾	280 / 30 / 290 ²⁾	Cool White	4000 K
ST8S-EM 17 W/830 1200 mm ¹⁾	17.00 W	17.00 W	220...240 V	50...60 Hz	0.077 A	AC	80 / 20 / 85 ²⁾	130 / 30 / 135 ²⁾	Warm White	3000 K
ST8S-EM 17 W/840 1200 mm EM ¹⁾	17.00 W	17.00 W	220...240 V	50...60 Hz	0.077 A	AC	80 / 20 / 85 ²⁾	130 / 30 / 135 ²⁾	Cool White	4000 K
ST8S-EM 20 W/830 1500 mm ¹⁾	20.00 W	20.00 W	220...240 V	50...60 Hz	0.09 A	AC	65 / 12 / 70 ²⁾	105 / 20 / 110 ²⁾	Warm White	3000 K
ST8S-EM 20 W/840 1500 mm EM ¹⁾	20.00 W	20.00 W	220...240 V	50...60 Hz	0.09 A	AC	65 / 12 / 70 ²⁾	105 / 20 / 110 ²⁾	Cool White	4000 K
ST8S-EM 7.6 W/830 600 mm EM	7.60 W	7.60 W	220...240 V	50...60 Hz	0.036 A	AC			Warm White	3000 K
ST8S-EM 7.6 W/840 600 mm EM	7.60 W	7.60 W	220...240 V	50...60 Hz	0.036 A	AC			Cool White	4000 K
ST8S-EM 7.6 W/865 600 mm EM	7.60 W	7.60 W	220...240 V	50...60 Hz	0.036 A	AC			Cool Daylight	6500 K
ST8S-EM 16.2 W/830 1200 mm EM	16.20 W	16.20 W	220...240 V	50...60 Hz	0.075 A	AC			Warm White	3000 K
ST8S-EM 16.2 W/840 1200 mm EM	16.20 W	16.20 W	220...240 V	50...60 Hz	0.075 A	AC			Cool White	4000 K
ST8S-EM 16.2 W/865 1200 mm EM	16.20 W	16.20 W	220...240 V	50...60 Hz	0.075 A	AC			Cool Daylight	6500 K
ST8S-EM 19.1 W/830 1500 mm EM	19.10 W	19.10 W	220...240 V	50...60 Hz	0.088 A	AC			Warm White	3000 K
ST8S-EM 19.1 W/840 1500 mm EM	19.10 W	19.10 W	220...240 V	50...60 Hz	0.088 A	AC			Cool White	4000 K
ST8S-EM 19.1 W/865 1500 mm EM	19.10 W	19.10 W	220...240 V	50...60 Hz	0.088 A	AC			Cool Daylight	6500 K

Product description	Nominal luminous flux	Rated luminous flux	Rated lamp efficacy (standard condition)	Color rendering index Ra	Lumen main.fact.at end of nom.life time	Light technical data			Dimensions & weight	
						Starting time	Rated beam angle (half peak value)	Warm-up time (60 %)	Tube diameter	Base diameter
ST8S-EM 8 W/830 600 mm ¹⁾	720 lm	720 lm	90 lm/W	>80	0.70	< 0.5 s	220.00 °	< 0.50 s	26 mm	27.5 mm
ST8S-EM 8 W/840 600 mm ¹⁾	800 lm	800 lm	100 lm/W	>80	0.70	< 0.5 s	220.00 °	< 0.50 s	26 mm	27.5 mm
ST8S-EM 17 W/830 1200 mm ¹⁾	1530 lm	1530 lm	90 lm/W	>80	0.70	< 0.5 s	220.00 °	< 0.50 s	26 mm	27.5 mm
ST8S-EM 17 W/840 1200 mm EM ¹⁾	1700 lm	1700 lm		>80	0.70	< 0.5 s	220.00 °	< 0.50 s	26 mm	27.5 mm
ST8S-EM 20 W/830 1500 mm ¹⁾	1800 lm	1800 lm	90 lm/W	>80	0.70	< 0.5 s	220.00 °	< 0.50 s	26 mm	27.5 mm
ST8S-EM 20 W/840 1500 mm EM ¹⁾	2000 lm	2000 lm	100 lm/W	>80	0.70	< 0.5 s	220.00 °	< 0.50 s	26 mm	27.5 mm
ST8S-EM 7.6 W/830 600 mm EM	720 lm	720 lm		>80	0.70	< 0.5 s	170.00 °	< 0.50 s		

