PHILIPS

Lighting

The new generation of energy saving tube lighting

MASTER LEDtube EM/Mains T8

The Philips MASTER LEDtube integrates a LED light source into a traditional fluorescent form factor. Its unique design creates a perfectly uniform visual appearance which cannot be distinguished from traditional fluorescent. For those that are looking for value for money within limited budget and re-lamping efforts for better light effect and lifetime.

Benefits

- Reduced operational cost thanks to lower energy consumption
- Lower maintenance cost thanks to 2-3 times longer lifetime than normal fluorescent tubes
- Fastest and easiest way to upgrade existing luminaire to LED technology; 100%-safe installation process

Features

- Only 50% energy consumption compared to fluorescent tubes
- Extra-long life of 40,000 hours
- Retrofit to existing T8 lamps on EM ballast installations
- Full safety features and EM Protector safety device
- No mercury

Application

- Parking lots / covered car parks
- Warehouses / coldrooms / signage
- Transport and distribution areas
- Food & Museums

MASTER LEDtube EM/Mains T8

Warnings and Safety

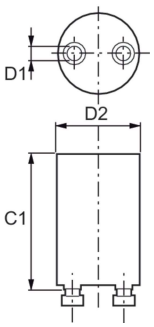
- -

Versions

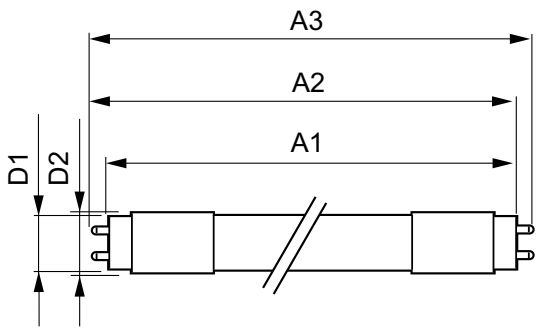
LEDtube Starter

SPPR OTHER 0003

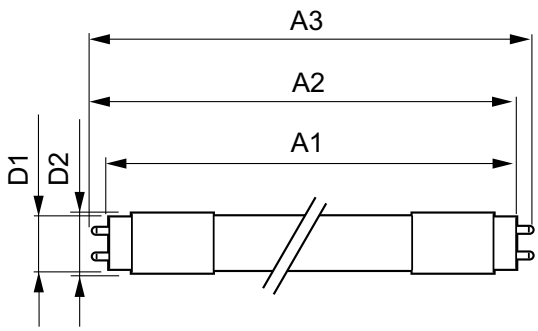
Dimensional drawing



Product	D1	D2	C1
MASTER LEDtube Starter EMP	3 mm	21.5 mm	34.5 mm
MASTER LEDtube Starter EMP GenII OP	3 mm	21.5 mm	34.5 mm



Product	D1	D2	A1	A2	A3
MAS LEDtube 1200mm UO 14.7W 830 T8	25.8 mm	28 mm	1,198.2 mm	1,205.3 mm	1,212.4 mm
MAS LEDtube 1200mm UO 14.7W 840 T8	25.8 mm	28 mm	1,198.2 mm	1,205.3 mm	1,212.4 mm
MAS LEDtube 1200mm UO 14.7W 865 T8	25.8 mm	28 mm	1,198.2 mm	1,205.3 mm	1,212.4 mm
MAS LEDtube 1500mm UO 21.7W 830 T8	25.8 mm	28 mm	1,498.8 mm	1,505.9 mm	1,513 mm
MAS LEDtube 1500mm UO 21.7W 840 T8	25.8 mm	28 mm	1,498.8 mm	1,505.9 mm	1,513 mm
MAS LEDtube 1500mm UO 21.7W 865 T8	25.8 mm	28 mm	1,498.8 mm	1,505.9 mm	1,513 mm
MAS LEDtube 600mm HO 8W830 T8	25.78 mm	28 mm	588.5 mm	595.5 mm	602.5 mm
MAS LEDtube 600mm HO 8W840 T8	25.78 mm	28 mm	588.5 mm	595.5 mm	602.5 mm
MAS LEDtube 600mm HO 8W865 T8	25.78 mm	28 mm	588.5 mm	595.5 mm	602.5 mm
MAS LEDtube 900mm HO 12W 840 T8	25.78 mm	28 mm	893.3 mm	900.4 mm	907.5 mm
MAS LEDtube 900mm HO 12W 865 T8	25.78 mm	28 mm	893.3 mm	900.4 mm	907.5 mm



