



The easy-fitting solution for highly energy-efficient and reliable white light outdoors

MASTER CosmoWhite CPO-TT Xtra

New-generation ceramic metal-halide tubular lamps used in outdoor applications, offering efficient and pleasant white light

Benefits

- Attractive white-light alternative to current standard mercury-vapor, HPS and ceramic solutions
- Offering easy access to low-cost high-performance new system with existing standard components
- Best combination of low investment and high energy savings (up to 65%), resulting in very low cost of ownership

Features

- Highly efficient white light; extremely high system efficacy
- Long reliable lifetime; new Xtra range offering service life of up to 6 years (> 30kh average life)
- Unique new burner design in combination with glass outer bulb and Edison lamp base offering easy fit into existing HPS / SON luminaire platform
- Designed for electronic gear platforms including all control features and dimming options offering flexible light levels and reduced energy consumption

MASTER CosmoWhite CPO-TT Xtra

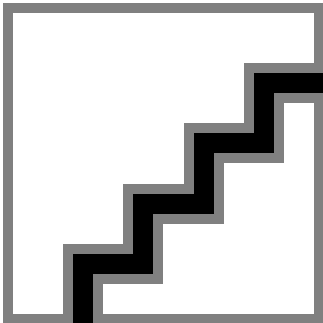
Application

- Street lighting and area lighting, urban and residential areas and city centers; for functional lighting and city beautification

Warnings and Safety

- Use only in a totally enclosed luminaire, even during testing (IEC 61167, IEC 62035, IEC 60598)
- The luminaire must be able to contain hot lamp parts if the lamp ruptures
- Use only with suitable electronic control gear
- Control gear must include end-of-life protection (IEC 61167, IEC 62035)
- E27 lamp holders and other parts in luminaires should be designed to withstand the ignition voltage of the electronic control gear (rated at 5 kV ignition pulse)
- 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.

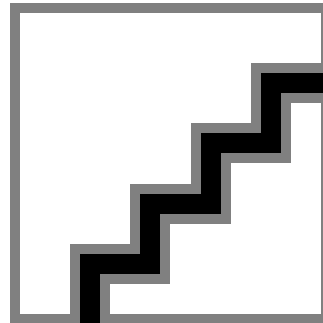
Versions



CPO-TT 45W, 60W /628 E27

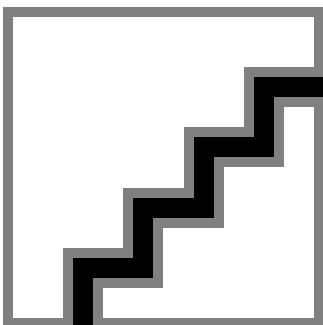


CPO-TT /628 E39, E40



CPO-TT 210W, 315W /942 E40

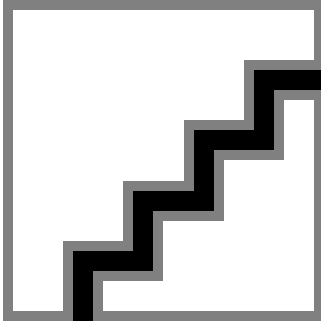
Dimensional drawing



Product	D (max)	D	O	L	C (max)
MST CosmoWhite CPO-TT Xtra 210W/830 E40	47 mm	46 mm	12.4 mm	157 mm	257 mm

MASTER CosmoWhite CPO-TT Xtra

Dimensional drawing



Product	D (max)	D	O	L	C (max)
MST CosmoWhite CPO-TT Xtra 45W/628 E27	36 mm	35 mm	14 mm	103 mm	156 mm
MST CosmoWhite CPO-TT Xtra 60W/628 E27	36 mm	35 mm	14 mm	102 mm	156 mm
MST CosmoWhite CPO-TT Xtra 140W/628 E40	47 mm	46 mm	23 mm	132 mm	211 mm
MST CosmoWhite CPO-TT Xtra 90W/628 E40	47 mm	46 mm	18 mm	132 mm	211 mm

