



Lighting food, brightening faces

Philips MASTER LEDtube SA I

PHILIPS
sense and simplicity

Introduction



MASTER LEDtube SA1 is an extremely effective energy-saving alternative to fluorescent lamps in canopy coolers. This state-of-the-art solution enhances the visual impression of the merchandise on display while at the same time minimizing glare for passing customers. The rotating end-cap makes it easy to align the light precisely on the merchandise. The product's long lifetime and excellent lumen maintenance minimize the hassle of re-lamping, while reducing maintenance costs. Thanks to MASTER LEDtube SA1's refined slim aluminum form with integrated optical system and driver, it is now easy to upgrade coolers to LED lighting.

Product benefits / unique buying arguments

- Energy savings of more than 54% compared to fluorescent lamps
- Uniform light distribution enhances the presentation of the merchandise on display
- New green image and improved sustainability thanks to Philips LED technology

Product features

- High-tech optical system creates optimum light uniformity with maximum efficacy and minimum glare
- Rotating end-cap ensures easy aiming for the best lighting result
- Philips design ensures safety even in the event of mistakes in the installation process; compliant with national and international safety requirements
- Embedded electrical driver for easy installation
- Compatible with standard G13 bi-pin lamp holders

Application areas

- Canopy lighting in chillier cabinets

N.B.!

When fluorescent lamps are replaced with the MASTER LEDtube SA1, the electrical installation has to be changed. Please refer to quick installation guide.

Product specification

Technical specifications

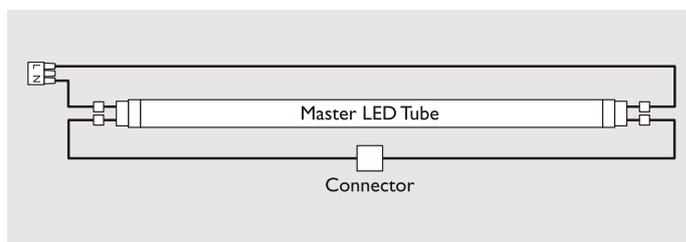
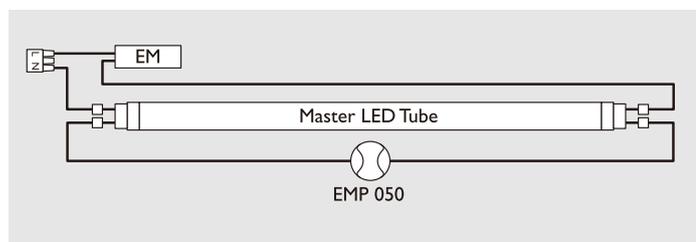
Product name	Length (mm)	CCT* (K)	Typical wattage (W)	Lumen**	Typical colour rendering	Cap base	Lifetime (hrs)	Lumen maintenance (30,000hrs)
MASTER LEDtube SA1 600mm 600lm 840 G13	600	4000	9	600	85	G13	30000	70%
MASTER LEDtube SA1 900mm 900lm 840 G13	900	4000	14	900	85	G13	30000	70%
MASTER LEDtube SA1 1200mm 1200lm 840 G13	1200	4000	19	1200	85	G13	30000	70%
MASTER LEDtube SA1 600mm 600lm 830 G13	600	3000	9	600	85	G13	30000	70%
MASTER LEDtube SA1 900mm 900lm 830 G13	900	3000	14	900	85	G13	30000	70%
MASTER LEDtube SA1 1200mm 1200lm 830 G13	1200	3000	19	1200	85	G13	30000	70%
MASTER LEDtube SA1 600mm 600lm 856 G13	600	5600	9	600	85	G13	30000	70%
MASTER LEDtube SA1 900mm 900lm 856 G13	900	5600	14	900	85	G13	30000	70%
MASTER LEDtube SA1 1200mm 1200lm 856 G13	1200	5600	19	1200	85	G13	30000	70%
MASTER LEDtube SA1 600mm 900lm 840 G13	600	4000	12	900	85	G13	30000	70%
MASTER LEDtube SA1 900mm 1350lm 840 G13	900	4000	19	1350	85	G13	30000	70%
MASTER LEDtube SA1 1200mm 1800lm 840 G13	1200	4000	25	1800	85	G13	30000	70%
MASTER LEDtube SA1 600mm 900lm 830 G13	600	3000	14	900	85	G13	30000	70%
MASTER LEDtube SA1 900mm 1350lm 830 G13	900	3000	21	1350	85	G13	30000	70%
MASTER LEDtube SA1 1200mm 1800lm 830 G13	1200	3000	28	1800	85	G13	30000	70%
MASTER LEDtube SA1 600mm 900lm 856 G13	600	5600	12	900	85	G13	30000	70%
MASTER LEDtube SA1 900mm 1350lm 856 G13	900	5600	19	1350	85	G13	30000	70%
MASTER LEDtube SA1 1200mm 1800lm 856 G13	1200	5600	25	1800	85	G13	30000	70%

