

SubstiTUBE Value

Economic LED tubes for electromagnetic control gears



Areas of application

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

Product benefits

- Quick, simple and safe replacement without rewiring
- Energy savings of up to 65 % (compared to T8 fluorescent lamp on CCG)
- Instant-on light, therefore ideally suitable in combination with sensor technology
- Very high resistance to switching loads
- Also suitable for operation at low temperatures

Product features

- LED alternative to classic T8 fluorescent lamps in CCG luminaires
- Integrated ECG with high power factor
- Uniform illumination
- Lifetime: up to 30,000 h
- Wide beam angle: 220°
- Mercury-free and RoHS compliant
- Luminous efficacy: up to 105 lm/W
- Tube made of glass



Product family datasheet

Technical data

Product description	Electrical data		Photometrical data			Light technical data
	Nominal wattage	Nominal voltage	Light color (designation)	Rated color temperature	Nominal luminous flux	Warm-up time (60 %)
ST8V-EM 17 W/840 1200 mm ¹⁾	17,00 W	220...240 V	Cool White	4000 K	1700 lm	< 0,50 s
ST8V-EM 17 W/865 1200 mm ¹⁾	17,00 W	220...240 V	Cool Daylight	6500 K	1700 lm	< 0,50 s
ST8V-EM 20 W/865 1500 mm ¹⁾	20,00 W	220...240 V	Cool Daylight	6500 K	2000 lm	< 0,50 s
ST8V-EM 8 W/830 600 mm ¹⁾	8,00 W	220...240 V	Warm White	3000 K	720 lm	< 0,50 s
ST8V-EM 8 W/865 600 mm ¹⁾	8,00 W	220...240 V	Cool Daylight	6500 K	800 lm	< 0,50 s
T8 BATTEN ECO 17 W/830 1200 mm ¹⁾	17,00 W	220...240 V	Warm White	3000 K	1530 lm	< 0,50 s
ST8V-EM 20 W/830 1500 mm ¹⁾	20,00 W	220...240 V	Warm White	3000 K	1800 lm	< 0,50 s
ST8V-EM 20 W/840 1500 mm ¹⁾	20,00 W	220...240 V	Cool White	4000 K	2000 lm	< 0,50 s
ST8V-EM 8 W/840 600 mm ¹⁾	8,00 W	220...240 V	Cool White	4000 K	800 lm	< 0,50 s
ST8V-EM 7.6 W/830 600 mm	7,60 W	220...240 V	Warm White	3000 K	720 lm	< 0,50 s
ST8V-EM 7.6 W/840 600 mm	7,60 W	220...240 V	Cool White	4000 K	800 lm	< 0,50 s
ST8V-EM 7.6 W/865 600 mm	7,60 W	220...240 V	Cool Daylight	6500 K	800 lm	< 0,50 s
ST8V-EM 16.2 W/830 1200 mm	16,20 W	220...240 V	Warm White	3000 K	1530 lm	< 0,50 s
ST8V-EM 16.2 W/840 1200 mm	16,20 W	220...240 V	Cool White	4000 K	1700 lm	< 0,50 s
ST8V-EM 16.2 W/865 1200 mm	16,20 W	220...240 V	Cool Daylight	6500 K	1700 lm	< 0,50 s
ST8V-EM 19.1 W/840 1500 mm	19,10 W	220...240 V	Cool White	4000 K	2000 lm	< 0,50 s
ST8V-EM 19.1 W/865 1500 mm	19,10 W	220...240 V	Cool Daylight	6500 K	2000 lm	< 0,50 s
ST8V-EM 19.1 W/830 1500 mm	19,10 W	220...240 V	Warm White	3000 K	1800 lm	< 0,50 s

Product description	Starting time	Rated beam angle (half peak value)	Dimensions & weight	Temperatures & operating conditions		Lifespan
			Overall length	Ambient temperature range	Maximum temperature at tc test point	Lifespan
ST8V-EM 17 W/840 1200 mm ¹⁾	< 0,5 s	220,00 °	1213 mm	-20...+45 °C	65 °C ²⁾	30000 h
ST8V-EM 17 W/865 1200 mm ¹⁾	< 0,5 s	220,00 °	1213 mm	-20...+45 °C	65 °C ²⁾	30000 h
ST8V-EM 20 W/865 1500 mm ¹⁾	< 0,5 s	220,00 °	1513 mm	-20...+45 °C	65 °C ²⁾	30000 h
ST8V-EM 8 W/830 600 mm ¹⁾	< 0,5 s	220,00 °	603,0 mm	-20...+45 °C	65 °C ²⁾	30000 h