Approval and Application

Energy Efficiency Label (EEL) A+

Controls and Dimming

Dimmable Yes

Operating and Electrical

Re-ignition Time (Min) (Max) 900 s

General Information

Life To 10% Failures (Nom) 24000 h

Life To 20% Failures (Nom) 27000 h

Life To 50% Failures (Nom) 32000 h

Life To 5% Failures (Nom) 21500 h

LSF 12000 h Rated 99 %

LSF 16000 h Rated 99 %

LSF 2000 h Rated 99 %

LSF 20000 h Rated 97 %

LSF 24000 h Rated 90 %

LSF 30000 h Rated 63 %

LSF 4000 h Rated 99 %

LSF 6000 h Rated 99 %

LSF 8000 h Rated 99 %

Light Technical

Color Designation Warm White (WW)

Mechanical and Housing

Bulb Finish Clear

Approval and Application

Order Code	Full Product Name	Energy Consumption kWh/1000 h	Mercury (Hg) Content (Nom)
928060109227	MST CosmoWhite CPO-TT Xtra 60W/628 E27	66 kWh	2.0 mg
928060809227	MST CosmoWhite CPO-TT Xtra 45W/628 E27	50 kWh	2.0 mg
928060209227	MST CosmoWhite CPO-TT Xtra 90W/628 E40	98 kWh	3.0 mg
928060309227	MST CosmoWhite CPO-TT Xtra 140W/628 E40	154 kWh	3.90 mg
928061009227	MST CosmoWhite CPO-TT Xtra 210W/830 E40	231 kWh	23.0 mg

Operating and Electrical

Order Code	Full Product Name	Voltage (Max)	Voltage (Min)	Voltage (Nom)	Power (Rated) (Nom)
928060109227	MST CosmoWhite CPO-TT Xtra 60W/628 E27	98 V	84 V	91 V	60.0 W

Order Code	Full Product Name	Voltage (Max)	Voltage (Min)	Voltage (Nom)	Power (Rated) (Nom)
928060809227	MST CosmoWhite CPO-TT Xtra 45W/628 E27	97 V	83 V	90 V	45.0 W

MASTER CosmoWhite CPO-TT Xtra

Order Code	Full Product Name	Voltage (Max)	Voltage (Min)	Voltage (Nom)	Power (Rated) (Nom)
928060209227	MST CosmoWhite CPO-TT Xtra 90W/628 E40	97 V	81 V	91 V	89.0 W
928060309227	MST CosmoWhite CPO-TT Xtra 140W/628 E40	97 V	85 V	91 V	140.0 W

Order Code	Full Product Name	Voltage (Max)	Voltage (Min)	Voltage (Nom)	Power (Rated) (Nom)
928061009227	MST CosmoWhite CPO-TT Xtra 210W/830 E40	-	-	97 V	210.0 W

General Information

Order Code	Full Product Name	Cap-Base	Operating Position
928060109227	MST CosmoWhite CPO-TT Xtra 60W/628 E27	E27	P20
928060809227	MST CosmoWhite CPO-TT Xtra 45W/628 E27	E27	P20
928060209227	MST CosmoWhite CPO-TT Xtra 90W/628 E40	E40	P20

Order Code	Full Product Name	Cap-Base	Operating Position
928060309227	MST CosmoWhite CPO-TT Xtra 140W/628 E40	E40	P20
928061009227	MST CosmoWhite CPO-TT Xtra 210W/830 E40	E40	UNIVERSAL

Luminaire Design Requirements

Order Code	Full Product Name	Bulb Temperature (Max)
928060109227	MST CosmoWhite CPO-TT Xtra 60W/628 E27	350 °C
928060809227	MST CosmoWhite CPO-TT Xtra 45W/628 E27	350 °C
928060209227	MST CosmoWhite CPO-TT Xtra 90W/628 E40	450 °C
928060309227	MST CosmoWhite CPO-TT Xtra 140W/628 E40	450 °C

Order Code	Full Product Name	Bulb Temperature (Max)
928061009227	MST CosmoWhite CPO-TT Xtra 210W/830 E40	450 °C

Light Technical (1/3)