Product	D1	D2	A1	A2	A3
MAS LEDtube 1050mm 16W 840 T8	25.8 mm	28 mm	1,045.8 mm	1,052.9 mm	1,060 mm
MAS LEDtube 1200mm HO 12.5W 830 T8	25.8 mm	28 mm	1,198.2 mm	1,205.3 mm	1,212.4 mm
MAS LEDtube 1200mm HO 12.5W 840 T8	25.8 mm	28 mm	1,198.2 mm	1,205.3 mm	1,212.4 mm
MAS LEDtube 1200mm HO 12.5W 865 T8	25.8 mm	28 mm	1,198.2 mm	1,205.3 mm	1,212.4 mm
MAS LEDtube 1500mm HO 18.2W 830 T8	25.8 mm	28 mm	1,498.8 mm	1,505.9 mm	1,513 mm
MAS LEDtube 1500mm HO 18.2W 840 T8	25.8 mm	28 mm	1,498.8 mm	1,505.9 mm	1,513 mm

MASTER LEDtube EM/Mains T8

Dimensional drawing

Product	D1	D2	A1	A2	A3
MAS LEDtube 1500mm HO 18.2W 865 T8	25.8 mm	28 mm	1,498.8 mm	1,505.9 mm	1,513 mm

General Information

Order Code	Full Product Name	Cap-Base	Switching Cycle	Nominal lifetime
68708600	MASTER LEDtube 900mm HO 12W 840 T8	G13 ROT	200,000	75,000 hour(s)
68710900	MASTER LEDtube 900mm HO 12W 865 T8	G13 ROT	200,000	75,000 hour(s)
69747400	MASTER LEDtube 600mm HO 8W830 T8	G13 ROT	200,000	75,000 hour(s)
69749800	MASTER LEDtube 600mm HO 8W840 T8	G13 ROT	200,000	75,000 hour(s)
69751100	MASTER LEDtube 600mm HO 8W865 T8	G13 ROT	200,000	75,000 hour(s)
31656000	MASTER LEDtube 1200mm UO 14.7W 830 T8	G13 ROT	200,000	75,000 hour(s)
31658400	MASTER LEDtube 1200mm UO 14.7W 840 T8	G13 ROT	200,000	75,000 hour(s)
31660700	MASTER LEDtube 1200mm UO 14.7W 865 T8	G13 ROT	200,000	75,000 hour(s)
31662100	MASTER LEDtube 1500mm UO 21.7W 830 T8	G13 ROT	200,000	75,000 hour(s)
31664500	MASTER LEDtube 1500mm UO 21.7W 840 T8	G13 ROT	200,000	75,000 hour(s)
31666900	MASTER LEDtube 1500mm UO 21.7W 865 T8	G13 ROT	200,000	75,000 hour(s)

Order Code	Full Product Name	Cap-Base	Switching Cycle	Nominal lifetime
48537200	MASTER LEDtube Starter EMP GenIII	-	-	-
59235600	MASTER LEDtube 1200mm HO 12.5W 830 T8	G13 ROT	200,000	75,000 hour(s)
59237000	MASTER LEDtube 1200mm HO 12.5W 840 T8	G13 ROT	200,000	75,000 hour(s)
59239400	MASTER LEDtube 1200mm HO 12.5W 865 T8	G13 ROT	200,000	75,000 hour(s)
59241700	MASTER LEDtube 1500mm HO 18.2W 830 T8	G13 ROT	200,000	75,000 hour(s)
59243100	MASTER LEDtube 1500mm HO 18.2W 840 T8	G13 ROT	200,000	75,000 hour(s)
59245500	MASTER LEDtube 1500mm HO 18.2W 865 T8	G13 ROT	200,000	75,000 hour(s)
61602100	MASTER LEDtube 1050mm 16W 840 T8	G13 ROT	200,000	75,000 hour(s)
72928000	MASTER LEDtube Starter EMP	-	-	-
81965400	MASTER LEDtube Starter EMP GenII OP	-	-	-