* The values can vary up to 300K

** The values can vary up to 20%

Ballast compatibility

Fluorescent tubes are operated on current limiting ballasts. Two different ballast technologies are available on the market: the electromagnetic (EM) ballast and the High Frequency electronic (HF) ballast. Although the Philips MASTER LEDtube primarily operates directly on mains voltage, it can also operate with the EM ballast remaining in the input circuit, provided the particular EM ballast is compliant with Safety Standard EN61347-2-8. In the case of a HF ballast, the ballast needs to be bypassed in accordance with the quick installation guide.



Fixture compatibility

Philips MASTER LEDtube SA1 is compatible with all lighting fixtures with standard G13 bi-pin lamp holders. In some cases it may be necessary to remove non-standard G13 bi-pin lamp holders from the fixtures.

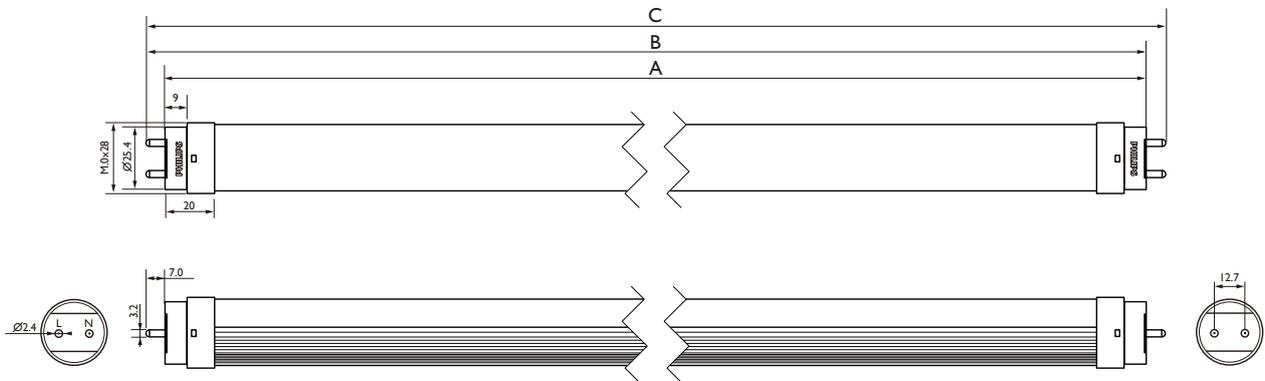
Safety

The MASTER LEDtube SA1 is designed in such a way that both end caps are electronically separated and therefore completely safe. The MASTER LEDtube SA1 is inserted into a live system, contact with the pins will not cause electric shock.

MASTER LEDtube SA1 and the wiring system are designed in such a way that it is completely safe even in the event of incorrect use, e.g. if a fluorescent lamp or other LED tube is re-installed in a system which has been adapted for the MASTER LEDtube SA1.

Dimensions

Product	Length (mm)	Length A (mm)	Length B (mm)	Length C (mm)	Length D (mm)	Length D I (mm)
MASTER LEDtube SA1 600mm 830/840/856 G13	600	588.5 ±1	595.5 ±1	602.5 ±1,5	25.68 max.	28 max.
MASTER LEDtube SA1 900mm 830/840/856 G13	900	893.5 ±1	900.5 ±1	907.5 ±1	25.68 max.	28 max.
MASTER LEDtube SA1 1200mm 830/840/856 G13	1200	1198.0 ±1	1205.0 ±1	1212.0 ±1	25.68 max.	28 max.



To ensure the safety of the application, as well as to simplify the installation of the EM ballast system the EMP050 Protector must be fitted to the system. This device switches off the MASTER LEDtube if it fails or is used incorrectly. EMP050 Protector is compatible with all standard starter connections.

mm	Min	Max
A	12.5	12.9
B	—	21.5
D	4.7	5.0
E	2.8	3.2
H	33.0	36.0
L	—	4.3
S	1.7	—
T	1.9	2.0

Lifetime and sustainability

Philips MASTER LEDtube SA1 has a lifetime of 30,000 hours; lifetime is, defined as the number of hours that 50% of a large group of identical lamps maintain their lumen output at or above 70% of the initial level.

The estimated lifetime is based on environmental conditions in the application.