Order Code	Full Product Name	Chromaticity Coordinate X (Nom)	Chromaticity Coordinate Y (Nom)	Color Code	Color Rendering Index (Min)
928060109227	MST CosmoWhite CPO-TT Xtra 60W/628 E27	0.459	0.408	628	-
928060809227	MST CosmoWhite CPO-TT Xtra 45W/628 E27	0.462	0.415	628	-
928060209227	MST CosmoWhite CPO-TT Xtra 90W/628 E40	0.460	0.417	628	63

Order Code	Full Product Name	Chromaticity Coordinate X (Nom)	Chromaticity Coordinate Y (Nom)	Color Code	Color Rendering Index (Min)
928060309227	MST CosmoWhite CPO-TT Xtra 140W/628 E40	0.433	0.414	628	-
928061009227	MST CosmoWhite CPO-TT Xtra 210W/830 E40	0.431	0.401	830	-

Light Technical (2/3)

MASTER CosmoWhite CPO-TT Xtra

Order Code	Full Product Name	Color	LLMF							
		Rendering Index (Nom)	LLMF 12000 h Rated	LLMF 16000 h Rated	LLMF 2000 h Rated	LLMF 20000 h Rated	LLMF 24000 h Rated	30000 h Rated	LLMF 4000 h Rated	LLMF 6000 h Rated
928060109227	MST CosmoWhite CPO-TT Xtra 60W/628 E27	70	85 %	83 %	88 %	82 %	80 %	78 %	86 %	86 %
928060809227	MST CosmoWhite CPO-TT Xtra 45W/628 E27	65	89 %	87 %	92 %	86 %	84 %	82 %	90 %	90 %
928060209227	MST CosmoWhite CPO-TT Xtra 90W/628 E40	66	87 %	86 %	93 %	85 %	84 %	83 %	91 %	90 %
928060309227	MST CosmoWhite CPO-TT Xtra 140W/628 E40	68	88 %	87 %	93 %	85 %	84 %	-	92 %	91 %
928061009227	MST CosmoWhite CPO-TT Xtra 210W/830 E40	86	89 %	86 %	97 %	84 %	82 %	80 %	95 %	93 %

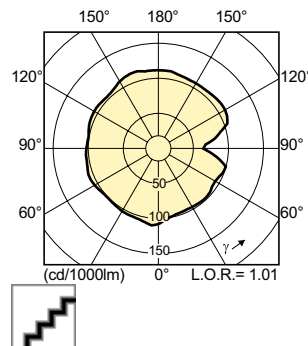
Light Technical (3/3)

Order Code	Full Product Name	LLMF 8000 h Rated	Luminous	Luminous	Ratio
			Efficacy (rated) (Nom)	Flux (Rated) (Nom)	Scotopic/Photopic Lumens
928060109227	MST CosmoWhite CPO-TT Xtra 60W/628 E27	86 %	120 lm/W	7090 lm	1.15
928060809227	MST CosmoWhite CPO-TT Xtra 45W/628 E27	90 %	105 lm/W	4650 lm	1.08
928060209227	MST CosmoWhite CPO-TT Xtra 90W/628 E40	88 %	113 lm/W	10000 lm	1.15

Order Code	Full Product Name	LLMF 8000 h Rated	Luminous	Luminous	Ratio
			Efficacy (rated) (Nom)	Flux (Rated) (Nom)	Scotopic/Photopic Lumens
928060309227	MST CosmoWhite CPO-TT Xtra 140W/628 E40	89 %	117 lm/W	16400 lm	1.23
928061009227	MST CosmoWhite CPO-TT Xtra 210W/830 E40	92 %	112 lm/W	23560 lm	1.34

Mechanical and Housing

Order Code	Full Product Name	Bulb Shape
928060109227	MST CosmoWhite CPO-TT Xtra 60W/628 E27	T35
928060809227	MST CosmoWhite CPO-TT Xtra 45W/628 E27	T35
928060209227	MST CosmoWhite CPO-TT Xtra 90W/628 E40	T46
928060309227	MST CosmoWhite CPO-TT Xtra 140W/628 E40	T46
928061009227	MST CosmoWhite CPO-TT Xtra 210W/830 E40	T46



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