Light Technical

Order Code	Full Product Name	Beam Angle (Nom)	Correlated Color Temperature (Nom)	Color rendering index (CRI)	Color Code	LLMF At End Of Nominal Lifetime (Nom)	Luminous Flux
68708600	MASTER LEDtube 900mm HO 12W 840 T8	160 degree(s)	4000 K	80	840	70 %	1,575 lm
68710900	MASTER LEDtube 900mm HO 12W 865 T8	160 degree(s)	6500 K	80	865	70 %	1,575 lm
69747400	MASTER LEDtube 600mm HO 8W830 T8	160 degree(s)	3000 K	83	830	70 %	1,000 lm
69749800	MASTER LEDtube 600mm HO 8W840 T8	160 degree(s)	4000 K	83	840	70 %	1,050 lm
69751100	MASTER LEDtube 600mm HO 8W865 T8	160 degree(s)	6500 K	83	865	70 %	1,050 lm
31656000	MASTER LEDtube 1200mm UO 14.7W 830 T8	160 degree(s)	3000 K	80	830	70 %	2,300 lm
31658400	MASTER LEDtube 1200mm UO 14.7W 840 T8	160 degree(s)	4000 K	80	840	70 %	2,500 lm
31660700	MASTER LEDtube 1200mm UO 14.7W 865 T8	160 degree(s)	6500 K	80	865	70 %	2,500 lm
31662100	MASTER LEDtube 1500mm UO 21.7W 830 T8	160 degree(s)	3000 K	80	830	70 %	3,400 lm
31664500	MASTER LEDtube 1500mm UO 21.7W 840 T8	160 degree(s)	4000 K	80	840	70 %	3,700 lm
31666900	MASTER LEDtube 1500mm UO 21.7W 865 T8	160 degree(s)	6500 K	80	865	70 %	3,700 lm
48537200	MASTER LEDtube Starter EMP GenIII	-	-	-	-	70 %	-
59235600	MASTER LEDtube 1200mm HO 12.5W 830 T8	160 degree(s)	3000 K	80	830	70 %	2,000 lm

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Order Code	Full Product Name	Beam Angle (Nom)	Correlated Color Temperature (Nom)	Color rendering index (CRI)	Color Code	LLMF At End Of Nominal Lifetime (Nom)	Luminous Flux
59237000	MASTER LEDtube 1200mm HO 12.5W 840 T8	160 degree(s)	4000 K	80	840	70 %	2,100 lm
59239400	MASTER LEDtube 1200mm HO 12.5W 865 T8	160 degree(s)	6500 K	80	865	70 %	2,100 lm
59241700	MASTER LEDtube 1500mm HO 18.2W 830 T8	160 degree(s)	3000 K	80	830	70 %	2,900 lm
59243100	MASTER LEDtube 1500mm HO 18.2W 840 T8	160 degree(s)	4000 K	80	840	70 %	3,100 lm
59245500	MASTER LEDtube 1500mm HO 18.2W 865 T8	160 degree(s)	6500 K	80	865	70 %	3,100 lm
61602100	MASTER LEDtube 1050mm 16W 840 T8	160 degree(s)	4000 K	80	840	70 %	2,500 lm
72928000	MASTER LEDtube Starter EMP	-	-	-	-	-	-
81965400	MASTER LEDtube Starter EMP GenII OP	-	-	-	-	-	-

