



The easiest switch to comfortable white light

MASTER CityWhite CDO-ET

Ceramic metal halide lamp, with opalized ovoid 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

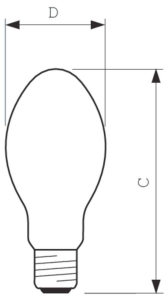
- Use only in totally enclosed luminaire, even during testing (IEC61167, IEC 62035, IEC60598)
- The luminaire must be able to contain hot lamp parts if the lamp ruptures
- Lamps may use electronic or electromagnetic control gear
- Control gear must include end-of-life protection (IEC61167, IEC 62035)
- 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



CDO-ET, E40

Dimensional drawing



Product	D (max)	C (max)
MASTER CityWhite CDO-ET Plus 150W/828 E40	91 mm	227 mm
MASTER CityWhite CDO-ET Plus 70W/828 E27	71 mm	156 mm
MASTER CityWhite CDO-ET Plus 100W/828 E40	76 mm	186 mm
MASTER CityWhite CDO-ET Plus 50W/828 E27	71 mm	156 mm

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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

Color Code 828

Color Designation Warm White (WW)

Ratio Scotopic/Photopic Lumens 1.30

Mechanical and Housing

Bulb Finish Coated glass

Approval and Application

Order Code	Full Product Name	Energy Consumption kWh/1000 h	Mercury (Hg) Content (Nom)
928154708835	MASTER CityWhite CDO-ET Plus 70W/828 E27	78 kWh	7.8 mg
928155008835	MASTER CityWhite CDO-ET Plus 50W/828 E27	57 kWh	5.4 mg
928154808835	MASTER CityWhite CDO-ET Plus 100W/828 E40	105 kWh	11.6 mg
928154908835	MASTER CityWhite CDO-ET Plus 150W/828 E40	157 kWh	15.8 mg

Operating and Electrical (1/2)

Order Code	Full Product Name	Lamp Current	Voltage (Max)	Voltage (Min)	Voltage (Nom)
		(EM) (Nom)			
928154708835	MASTER CityWhite CDO-ET Plus 70W/828 E27	0.99 A	96 V	80 V	83 V
928155008835	MASTER CityWhite CDO-ET Plus 50W/828 E27	0.77 A	86 V	70 V	78 V

Order Code	Full Product Name	Lamp Current	Voltage (Max)	Voltage (Min)	Voltage (Nom)
		(EM) (Nom)			
928154808835	MASTER CityWhite CDO-ET Plus 100W/828 E40	0.123 A	98 V	82 V	90 V
928154908835	MASTER CityWhite CDO-ET Plus 150W/828 E40	1.85 A	98 V	82 V	89 V

Operating and Electrical (2/2)

Order Code	Full Product Name	Power (Rated)	Re-Ignition Time
		(Nom)	(Min) (Max)
928154708835	MASTER CityWhite CDO-ET Plus 70W/828 E27	71.0 W	720 s
928155008835	MASTER CityWhite CDO-ET Plus 50W/828 E27	52.0 W	720 s

Order Code	Full Product Name	Power (Rated)	Re-Ignition Time
		(Nom)	(Min) (Max)
928154808835	MASTER CityWhite CDO-ET Plus 100W/828 E40	95.0 W	900 s
928154908835	MASTER CityWhite CDO-ET Plus 150W/828 E40	143 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)
928154708835	MASTER CityWhite CDO-ET Plus 70W/828 E27	E27	15000 h	17000 h	27000 h
928155008835	MASTER CityWhite CDO-ET Plus 50W/828 E27	E27	15000 h	17000 h	21000 h

Order Code	Full Product Name	Cap-Base	Life To 10%	Life To 20%	Life To 50%
			Failures (Nom)	Failures (Nom)	Failures (Nom)
928154808835	MASTER CityWhite CDO-ET Plus 100W/828 E40	E40	20000 h	22500 h	27000 h
928154908835	MASTER CityWhite CDO-ET Plus 150W/828 E40	E40	20000 h	22500 h	27000 h