Product description	Nominal luminous flux	Rated luminous flux	Rated lamp efficacy (standard condition)	Color render- ing index Ra	Lumen main.fact.at end of nom.life time	Light technical data			Dimensions & weight	
						Starting time	Rated beam angle (half peak value)	Warm-up time (60 %)	Tube diamete r	Base diameter
ST8S-EM 7.6 W/840 600 mm EM	800 lm	800 lm		>80	0.70	< 0.5 s	170.00 °	< 0.50 s		
ST8S-EM 7.6 W/865 600 mm EM	800 lm	800 lm		>80	0.70	< 0.5 s	170.00 °	< 0.50 s		
ST8S-EM 16.2 W/830 1200 mm EM	1530 lm	1530 lm		>80	0.70	< 0.5 s	170.00 °	< 0.50 s		
ST8S-EM 16.2 W/840 1200 mm EM	1700 lm	1700 lm		>80	0.70	< 0.5 s	170.00 °	< 0.50 s		
ST8S-EM 16.2 W/865 1200 mm EM	1700 lm	1700 lm		>80	0.70	< 0.5 s	170.00 °	< 0.50 s		
ST8S-EM 19.1 W/830 1500 mm EM	1800 lm	1800 lm		>80	0.70	< 0.5 s	170.00 °	< 0.50 s		
ST8S-EM 19.1 W/840 1500 mm EM	2000 lm	2000 lm		>80	0.70	< 0.5 s	170.00 °	< 0.50 s		
ST8S-EM 19.1 W/865 1500 mm EM	2000 lm	2000 lm		>80	0.70	< 0.5 s	170.00 °	< 0.50 s		

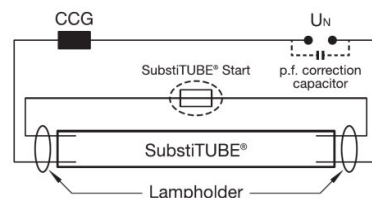
Product description	Product weight	Overall length	Temperatures & operating conditions	Lifespan		Additional product data		Capabilities
			Ambient temperature range	Nominal lamp life time	Number of switching cycles	Base (standard designation)	Mercury- free	Dimmable
ST8S-EM 8 W/830 600 mm ¹⁾	110.00 g	603.0 mm	-20...+45 °C	30000 h	200000	G13	Yes	No
ST8S-EM 8 W/840 600 mm ¹⁾	110.00 g	603.0 mm	-20...+45 °C	30000 h	200000	G13	Yes	No
ST8S-EM 17 W/830 1200 mm ¹⁾	214.00 g	1213 mm	-20...+45 °C	30000 h	200000	G13	Yes	No
ST8S-EM 17 W/840 1200 mm EM ¹⁾	214.00 g	1213 mm	-20...+45 °C	30000 h	200000	G13	Yes	No
ST8S-EM 20 W/830 1500 mm ¹⁾	267.00 g	1513 mm	-20...+45 °C	30000 h	200000	G13	Yes	No
ST8S-EM 20 W/840 1500 mm EM ¹⁾	267.00 g	1513 mm	-20...+45 °C	30000 h	200000	G13	Yes	No
ST8S-EM 7.6 W/830 600 mm EM	103.00 g	602.0 mm	-20...+45 °C	30000 h	200000	G13	Yes	No
ST8S-EM 7.6 W/840 600 mm EM	103.00 g	602.0 mm	-20...+45 °C	30000 h	200000	G13	Yes	No
ST8S-EM 7.6 W/865 600 mm EM	103.00 g	602.0 mm	-20...+45 °C	30000 h	200000	G13	Yes	No
ST8S-EM 16.2 W/830 1200 mm EM	205.80 g	1212 mm	-20...+45 °C	30000 h	200000	G13	Yes	No
ST8S-EM 16.2 W/840 1200 mm EM	205.80 g	1212 mm	-20...+45 °C	30000 h	200000	G13	Yes	No
ST8S-EM 16.2 W/865 1200 mm EM	205.80 g	1212 mm	-20...+45 °C	30000 h	200000	G13	Yes	No
ST8S-EM 19.1 W/830 1500 mm EM	251.00 g	1513 mm	-20...+45 °C	30000 h	200000	G13	Yes	No
ST8S-EM 19.1 W/840 1500 mm EM	251.00 g	1513 mm	-20...+45 °C	30000 h	200000	G13	Yes	No