Product family datasheet

Product description	Starting time	Rated beam angle (half peak value)	Dimensions & weight	Temperatures & operating conditions		Lifespan
			Overall length	Ambient temperature range	Maximum temperature at tc test point	Lifespan
ST8V-EM 8 W/865 600 mm ¹⁾	< 0,5 s	220,00 °	603,0 mm	-20...+45 °C	65 °C ²⁾	30000 h
T8 BATTEN ECO 17 W/830 1200 mm ¹⁾	< 0,5 s	220,00 °	1213 mm	-20...+45 °C	65 °C ²⁾	30000 h
ST8V-EM 20 W/830 1500 mm ¹⁾	< 0,5 s	220,00 °	1513 mm	-20...+45 °C		30000 h
ST8V-EM 20 W/840 1500 mm ¹⁾	< 0,5 s	220,00 °	1513 mm	-20...+45 °C	65 °C ²⁾	30000 h
ST8V-EM 8 W/840 600 mm ¹⁾	< 0,5 s	220,00 °	603,0 mm	-20...+45 °C	65 °C ²⁾	30000 h
ST8V-EM 7.6 W/830 600 mm	< 0,5 s	210,00 °	602,0 mm	-20...+45 °C		30000 h
ST8V-EM 7.6 W/840 600 mm	< 0,5 s	210,00 °	602,0 mm	-20...+45 °C		30000 h
ST8V-EM 7.6 W/865 600 mm	< 0,5 s	210,00 °	602,0 mm	-20...+45 °C		30000 h
ST8V-EM 16.2 W/830 1200 mm	< 0,5 s	210,00 °	1212 mm	-20...+45 °C		30000 h
ST8V-EM 16.2 W/840 1200 mm	< 0,5 s	210,00 °	1212 mm	-20...+45 °C		30000 h
ST8V-EM 16.2 W/865 1200 mm	< 0,5 s	210,00 °	1212 mm	-20...+45 °C		30000 h
ST8V-EM 19.1 W/840 1500 mm	< 0,5 s	210,00 °	1513 mm	-20...+45 °C		30000 h
ST8V-EM 19.1 W/865 1500 mm	< 0,5 s	210,00 °	1513 mm	-20...+45 °C		30000 h
ST8V-EM 19.1 W/830 1500 mm	< 0,5 s	210,00 °	1513 mm	-20...+45 °C		30000 h

Product description	Nominal lamp life time	Rated lamp life time	Number of switching cycles	Additional product data	Capabilities	Certificates & standards
				Base (standard designation)	Dimmable	Type of protection
ST8V-EM 17 W/840 1200 mm ¹⁾	30000 h	30000 h	200000	G13	No	IP20
ST8V-EM 17 W/865 1200 mm ¹⁾	30000 h	30000 h	200000	G13	No	IP20
ST8V-EM 20 W/865 1500 mm ¹⁾	30000 h	30000 h	200000	G13	No	IP20
ST8V-EM 8 W/830 600 mm ¹⁾	30000 h	30000 h	200000	G13	No	IP20
ST8V-EM 8 W/865 600 mm ¹⁾	30000 h	30000 h	200000	G13	No	IP20
T8 BATTEN ECO 17 W/830 1200 mm ¹⁾	30000 h	30000 h	200000	G13	No	IP20
ST8V-EM 20 W/830 1500 mm ¹⁾	30000 h	30000 h	200000	G13	No	IP20
ST8V-EM 20 W/840 1500 mm ¹⁾	30000 h	30000 h	200000	G13	No	IP20

Product family datasheet

Product description	Nominal lamp life time	Rated lamp life time	Number of switching cycles	Additional product data	Capabilities	Certificates & standards
				Base (standard designation)	Dimmable	Type of protection
ST8V-EM 8 W/840 600 mm ¹⁾	30000 h	30000 h	200000	G13	No	IP20
ST8V-EM 7.6 W/830 600 mm	30000 h	30000 h	200000	G13	No	IP20
ST8V-EM 7.6 W/840 600 mm	30000 h	30000 h	200000	G13	No	IP20
ST8V-EM 7.6 W/865 600 mm	30000 h	30000 h	200000	G13	No	IP20
ST8V-EM 16.2 W/830 1200 mm	30000 h	30000 h	200000	G13	No	IP20
ST8V-EM 16.2 W/840 1200 mm	30000 h	30000 h	200000	G13	No	IP20
ST8V-EM 16.2 W/865 1200 mm	30000 h	30000 h	200000	G13	No	IP20
ST8V-EM 19.1 W/840 1500 mm	30000 h	30000 h	200000	G13	No	IP20
ST8V-EM 19.1 W/865 1500 mm	30000 h	30000 h	200000	G13	No	IP20
ST8V-EM 19.1 W/830 1500 mm	30000 h	30000 h	200000	G13	No	IP20

