



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



Approval and Application	
Energy Efficiency Label (EEL)	A+
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 (Nom)
12030800	MASTER CityWhite CDO-TT Plus 70W/828 1SL/12	81 kWh	7.8 mg
12032200	MASTER CityWhite CDO-TT Plus 100W/828 E40	108 kWh	11.6 mg
12034600	MASTER CityWhite CDO-TT Plus 150W/828 E40	163 kWh	15.8 mg
12197800	MASTER CityWhite CDO-TT Plus 250W/830 E40	275 kWh	25.3 mg

Operating and Electrical (1/2)

Order Code	Full Product Name	Lamp			
		Current (EM) (Nom)	Voltage (Max)	Voltage (Min)	Voltage (Nom)
12030800	MASTER CityWhite CDO-TT Plus 70W/828 1SL/12	0.96 A	101 V	85 V	91 V
12032200	MASTER CityWhite CDO-TT Plus 100W/828 E40	0.118 A	105 V	89 V	100 V

Order Code	Full Product Name	Lamp			
		Current (EM) (Nom)	Voltage (Max)	Voltage (Min)	Voltage (Nom)
12034600	MASTER CityWhite CDO-TT Plus 150W/828 E40	0.177 A	106 V	90 V	99 V

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Order Code	Full Product Name	Lamp			
		Current (EM) (Nom)	Voltage (Max)	Voltage (Min)	Voltage (Nom)
12197800	MASTER CityWhite CDO-TT Plus 250W/830 E40	0.295 A	108 V	92 V	99 V

Operating and Electrical (2/2)

Order Code	Full Product Name	Power (Rated) (Nom)	Re-Ignition Time (Min) (Max)
12030800	MASTER CityWhite CDO-TT Plus 70W/828 1SL/12	73.5 W	720 s
12032200	MASTER CityWhite CDO-TT Plus 100W/828 E40	99.0 W	900 s

Order Code	Full Product Name	Power (Rated) (Nom)	Re-Ignition Time (Min) (Max)
12034600	MASTER CityWhite CDO-TT Plus 150W/828 E40	148.5 W	900 s
12197800	MASTER CityWhite CDO-TT Plus 250W/830 E40	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%
			Failures (Nom)	Failures (Nom)	Failures (Nom)
12030800	MASTER CityWhite CDO-TT Plus 70W/828 1SL/12	E27	15000 h	17000 h	27000 h
12032200	MASTER CityWhite CDO-TT Plus 100W/828 E40	E40	20000 h	22500 h	27000 h

Order Code	Full Product Name	Cap-Base	Life To 10%	Life To 20%	Life To 50%
			Failures (Nom)	Failures (Nom)	Failures (Nom)
12034600	MASTER CityWhite CDO-TT Plus 150W/828 E40	E40	20000 h	22500 h	27000 h
12197800	MASTER CityWhite CDO-TT Plus 250W/830 E40	E40	16000 h	18500 h	23000 h

General Information (2/2)

Order Code	Full Product Name	Life To 5% Failures (Nom)	LSF 12000 h Rated	LSF 16000 h Rated	LSF 20000 h Rated	LSF 6000 h Rated	LSF 8000 h Rated
12030800	MASTER CityWhite CDO-TT Plus 70W/828 1SL/12	13000 h	90 %	81 %	71 %	98 %	96 %
12032200	MASTER CityWhite CDO-TT Plus 100W/828 E40	18000 h	99 %	97 %	90 %	99 %	99 %
12034600	MASTER CityWhite CDO-TT Plus 150W/828 E40	18000 h	99 %	97 %	90 %	99 %	99 %
12197800	MASTER CityWhite CDO-TT Plus 250W/830 E40	14000 h	98 %	90 %	71 %	99 %	99 %

Luminaire Design Requirements

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

Order Code	Full Product Name	Bulb Temperature (Max)
12034600	MASTER CityWhite CDO-TT Plus 150W/828 E40	450 °C
12197800	MASTER CityWhite CDO-TT Plus 250W/830 E40	450 °C

Light Technical (1/3)

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Order Code	Full Product Name	Chromaticity	Chromaticity	Correlated Colour	
		Coordinate X (Nom)	Coordinate Y (Nom)	Code	Temperature (Nom)
12030800	MASTER CityWhite CDO-TT Plus 70W/828 1SL/12	0.447	0.400	828	2800 K
12032200	MASTER CityWhite CDO-TT Plus 100W/828 E40	0.447	0.400	828	2800 K
12034600	MASTER CityWhite CDO-	0.447	0.400	828	2800 K

Order Code	Full Product Name	Chromaticity	Chromaticity	Correlated Colour	
		Coordinate X (Nom)	Coordinate Y (Nom)	Code	Temperature (Nom)
	TT Plus 150W/828 E40				
12197800	MASTER CityWhite CDO-TT Plus 250W/830 E40	0.434	0.398	830	3000 K

Light Technical (2/3)

Order Code	Full Product Name	Colour Rendering	Colour Rendering	LLMF 12000	LLMF 16000	LLMF 2000	LLMF 20000	LLMF 4000	LLMF 6000	LLMF 8000
		Index (Min)	Index (Nom)	h Rated	h Rated	h Rated	h Rated	h Rated	h Rated	h Rated
12030800	MASTER CityWhite CDO-TT Plus 70W/828 1SL/12	83	86	80.5 %	76.5 %	97 %	73.5 %	93 %	89.5 %	86 %
12032200	MASTER CityWhite CDO-TT Plus 100W/828 E40	-	88	85 %	82 %	95 %	80 %	92 %	90 %	88 %
12034600	MASTER CityWhite CDO-TT Plus 150W/828 E40	-	87	85 %	82 %	95 %	80 %	92 %	90 %	88 %
12197800	MASTER CityWhite CDO-TT Plus 250W/830 E40	-	88	85 %	82 %	95 %	80 %	92 %	90 %	88 %

Light Technical (3/3)

Order Code	Full Product Name	Luminous Efficacy (rated) (Nom)	Luminous Flux (Rated) (Nom)	Order Code	Full Product Name	Luminous Efficacy (rated) (Nom)	Luminous Flux (Rated) (Nom)
12030800	MASTER CityWhite CDO-TT Plus 70W/828 1SL/12	105 lm/W	7750 lm	12034600	MASTER CityWhite CDO-TT Plus 150W/828 E40	110 lm/W	16400 lm
12032200	MASTER CityWhite CDO-TT Plus 100W/828 E40	106 lm/W	10450 lm	12197800	MASTER CityWhite CDO-TT Plus 250W/830 E40	113 lm/W	28400 lm

Mechanical and Housing

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

Order Code	Full Product Name	Bulb Shape
12034600	MASTER CityWhite CDO-TT Plus 150W/828 E40	T46
12197800	MASTER CityWhite CDO-TT Plus 250W/830 E40	T46