Product description	Product weight	Overall length	Temperatures & operating conditions	Lifespan		Additional product data		Capabilities
			Ambient temperature range	Nominal lamp life time	Number of switching cycles	Base (standard designation)	Mercury-free	Dimmable
ST8S-EM 19.1 W/865 1500 mm EM	251.00 g	1513 mm	-20...+45 °C	30000 h	200000	G13	Yes	No

Product description	Certificates & standards	Country specific categorizations	Logistical data
	Type of protection	ILCOS	Temperature range at storage
ST8S-EM 8 W/830 600 mm ¹⁾	IP20	DR-8/830-G13-26/590	-20...80 °C
ST8S-EM 8 W/840 600 mm ¹⁾	IP20	DR-8/840-G13-26/590	-20...80 °C
ST8S-EM 17 W/830 1200 mm ¹⁾	IP20	DR-17/830-G13-26/1200	-20...80 °C
ST8S-EM 17 W/840 1200 mm EM ¹⁾	IP20	DR-17/840-G13-26/1200	-20...80 °C
ST8S-EM 20 W/830 1500 mm ¹⁾	IP20	DR-20/830-G13-26/1500	-20...80 °C
ST8S-EM 20 W/840 1500 mm EM ¹⁾	IP20	DR-20/840-G13-26/1500	-20...80 °C
ST8S-EM 7.6 W/830 600 mm EM	IP20	DR-7.6/830-G13-25.5/600	-20...80 °C
ST8S-EM 7.6 W/840 600 mm EM	IP20	DR-7.6/840-G13-25.5/600	-20...80 °C
ST8S-EM 7.6 W/865 600 mm EM	IP20	DR-7.6/865-G13-25.5/600	-20...80 °C
ST8S-EM 16.2 W/830 1200 mm EM	IP20	DR-16.2/830-G13-25.5/1200	-20...80 °C
ST8S-EM 16.2 W/840 1200 mm EM	IP20	DR-16.2/840-G13-25.5/1200	-20...80 °C
ST8S-EM 16.2 W/865 1200 mm EM	IP20	DR-16.2/865-G13-25.5/1200	-20...80 °C
ST8S-EM 19.1 W/830 1500 mm EM	IP20	DR-19.1/830-G13-25.5/1500	-20...80 °C
ST8S-EM 19.1 W/840 1500 mm EM	IP20	DR-19.1/840-G13-25.5/1500	-20...80 °C
ST8S-EM 19.1 W/865 1500 mm EM	IP20	DR-19.1/865-G13-25.5/1500	-20...80 °C

¹⁾ When used to replace a T8 fluorescent lamp the total energy efficiency and light distribution depends on the design of the lighting system/Not usable in luminaires with serial lamp connection, i.e. more than one tube at one magnetic ballast (tandem circuitry)

²⁾ Operated with conventional control gear



ST8S-EM 8 W/830 600 mm, ST8S-EM 8 W/840 600 mm, ST8S-EM 17 W/830 1200 mm, ST8S-EM 17 W/840 1200 mm EM, ST8S-EM 20 W/830 1500 mm, ST8S-EM 20 W/840 1500 mm EM, ST8S-EM 7.6 W/830 600 mm EM, ST8S-EM 7.6 W/840 600 mm EM, ST8S-EM 7.6 W/865 600 mm EM, ST8S-EM 16.2 W/830 1200 mm EM, ST8S-EM 16.2 W/840 1200 mm EM, ST8S-EM 16.2 W/865 1200 mm EM, ST8S-EM 19.1 W/830 1500 mm EM, ST8S-EM 19.1 W/840 1500 mm EM, ST8S-EM 19.1 W/865 1500 mm EM