Temperature

Operating temperature	T operating	min -30 °C	max +30 °C
Storage temperature	T storage	min -40 °C	max +65 °C
Maximum surface temperature of metal parts at $t_{amb.} = 25$ °C	T surface		max +55 °C

Approbation / compliance and approval

Applicable national and international legislation and approbation: CE, KEMA, VDE, WEEE, EMC and RoHS.

Packaging information

Product description	Net weight (gram)	Gross weight (gram)	Dimensions spu (l x w x h) in cm	Dimensions stacking pattern (l x w x h) in cm	Number of spu's per pallet
MASTER LEDtube SAI 600mm 600lm 840 G13	225	300	67.6 x 5.6 x 4.8	130 x 100 x 108.8	420
MASTER LEDtube SAI 900mm 900lm 840 G13	305	418	98.1 x 5.6 x 4.8	120 x 100 x 108.8	280
MASTER LEDtube SAI 1200mm 1200lm 840 G13	372	522	128.3 x 5.6 x 4.8	130 x 100 x 108.8	210
MASTER LEDtube SAI 600mm 600lm 830 G13	225	300	67.6 x 5.6 x 4.8	130 x 100 x 108.8	420
MASTER LEDtube SAI 900mm 900lm 830 G13	305	418	98.1 x 5.6 x 4.8	120 x 100 x 108.8	280
MASTER LEDtube SAI 1200mm 1200lm 830 G13	372	522	128.3 x 5.6 x 4.8	130 x 100 x 108.8	210
MASTER LEDtube SAI 600mm 600lm 856 G13	225	300	67.6 x 5.6 x 4.8	130 x 100 x 108.8	420
MASTER LEDtube SAI 900mm 900lm 856 G13	305	418	98.1 x 5.6 x 4.8	120 x 100 x 108.8	280
MASTER LEDtube SAI 1200mm 1200lm 856 G13	372	522	128.3 x 5.6 x 4.8	130 x 100 x 108.8	210
MASTER LEDtube SAI 600mm 900lm 840 G13	225	300	67.6 x 5.6 x 4.8	130 x 100 x 108.8	420
MASTER LEDtube SAI 900mm 1350lm 840 G13	305	418	98.1 x 5.6 x 4.8	120 x 100 x 108.8	280
MASTER LEDtube SAI 1200mm 1800lm 840 G13	372	522	128.3 x 5.6 x 4.8	130 x 100 x 108.8	210
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Product description	I2 NC	EAN-3 code	EOC code	MOQ(Min. Order Quantity)
MASTER LEDtube SAI 600mm 600lm 840 G13	9290 004 87908	8727900924268	872790092426800	10
MASTER LEDtube SAI 900mm 900lm 840 G13	9290 004 88008	8727900925142	872790092514200	10
MASTER LEDtube SAI 1200mm 1200lm 840 G13	9290 004 88108	8727900925296	872790092529600	10
MASTER LEDtube SAI 600mm 600lm 830 G13	9290 004 88208	8727900924275	872790092427500	10
MASTER LEDtube SAI 900mm 900lm 830 G13	9290 004 88308	8727900925159	872790092515900	10
MASTER LEDtube SAI 1200mm 1200lm 830 G13	9290 004 88408	8727900925319	872790092531900	10
MASTER LEDtube SAI 600mm 600lm 856 G13	9290 004 88508	8727900924282	872790092428200	10
MASTER LEDtube SAI 900mm 900lm 856 G13	9290 004 88608	8727900925197	872790092519700	10
MASTER LEDtube SAI 1200mm 1200lm 856 G13	9290 004 88708	8727900925326	872790092532600	10
MASTER LEDtube SAI 600mm 900lm 840 G13	9290 004 88808	8727900924299	872790092429900	10
MASTER LEDtube SAI 900mm 1350lm 840 G13	9290 004 88908	8727900925203	872790092520300	10
MASTER LEDtube SAI 1200mm 1800lm 840 G13	9290 004 89008	8727900925357	872790092535700	10
MASTER LEDtube SAI 600mm 900lm 830 G13	9290 004 89108	8727900924305	872790092430500	10
MASTER LEDtube SAI 900mm 1350lm 830 G13	9290 004 89208	8727900925241	872790092524100	10
MASTER LEDtube SAI 1200mm 1800lm 830 G13 *	9290 004 89308	8727900925364	872790092536400	10
MASTER LEDtube SAI 600mm 900lm 856 G13	9290 004 89408	8727900924312	872790092431200	10
MASTER LEDtube SAI 900mm 1350lm 856 G13	9290 004 89508	8727900925258	872790092525800	10
MASTER LEDtube SAI 1200mm 1800lm 856 G13	9290 004 89608	8727900925371	872790092537100	10

* Planned, to be release.



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04/2010
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