Operating and Electrical

Order Code	Full Product Name	Input Frequency	Line Frequency	Power Consumption	Starting Time (Nom)
68708600	MASTER LEDtube 900mm HO 12W 840 T8	50 to 60 Hz	50 to 60 Hz	12 W	0.5 s
68710900	MASTER LEDtube 900mm HO 12W 865 T8	50 to 60 Hz	50 to 60 Hz	12 W	0.5 s
69747400	MASTER LEDtube 600mm HO 8W830 T8	50 to 60 Hz	50 to 60 Hz	8 W	0.5 s
69749800	MASTER LEDtube 600mm HO 8W840 T8	50 to 60 Hz	50 to 60 Hz	8 W	0.5 s
69751100	MASTER LEDtube 600mm HO 8W865 T8	50 to 60 Hz	50 to 60 Hz	8 W	0.5 s
31656000	MASTER LEDtube 1200mm UO 14.7W 830 T8	50 to 60 Hz	50 to 60 Hz	14.7 W	0.5 s
31658400	MASTER LEDtube 1200mm UO 14.7W 840 T8	50 to 60 Hz	50 to 60 Hz	14.7 W	0.5 s
31660700	MASTER LEDtube 1200mm UO 14.7W 865 T8	50 to 60 Hz	50 to 60 Hz	14.7 W	0.5 s
31662100	MASTER LEDtube 1500mm UO 21.7W 830 T8	50 to 60 Hz	50 to 60 Hz	21.7 W	0.5 s
31664500	MASTER LEDtube 1500mm UO 21.7W 840 T8	50 to 60 Hz	50 to 60 Hz	21.7 W	0.5 s
31666900	MASTER LEDtube 1500mm UO 21.7W 865 T8	50 to 60 Hz	50 to 60 Hz	21.7 W	0.5 s
48537200	MASTER LEDtube Starter EMP GenIII	- Hz	- Hz	-	-
59235600	MASTER LEDtube 1200mm HO 12.5W 830 T8	50 to 60 Hz	50 to 60 Hz	12.5 W	0.5 s
59237000	MASTER LEDtube 1200mm HO 12.5W 840 T8	50 to 60 Hz	50 to 60 Hz	12.5 W	0.5 s
59239400	MASTER LEDtube 1200mm HO 12.5W 865 T8	50 to 60 Hz	50 to 60 Hz	12.5 W	0.5 s
59241700	MASTER LEDtube 1500mm HO 18.2W 830 T8	50 to 60 Hz	50 to 60 Hz	18.2 W	0.5 s
59243100	MASTER LEDtube 1500mm HO 18.2W 840 T8	50 to 60 Hz	50 to 60 Hz	18.2 W	0.5 s
59245500	MASTER LEDtube 1500mm HO 18.2W 865 T8	50 to 60 Hz	50 to 60 Hz	18.2 W	0.5 s

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Order Code	Full Product Name	Input Frequency	Line Frequency	Power Consumption	Starting Time (Nom)
61602100	MASTER LEDtube 1050mm 16W 840 T8	50 to 60 Hz	50 to 60 Hz	16 W	0.5 s
72928000	MASTER LEDtube Starter EMP	50 to 60 Hz	50 to 60 Hz	-	-

Order Code	Full Product Name	Input Frequency	Line Frequency	Power Consumption	Starting Time (Nom)
81965400	MASTER LEDtube Starter EMP GenII OP	-	-	-	-

Temperature

Order Code	Full Product Name	Ambient temperature range	T-Case Maximum (Nom)
68708600	MASTER LEDtube 900mm HO 12W 840 T8	-20 °C to 45 °C	50 °C
68710900	MASTER LEDtube 900mm HO 12W 865 T8	-20 °C to 45 °C	50 °C
69747400	MASTER LEDtube 600mm HO 8W830 T8	-20 °C to 45 °C	50 °C
69749800	MASTER LEDtube 600mm HO 8W840 T8	-20 °C to 45 °C	50 °C
69751100	MASTER LEDtube 600mm HO 8W865 T8	-20 °C to 45 °C	50 °C
31656000	MASTER LEDtube 1200mm UO 14.7W 830 T8	-20 °C to 45 °C	55 °C
31658400	MASTER LEDtube 1200mm UO 14.7W 840 T8	-20 °C to 45 °C	55 °C
31660700	MASTER LEDtube 1200mm UO 14.7W 865 T8	-20 °C to 45 °C	55 °C
31662100	MASTER LEDtube 1500mm UO 21.7W 830 T8	-20 °C to 45 °C	60 °C
31664500	MASTER LEDtube 1500mm UO 21.7W 840 T8	-20 °C to 45 °C	60 °C
31666900	MASTER LEDtube 1500mm UO 21.7W 865 T8	-20 °C to 45 °C	60 °C