ST8S-EM 8 W/830 600 mm, ST8S-EM 8 W/840 600 mm, ST8S-EM 17 W/830 1200 mm, ST8S-EM 17 W/840 1200 mm EM, ST8S-EM 20 W/830 1500 mm, ST8S-EM 20 W/840 1500 mm EM

EQUIPMENT / ACCESSORIES

- Suitable for operation on magnetic control gear

SAFETY ADVICE

Operation in outdoor applications in suitable damp-proof luminaires possible according to data sheet and installation instruction.

APPLICATION ADVICE

For more detailed application information and graphics please see product datasheet.

LOGISTICAL DATA

Product code	Product description	Packaging unit (Pieces/Unit)	Dimensions (length x width x height)	Volume	Gross weight
4052899956711	ST8S-EM 8 W/830 600 mm	Shipping carton box 8	751 mm x 178 mm x 112 mm	14.97 dm ³	1700.00 g
4052899956728	ST8S-EM 8 W/840 600 mm	Shipping carton box 8	751 mm x 178 mm x 112 mm	14.97 dm ³	1714.00 g
4052899956759	ST8S-EM 17 W/830 1200 mm	Shipping carton box 8	1363 mm x 178 mm x 112 mm	27.17 dm ³	3040.00 g
4052899956766	ST8S-EM 17 W/840 1200 mm EM	Shipping carton box 8	1363 mm x 178 mm x 112 mm	27.17 dm ³	3010.00 g
4052899956797	ST8S-EM 20 W/830 1500 mm	Shipping carton box 8	1659 mm x 178 mm x 112 mm	33.07 dm ³	3700.00 g
4052899956803	ST8S-EM 20 W/840 1500 mm EM	Shipping carton box 8	1659 mm x 178 mm x 112 mm	33.07 dm ³	3720.00 g
4058075024434	ST8S-EM 7.6 W/830 600 mm EM	Shipping carton box 8	753 mm x 182 mm x 125 mm	17.13 dm ³	1562.00 g
4058075024458	ST8S-EM 7.6 W/840 600 mm EM	Shipping carton box 8	753 mm x 182 mm x 125 mm	17.13 dm ³	1639.00 g
4058075024472	ST8S-EM 7.6 W/865 600 mm EM	Shipping carton box 8	753 mm x 182 mm x 125 mm	17.13 dm ³	1557.00 g
4058075024496	ST8S-EM 16.2 W/830 1200 mm EM	Shipping carton box 8	1367 mm x 182 mm x 125 mm	31.10 dm ³	3858.00 g
4058075024519	ST8S-EM 16.2 W/840 1200 mm EM	Shipping carton box 8	1367 mm x 182 mm x 125 mm	31.10 dm ³	2870.00 g

Product code	Product description	Packaging unit (Pieces/Unit)	Dimensions (length x width x height)	Volume	Gross weight
4058075024533	ST8S-EM 16.2 W/865 1200 mm EM	Shipping carton box 8	1367 mm x 182 mm x 125 mm	31.10 dm ³	2850.00 g
4058075024557	ST8S-EM 19.1 W/830 1500 mm EM	Shipping carton box 8	1660 mm x 182 mm x 125 mm	37.77 dm ³	3510.00 g
4058075024571	ST8S-EM 19.1 W/840 1500 mm EM	Shipping carton box 8	1660 mm x 182 mm x 125 mm	37.77 dm ³	3520.00 g
4058075024595	ST8S-EM 19.1 W/865 1500 mm EM	Shipping carton box 8	1660 mm x 182 mm x 125 mm	37.77 dm ³	3520.00 g

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.

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.