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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
928154708835	MASTER CityWhite CDO-ET Plus 70W/828 E27	13000 h	90 %	81 %	71 %	98 %	96 %
928155008835	MASTER CityWhite CDO-ET Plus 50W/828 E27	13000 h	90 %	74 %	50 %	99 %	98 %
928154808835	MASTER CityWhite CDO-ET Plus 100W/828 E40	18000 h	99 %	97 %	90 %	99 %	99 %
928154908835	MASTER CityWhite CDO-ET Plus 150W/828 E40	18000 h	99 %	97 %	90 %	99 %	99 %

Luminaire Design Requirements

Order Code	Full Product Name	Bulb Temperature (Max)
928154708835	MASTER CityWhite CDO-ET Plus 70W/828 E27	350 °C
928155008835	MASTER CityWhite CDO-ET Plus 50W/828 E27	350 °C

Order Code	Full Product Name	Bulb Temperature (Max)
928154808835	MASTER CityWhite CDO-ET Plus 100W/828 E40	450 °C
928154908835	MASTER CityWhite CDO-ET Plus 150W/828 E40	350 °C

Light Technical (1/3)

Order Code	Full Product Name	Chromaticity Coordinate X (Nom)	Chromaticity Coordinate Y (Nom)	Correlated Color Temperature (Nom)	Color Rendering Index (Min)
928154708835	MASTER CityWhite CDO-ET Plus 70W/828 E27	438	398	2900 K	81
928155008835	MASTER CityWhite CDO-ET Plus 50W/828 E27	443	399	2800 K	79
928154808835	MASTER CityWhite	444	403	2890 K	-

Order Code	Full Product Name	Chromaticity Coordinate X (Nom)	Chromaticity Coordinate Y (Nom)	Correlated Color Temperature (Nom)	Color Rendering Index (Min)
928154808835	MASTER CityWhite CDO-ET Plus 100W/828 E40	443	402	2830 K	-
928154908835	MASTER CityWhite CDO-ET Plus 150W/828 E40	443	402	2830 K	-

Light Technical (2/3)

Order Code	Full Product Name	Color Rendering Index (Nom)	LLMF 12000 h Rated	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)
928154708835	MASTER CityWhite CDO-ET Plus 70W/828 E27	84	80.5 %	76.5 %	97 %	73.5 %	93 %	89.5 %	86 %	99.3 lm/W
928155008835	MASTER CityWhite CDO-ET Plus 50W/828 E27	82	80 %	74 %	98 %	71 %	96 %	92 %	88 %	99.04 lm/W

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Order Code	Full Product Name	Color								Luminous Efficacy (rated) (Nom)
		Rendering Index (Nom)	LLMF 12000 h Rated	LLMF 16000 h Rated	LLMF 2000 h Rated	LLMF 20000 h Rated	LLMF 4000 h Rated	LLMF 6000 h Rated	LLMF 8000 h Rated	
928154808835	MASTER CityWhite CDO-ET Plus 100W/828 E40	87	85 %	82 %	95 %	80 %	92 %	90 %	88 %	98.95 lm/W
928154908835	MASTER CityWhite CDO-ET Plus 150W/828 E40	85	85 %	82 %	95 %	80 %	92 %	90 %	88 %	107.69 lm/W

Light Technical (3/3)

Order Code	Full Product Name	Luminous Flux (Rated) (Nom)
928154708835	MASTER CityWhite CDO-ET Plus 70W/828 E27	7050 lm
928155008835	MASTER CityWhite CDO-ET Plus 50W/828 E27	5150 lm
928154808835	MASTER CityWhite CDO-ET Plus 100W/828 E40	9400 lm

Order Code	Full Product Name	Luminous Flux (Rated) (Nom)
928154908835	MASTER CityWhite CDO-ET Plus 150W/828 E40	15400 lm

Mechanical and Housing

Order Code	Full Product Name	Bulb Shape
928154708835	MASTER CityWhite CDO-ET Plus 70W/828 E27	B70
928155008835	MASTER CityWhite CDO-ET Plus 50W/828 E27	B70
928154808835	MASTER CityWhite CDO-ET Plus 100W/828 E40	B75
928154908835	MASTER CityWhite CDO-ET Plus 150W/828 E40	BD90