Order Code	Full Product Name	Ambient temperature range	T-Case Maximum (Nom)
48537200	MASTER LEDtube Starter EMP GenIII	-	-
59235600	MASTER LEDtube 1200mm HO 12.5W 830 T8	-20 °C to 45 °C	50 °C
59237000	MASTER LEDtube 1200mm HO 12.5W 840 T8	-20 °C to 45 °C	50 °C
59239400	MASTER LEDtube 1200mm HO 12.5W 865 T8	-20 °C to 45 °C	50 °C
59241700	MASTER LEDtube 1500mm HO 18.2W 830 T8	-20 °C to 45 °C	55 °C
59243100	MASTER LEDtube 1500mm HO 18.2W 840 T8	-20 °C to 45 °C	55 °C
59245500	MASTER LEDtube 1500mm HO 18.2W 865 T8	-20 °C to 45 °C	55 °C
61602100	MASTER LEDtube 1050mm 16W 840 T8	-20 °C to 45 °C	55 °C
72928000	MASTER LEDtube Starter EMP	-	-
81965400	MASTER LEDtube Starter EMP GenII OP	-	-

Controls and Dimming

Order Code	Full Product Name	Dimmable
68708600	MASTER LEDtube 900mm HO 12W 840 T8	No
68710900	MASTER LEDtube 900mm HO 12W 865 T8	No
69747400	MASTER LEDtube 600mm HO 8W830 T8	No
69749800	MASTER LEDtube 600mm HO 8W840 T8	No
69751100	MASTER LEDtube 600mm HO 8W865 T8	No
31656000	MASTER LEDtube 1200mm UO 14.7W 830 T8	No
31658400	MASTER LEDtube 1200mm UO 14.7W 840 T8	No
31660700	MASTER LEDtube 1200mm UO 14.7W 865 T8	No
31662100	MASTER LEDtube 1500mm UO 21.7W 830 T8	No
31664500	MASTER LEDtube 1500mm UO 21.7W 840 T8	No
31666900	MASTER LEDtube 1500mm UO 21.7W 865 T8	No

Order Code	Full Product Name	Dimmable
48537200	MASTER LEDtube Starter EMP GenIII	No
59235600	MASTER LEDtube 1200mm HO 12.5W 830 T8	No
59237000	MASTER LEDtube 1200mm HO 12.5W 840 T8	No
59239400	MASTER LEDtube 1200mm HO 12.5W 865 T8	No
59241700	MASTER LEDtube 1500mm HO 18.2W 830 T8	No
59243100	MASTER LEDtube 1500mm HO 18.2W 840 T8	No
59245500	MASTER LEDtube 1500mm HO 18.2W 865 T8	No
61602100	MASTER LEDtube 1050mm 16W 840 T8	No
72928000	MASTER LEDtube Starter EMP	-
81965400	MASTER LEDtube Starter EMP GenII OP	-

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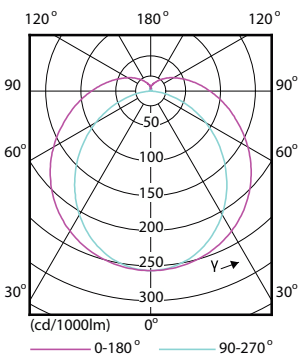
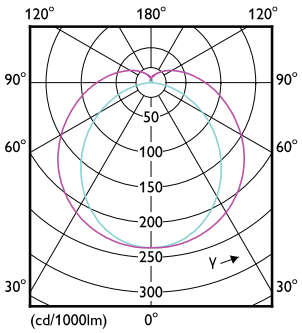
Mechanical and Housing

