



The easiest switch to comfortable white light

MASTER CityWhite CDO-TT

Ceramic metal halide lamp with clear tubular outer bulb shape, used in outdoor offering pleasant white light

Benefits

- White warm color impression providing comfort and safety
- Easy upgrade from SON to white light without additional cost
- Flexible light levels and reduced energy consumption possible via dimming option

Features

- High-quality white light
- Directly retrofit on HPS (SON/NAV) installations for upgrade from yellow to white light
- "Plus" concept with high efficacy translates into high light output and improved lumen maintenance
- Good color rendering and harmonized warm white color temperature
- Dimmable

Application

- Beautification and functional lighting for City centers, shopping centers and pedestrian areas, residential areas, road lighting and floodlighting

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Warnings and Safety

- Use only in totally enclosed luminaire, even during testing (IEC61167, IEC 62035, IEC60598)
- The luminaire must be able to contain hot lamp parts if the lamp ruptures
- Lamps may use electromagnetic control gear or electronic gear suitable to drive CDO lamps (e.g. HID-PV Xt CDO)
- Control gear must include end-of-life protection (IEC61167, IEC 62035)
- Warm restart time can be up to 15 minutes; T15 ignitors therefore advised
- A lamp breaking is extremely unlikely to have any impact on your health. If a lamp breaks, ventilate the room for 30 minutes and remove the parts, preferably with gloves. Put them in a sealed plastic bag and take it to your local waste facilities for recycling. Do not use a vacuum cleaner.

Versions



Controls and Dimming	
Dimmable	Yes
General Information	
LSF 2000 h Rated	99 %
LSF 4000 h Rated	99 %
Operating Position	UNIVERSAL
Light Technical	
Colour Designation	Warm White (WW)
Ratio Scotopic/Photopic Lumens	1.30
Mechanical and Housing	
Bulb Finish	Clear

Approval and Application

Order Code	Full Product Name	Energy Consumption kWh/1000 h	Mercury (Hg) Content (Max)	Mercury (Hg) Content (Nom)
12030800	MASTER CityWhite CDO-TT Plus 70W/828 1SL/12	74 kWh	7.8 mg	7.8 mg
12032200	MASTER CityWhite CDO-TT Plus 100W/828 E40	99 kWh	12 mg	11.6 mg

Order Code	Full Product Name	Energy Consumption kWh/1000 h	Mercury (Hg) Content (Max)	Mercury (Hg) Content (Nom)
12034600	MASTER CityWhite CDO-TT Plus 150W/828 E40	149 kWh	15.8 mg	15.8 mg
12197800	MASTER CityWhite CDO-TT Plus 250W/830 E40	250 kWh	25 mg	25.3 mg

Operating and Electrical

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Order Code	Full Product Name	Lamp Current (EM) (Nom)	Voltage (Max)	Voltage (Min)	Voltage (Nom)	Power (Nom)	Re-Ignition Time (Min)
							(Max)
12030800	MASTER CityWhite CDO-TT Plus 70W/828 1SL/12	0.96 A	101 V	85 V	91 V	73.5 W	720 s
12032200	MASTER CityWhite CDO-TT Plus 100W/828 E40	0.118 A	105 V	89 V	100 V	99.0 W	900 s
12034600	MASTER CityWhite CDO-TT Plus 150W/828 E40	0.177 A	106 V	90 V	99 V	148.5 W	900 s
12197800	MASTER CityWhite CDO-TT Plus 250W/830 E40	0.295 A	108 V	92 V	99 V	250.0 W	900 s

General Information (1/2)

Order Code	Full Product Name	Cap-Base	Life To 10%	Life To 20%	Life To 50%	Life To 5%	LSF 12000 h	LSF 16000 h
			Failures (Nom)	Failures (Nom)	Failures (Nom)	Failures (Nom)	Rated	Rated
12030800	MASTER CityWhite CDO-TT Plus 70W/828 1SL/12	E27	15000 h	17000 h	27000 h	13000 h	90 %	81 %
12032200	MASTER CityWhite CDO-TT Plus 100W/828 E40	E40	20000 h	22500 h	27000 h	18000 h	99 %	97 %
12034600	MASTER CityWhite CDO-TT Plus 150W/828 E40	E40	20000 h	22500 h	27000 h	18000 h	99 %	97 %
12197800	MASTER CityWhite CDO-TT Plus 250W/830 E40	E40	16000 h	18500 h	23000 h	14000 h	98 %	90 %

