



The most energy-efficient reliable white light solution for Outdoor

MASTER CosmoWhite CPO-TW & CPO-TW Xtra

New-generation ceramic metal halide lamps used in Outdoor offering efficient and pleasant white light

Benefits

- Attractive white light
- Excellent optical efficacy allows greater spacing between luminaires, thereby reducing investment
- Energy savings of up to 60% and very low cost of ownership

Features

- Highly efficient white light with extremely high system efficacy
- Long reliable lifetime; new Xtra range offering service life of up to 6 years
- Unique new burner design and positioning in combination with optimum lamp fixation (PGZ12) ensures excellent optical efficacy
- Compact size: 50% smaller than SON/HPL systems
- New electronic gear platform including dimming options

Application

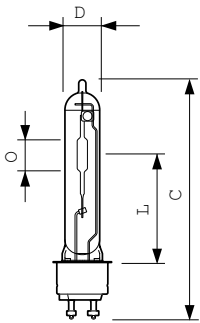
- Urban public lighting for city centers, residential areas and roads
- Lamp optimized for horizontal position; when positioned vertically, the lifetime specification is much lower (as much as - 40%)

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Versions



Dimensional drawing



Product	D (max)	D	O	L	C (max)
MASTER CosmoWhite CPO-TW Xtra 90W/728 PGZ12	20 mm	19 mm	18 mm	66 mm	143 mm
MASTER CosmoWhite CPO-TW Xtra 140W/728 PGZ12	20 mm	19 mm	22 mm	66 mm	150 mm
MASTER CosmoWhite CPO-TW Xtra 60W/728 PGZ12	20 mm	19 mm	14 mm	59 mm	132 mm
MASTER CosmoWhite CPO-TW Xtra 45W/628 PGZ12	20 mm	19 mm	14 mm	59 mm	132 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

Cap-Base PGZ12

LSF 12000 h Rated 99 %

LSF 2000 h Rated 99 %

LSF 4000 h Rated 99 %

LSF 6000 h Rated 99 %

LSF 8000 h Rated 99 %

Operating Position UNIVERSAL

Light Technical

Colour Designation White (WH)

Mechanical and Housing

Bulb Finish Clear (CL)

Bulb Shape T19

Approval and Application

Order Code	Full Product Name	Energy Consumption kWh/1000 h	Mercury (Hg) Content (Nom)
15001500	MASTER CosmoWhite CPO-TW Xtra 45W/628 PGZ12	50 kWh	2.0 mg
20851415	MASTER CosmoWhite CPO-TW Xtra 60W/728 PGZ12	66 kWh	2.0 mg
21121715	MASTER CosmoWhite CPO-TW Xtra 90W/728 PGZ12	99 kWh	3.0 mg
20853815	MST COSMOWH CPO-TW Xtra 140W/728 PGZ12	154 kWh	3.9 mg

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Operating and Electrical

Order Code	Full Product Name	Voltage			Power
		(Max)	(Min)	(Nom)	(Rated)
15001500	MASTER CosmoWhite CPO-TW Xtra 45W/628 PGZ12	98 V	84 V	91 V	45.0 W
20851415	MASTER CosmoWhite CPO-TW Xtra 60W/728 PGZ12	99 V	85 V	92 V	60.0 W

Order Code	Full Product Name	Voltage			Power
		(Max)	(Min)	(Nom)	(Rated)
21121715	MASTER CosmoWhite CPO-TW Xtra 90W/728 PGZ12	98 V	86 V	92 V	90.0 W
20853815	MST COSMOWH CPO-TW Xtra 140W/728 PGZ12	100 V	88 V	94 V	140.0 W

General Information (1/2)

Order Code	Full Product Name	Life To		Life To	
		Life To 10% Failures (Nom)	20% Failures (Nom)	50% Failures (Nom)	Life To 5% Failures (Nom)
15001500	MASTER CosmoWhite CPO-TW Xtra 45W/628 PGZ12	24000 h	27000 h	32000 h	21500 h
20851415	MASTER CosmoWhite CPO-TW Xtra 60W/728 PGZ12	24000 h	27000 h	32000 h	21500 h

Order Code	Full Product Name	Life To		Life To	
		Life To 10% Failures (Nom)	20% Failures (Nom)	50% Failures (Nom)	Life To 5% Failures (Nom)
21121715	MASTER CosmoWhite CPO-TW Xtra 90W/728 PGZ12	24000 h	27000 h	32000 h	21500 h
20853815	MST COSMOWH CPO-TW Xtra 140W/728 PGZ12	20000 h	24000 h	30000 h	18000 h