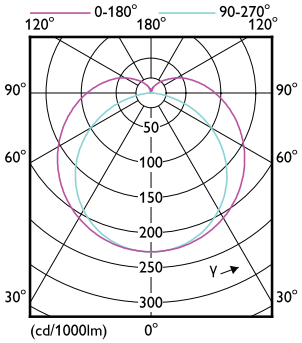
Order Code	Full Product Name	Bulb Finish	Bulb Shape
68708600	MASTER LEDtube 900mm HO 12W 840 T8	Frosted	T8
68710900	MASTER LEDtube 900mm HO 12W 865 T8	Frosted	T8
69747400	MASTER LEDtube 600mm HO 8W830 T8	Frosted	T8
69749800	MASTER LEDtube 600mm HO 8W840 T8	Frosted	T8
69751100	MASTER LEDtube 600mm HO 8W865 T8	Frosted	T8
31656000	MASTER LEDtube 1200mm UO 14.7W 830 T8	Frosted	T8
31658400	MASTER LEDtube 1200mm UO 14.7W 840 T8	Frosted	T8
31660700	MASTER LEDtube 1200mm UO 14.7W 865 T8	Frosted	T8
31662100	MASTER LEDtube 1500mm UO 21.7W 830 T8	Frosted	T8
31664500	MASTER LEDtube 1500mm UO 21.7W 840 T8	Frosted	T8
31666900	MASTER LEDtube 1500mm UO 21.7W 865 T8	Frosted	T8
48537200	MASTER LEDtube Starter EMP GenIII	-	-
59235600	MASTER LEDtube 1200mm HO 12.5W 830 T8	Frosted	T8
59237000	MASTER LEDtube 1200mm HO 12.5W 840 T8	Frosted	T8
59239400	MASTER LEDtube 1200mm HO 12.5W 865 T8	Frosted	T8
59241700	MASTER LEDtube 1500mm HO 18.2W 830 T8	Frosted	T8
59243100	MASTER LEDtube 1500mm HO 18.2W 840 T8	Frosted	T8
59245500	MASTER LEDtube 1500mm HO 18.2W 865 T8	Frosted	T8
61602100	MASTER LEDtube 1050mm 16W 840 T8	Frosted	T8
72928000	MASTER LEDtube Starter EMP	-	-
81965400	MASTER LEDtube Starter EMP GenII OP	-	-

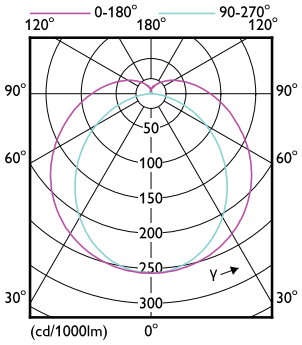
Approval and Application

Order Code	Full Product Name	Energy Consumption kWh/ 1000 h
68708600	MASTER LEDtube 900mm HO 12W 840 T8	12 kWh
68710900	MASTER LEDtube 900mm HO 12W 865 T8	12 kWh
69747400	MASTER LEDtube 600mm HO 8W830 T8	8 kWh
69749800	MASTER LEDtube 600mm HO 8W840 T8	8 kWh
69751100	MASTER LEDtube 600mm HO 8W865 T8	8 kWh
31656000	MASTER LEDtube 1200mm UO 14.7W 830 T8	15 kWh
31658400	MASTER LEDtube 1200mm UO 14.7W 840 T8	15 kWh
31660700	MASTER LEDtube 1200mm UO 14.7W 865 T8	15 kWh
31662100	MASTER LEDtube 1500mm UO 21.7W 830 T8	22 kWh
31664500	MASTER LEDtube 1500mm UO 21.7W 840 T8	22 kWh
31666900	MASTER LEDtube 1500mm UO 21.7W 865 T8	22 kWh
48537200	MASTER LEDtube Starter EMP GenIII	- kWh
59235600	MASTER LEDtube 1200mm HO 12.5W 830 T8	13 kWh
59237000	MASTER LEDtube 1200mm HO 12.5W 840 T8	13 kWh
59239400	MASTER LEDtube 1200mm HO 12.5W 865 T8	13 kWh
59241700	MASTER LEDtube 1500mm HO 18.2W 830 T8	19 kWh
59243100	MASTER LEDtube 1500mm HO 18.2W 840 T8	19 kWh
59245500	MASTER LEDtube 1500mm HO 18.2W 865 T8	19 kWh
61602100	MASTER LEDtube 1050mm 16W 840 T8	16 kWh
72928000	MASTER LEDtube Starter EMP	-
81965400	MASTER LEDtube Starter EMP GenII OP	-









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