General Information (2/2)

Order Code	Full Product Name	LSF 20000 h	LSF 6000 h	LSF 8000 h	Order Code	Full Product Name	LSF 20000 h	LSF 6000 h	LSF 8000 h
		Rated	Rated	Rated			Rated	Rated	Rated
12030800	MASTER CityWhite CDO-TT Plus 70W/828 1SL/12	71 %	98 %	96 %	12034600	MASTER CityWhite CDO-TT Plus 150W/828 E40	90 %	99 %	99 %
12032200	MASTER CityWhite CDO-TT Plus 100W/828 E40	90 %	99 %	99 %	12197800	MASTER CityWhite CDO-TT Plus 250W/830 E40	71 %	99 %	99 %

Luminaire Design Requirements

Order Code	Full Product Name	Bulb Temperature (Max)	Order Code	Full Product Name	Bulb Temperature (Max)
12030800	MASTER CityWhite CDO-TT Plus 70W/828 1SL/12	350 °C	12034600	MASTER CityWhite CDO-TT Plus 150W/828 E40	450 °C
12032200	MASTER CityWhite CDO-TT Plus 100W/828 E40	450 °C	12197800	MASTER CityWhite CDO-TT Plus 250W/830 E40	450 °C

Light Technical (1/2)

Order Code	Full Product Name	Chromaticity	Chromaticity	Colour Code	Correlated Colour Temperature (Nom)	Colour	Colour	LLMF 12000 h Rated
		Coordinate X (Nom)	Coordinate Y (Nom)			Rendering Index (Min)	Rendering Index (Nom)	
12030800	MASTER CityWhite CDO-TT Plus 70W/828 1SL/12	0.447	0.4	828	2800 K	83	86	80.5 %
12032200	MASTER CityWhite CDO-TT Plus 100W/828 E40	0.447	0.4	828	2800 K	-	88	85 %
12034600	MASTER CityWhite CDO-TT Plus 150W/828 E40	0.447	0.4	828	2800 K	-	87	85 %
12197800	MASTER CityWhite CDO-TT Plus 250W/830 E40	0.434	0.398	830	3000 K	-	88	85 %

Light Technical (2/2)

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Order Code	Full Product Name	LLMF 16000 h Rated	LLMF 2000 h Rated	LLMF 20000 h Rated	LLMF 4000 h Rated	LLMF 6000 h Rated	LLMF 8000 h Rated	Luminous Efficacy (rated) (Nom)	Luminous Flux (Nom)	Luminous Flux (Rated) (Nom)
12030800	MASTER CityWhite CDO-TT Plus 70W/828 1SL/12	76.5 %	97 %	73.5 %	93 %	89.5 %	86 %	105 lm/W	7750 lm	7750 lm
12032200	MASTER CityWhite CDO-TT Plus 100W/828 E40	82 %	95 %	80 %	92 %	90 %	88 %	106 lm/W	10450 lm	10450 lm
12034600	MASTER CityWhite CDO-TT Plus 150W/828 E40	82 %	95 %	80 %	92 %	90 %	88 %	110 lm/W	16400 lm	16400 lm
12197800	MASTER CityWhite CDO-TT Plus 250W/830 E40	82 %	95 %	80 %	92 %	90 %	88 %	113 lm/W	28400 lm	28400 lm

Mechanical and Housing

Order Code	Full Product Name	Bulb Shape	Order Code	Full Product Name	Bulb Shape
12030800	MASTER CityWhite CDO-TT Plus 70W/828 1SL/12	T35	12034600	MASTER CityWhite CDO-TT Plus 150W/828 E40	T46
12032200	MASTER CityWhite CDO-TT Plus 100W/828 E40	T46	12197800	MASTER CityWhite CDO-TT Plus 250W/830 E40	T46