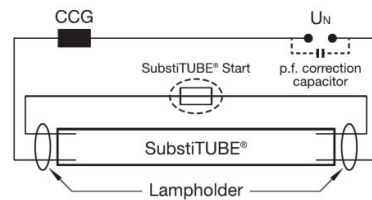
Product description	Standards	Energy efficiency class	Energy consumption	Country specific categorizations		Logistical data
				ILCOS	Order reference	Temperature range at storage
ST8V-EM 17 W/840 1200 mm ¹⁾	CE	A+	17 kWh/1000h	DR-17/840-G13-26/1200	ST8V-1.2M 17W/8	-20...80 °C
ST8V-EM 17 W/865 1200 mm ¹⁾	CE	A+	17 kWh/1000h	DR-17/865-G13-26/1200	ST8V-1.2M 17W/8	-20...80 °C
ST8V-EM 20 W/865 1500 mm ¹⁾	CE	A+	20 kWh/1000h	DR-20/865-G13-26/1500	ST8V-1.5M 20W/8	-20...80 °C
ST8V-EM 8 W/830 600 mm ¹⁾	CE	A+	8 kWh/1000h	DR-8/830-G13-26/590	ST8V-0.6M 8W/83	-20...80 °C
ST8V-EM 8 W/865 600 mm ¹⁾	CE	A+	8 kWh/1000h	DR-8/865-G13-26/590	ST8V-0.6M 8W/86	-20...80 °C
T8 BATTEN ECO 17 W/830 1200 mm ¹⁾	CE	A+	17 kWh/1000h	DR-17/830-G13-26/1200	ST8V-1.2M 17W/8	-20...80 °C
ST8V-EM 20 W/830 1500 mm ¹⁾	CECB	A+	20 kWh/1000h	DR-7.6/830-G13-25.5/590	ST8V-1.5M 20W/8	-20...80 °C
ST8V-EM 20 W/840 1500 mm ¹⁾	CE	A+	20 kWh/1000h	DR-20/840-G13-26/1500	ST8V-1.5M 20W/8	-20...80 °C
ST8V-EM 8 W/840 600 mm ¹⁾	CE	A+	8 kWh/1000h	DR-8/840-G13-26/590	ST8V-0.6M 8W/84	-20...80 °C
ST8V-EM 7.6 W/830 600 mm	CECB	A+	8 kWh/1000h	DR-7.6/830-G13-25.5/590	ST8V-0.6M 7,6W/	-20...80 °C
ST8V-EM 7.6 W/840 600 mm	CECB	A+	8 kWh/1000h	DR-7.6/840-G13-25.5/590	ST8V-0.6M 7,6W/	-20...80 °C
ST8V-EM 7.6 W/865 600 mm	CECB	A+	8 kWh/1000h	DR-7.6/865-G13-25.5/590	ST8V-0.6M 7,6W/	-20...80 °C

Product family datasheet

Product description	Standards	Energy efficiency class	Energy consumption	Country specific categorizations		Logistical data
				ILCOS	Order reference	Temperature range at storage
ST8V-EM 16.2 W/830 1200 mm	CECB	A+	17 kWh/1000h	DR-16.2/830-G13-25.5/1200	ST8V-1.2M 16,2W	-20...80 °C
ST8V-EM 16.2 W/840 1200 mm	CECB	A+	17 kWh/1000h	DR-16.2/840-G13-25.5/1200	ST8V-1.2M 16,2W	-20...80 °C
ST8V-EM 16.2 W/865 1200 mm	CECB	A+	17 kWh/1000h	DR-16.2/865-G13-25.5/1200	ST8V-1.2M 16,2W	-20...80 °C
ST8V-EM 19.1 W/840 1500 mm	CECB	A+	20 kWh/1000h	DR-19.1/840-G13-25.5/1500	ST8V-1.5M 19,1W	-20...80 °C
ST8V-EM 19.1 W/865 1500 mm	CECB	A+	20 kWh/1000h	DR-19.1/865-G13-25.5/1500	ST8V-1.5M 19,1W	-20...80 °C
ST8V-EM 19.1 W/830 1500 mm	CECB	A+	20 kWh/1000h	DR-19.1/830-G13-25.5/1500	ST8V-1.5M 19,1W	-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) Massimo a punto Tc



Product family datasheet

ST8V-EM 17 W/840 1200 mm, ST8V-EM 17 W/865 1200 mm, ST8V-EM 20 W/865 1500 mm, ST8V-EM 8 W/830 600 mm, ST8V-EM 8 W/865 600 mm, T8 BATTEN ECO 17 W/830 1200 mm, ST8V-EM 20 W/830 1500 mm, ST8V-EM 20 W/840 1500 mm, ST8V-EM 8 W/840 600 mm

ST8V-EM 17 W/840 1200 mm, ST8V-EM 17 W/865 1200 mm, ST8V-EM 20 W/865 1500 mm

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.

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
4052899955752	ST8V-EM 17 W/840 1200 mm	Shipping carton box 25	1366 mm x - x -	78.20 dm ³	7203.00 g

Product family datasheet

Product code	Product description	Packaging unit (Pieces/Unit)	Dimensions (length x width x height)	Volume	Gross weight
4052899955776	ST8V-EM 17 W/865 1200 mm	Shipping carton box 25	1366 mm x - x -	78.20 dm ³	7203.00 g
4052899955813	ST8V-EM 20 W/865 1500 mm	Shipping carton box 25	1666 mm x - x -	95.38 dm ³	8602.00 g
4052899955677	ST8V-EM 8 W/830 600 mm	Shipping carton box 25	756 mm x - x -	43.28 dm ³	4377.00 g
4052899955714	ST8V-EM 8 W/865 600 mm	Shipping carton box 25	756 mm x - x -	43.28 dm ³	4390.00 g
4052899955738	T8 BATTEN ECO 17 W/830 1200 mm	Shipping carton box 25	1366 mm x - x -	78.20 dm ³	7203.00 g
4052899955790	ST8V-EM 20 W/830 1500 mm	Shipping carton box 25	1666 mm x - x -	95.38 dm ³	8602.00 g
4052899955806	ST8V-EM 20 W/840 1500 mm	Shipping carton box 25	1666 mm x - x -	95.38 dm ³	8602.00 g
4052899955691	ST8V-EM 8 W/840 600 mm	Shipping carton box 25	756 mm x 229 mm x 250 mm	43.28 dm ³	4365.00 g
4058075024618	ST8V-EM 7.6 W/830 600 mm	Shipping carton box 10	668 mm x 154 mm x 65 mm	6.69 dm ³	1323.00 g
4058075024632	ST8V-EM 7.6 W/840 600 mm	Shipping carton box 10	668 mm x 154 mm x 65 mm	6.69 dm ³	823.00 g
4058075024656	ST8V-EM 7.6 W/865 600 mm	Shipping carton box 10	668 mm x 154 mm x 65 mm	6.69 dm ³	1323.00 g
4058075024670	ST8V-EM 16.2 W/830 1200 mm	Shipping carton box 10	1278 mm x 154 mm x 65 mm	12.79 dm ³	2312.00 g
4058075024694	ST8V-EM 16.2 W/840 1200 mm	Shipping carton box 10	1278 mm x 154 mm x 65 mm	12.79 dm ³	2312.00 g
4058075024717	ST8V-EM 16.2 W/865 1200 mm	Shipping carton box 10	1278 mm x 154 mm x 65 mm	12.79 dm ³	2312.00 g

Product family datasheet

Product code	Product description	Packaging unit (Pieces/Unit)	Dimensions (length x width x height)	Volume	Gross weight
4058075024755	ST8V-EM 19.1 W/840 1500 mm	Shipping carton box 10	1578 mm x 154 mm x 65 mm	15.80 dm ³	2912.00 g
4058075024779	ST8V-EM 19.1 W/865 1500 mm	Shipping carton box 10	1578 mm x 154 mm x 65 mm	15.80 dm ³	2912.00 g
4058075024731	ST8V-EM 19.1 W/830 1500 mm	Shipping carton box 10	1578 mm x 154 mm x 65 mm	15.80 dm ³	2912.00 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.

References / Links

For current information see

▶ www.osram.com/substitute

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.