General Information (2/2)

Order Code	Full Product Name	LSF	LSF	LSF	LSF
		16000 h Rated	20000 h Rated	24000 h Rated	30000 h Rated
15001500	MASTER CosmoWhite CPO-TW Xtra 45W/628 PGZ12	99 %	97 %	90 %	63 %
20851415	MASTER CosmoWhite CPO-TW Xtra 60W/728 PGZ12	99 %	97 %	90 %	63 %

Order Code	Full Product Name	LSF	LSF	LSF	LSF
		16000 h Rated	20000 h Rated	24000 h Rated	30000 h Rated
21121715	MASTER CosmoWhite CPO-TW Xtra 90W/728 PGZ12	99 %	97 %	90 %	63 %
20853815	MST COSMOWH CPO-TW Xtra 140W/728 PGZ12	97 %	90 %	80 %	50 %

Luminaire Design Requirements

Order Code	Full Product Name	Bulb Temperature (Max)
15001500	MASTER CosmoWhite CPO-TW Xtra 45W/628 PGZ12	380 °C
20851415	MASTER CosmoWhite CPO-TW Xtra 60W/728 PGZ12	400 °C

Order Code	Full Product Name	Bulb Temperature (Max)
21121715	MASTER CosmoWhite CPO-TW Xtra 90W/728 PGZ12	470 °C
20853815	MST COSMOWH CPO-TW Xtra 140W/728 PGZ12	550 °C

Light Technical (1/3)

MASTER CosmoWhite CPO-TW & CPO-TW Xtra

Order Code	Full Product Name	Chromaticity	Chromaticity	Colour	
		Coordinate X (Nom)	Coordinate Y (Nom)	Colour Code	Rendering Index (Min)
15001500	MASTER CosmoWhite CPO-TW Xtra 45W/628 PGZ12	459	412	628	63
20851415	MASTER CosmoWhite CPO-TW Xtra 60W/728 PGZ12	453	405	728	70

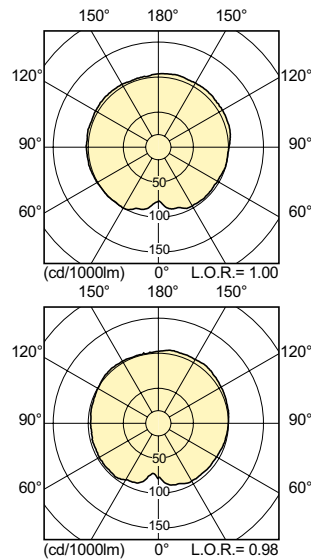
Order Code	Full Product Name	Chromaticity	Chromaticity	Colour	
		Coordinate X (Nom)	Coordinate Y (Nom)	Colour Code	Rendering Index (Min)
21121715	MASTER CosmoWhite CPO-TW Xtra 90W/728 PGZ12	449	412	728	67
20853815	MST COSMOWH CPO-TW Xtra 140W/728 PGZ12	440	413	728	-

Light Technical (2/3)

Order Code	Full Product Name	Colour	LLMF							
		Rendering Index (Nom)	LLMF 12000 h Rated	LLMF 16000 h Rated	LLMF 2000 h Rated	LLMF 20000 h Rated	LLMF 24000 h Rated	LLMF 30000 h Rated	LLMF 4000 h Rated	LLMF 6000 h Rated
15001500	MASTER CosmoWhite CPO-TW Xtra 45W/628 PGZ12	66	89 %	87 %	92 %	86 %	84 %	82 %	90 %	90 %
20851415	MASTER CosmoWhite CPO-TW Xtra 60W/728 PGZ12	73	89 %	87 %	92 %	86 %	84 %	82 %	90 %	90 %
21121715	MASTER CosmoWhite CPO-TW Xtra 90W/728 PGZ12	70	92 %	91 %	94 %	90 %	-	-	93 %	93 %
20853815	MST COSMOWH CPO-TW Xtra 140W/728 PGZ12	72	89 %	88 %	94 %	87 %	86 %	-	93 %	92 %

Light Technical (3/3)

Order Code	Full Product Name	LLMF	Luminous	Luminous	Ratio
		8000 h Rated	Efficacy (rated) (Nom)	Flux (Rated) (Nom)	Scotopic/Photopic Lumens
15001500	MASTER CosmoWhite CPO-TW Xtra 45W/628 PGZ12	90 %	110 lm/W	4950 lm	1.15
20851415	MASTER CosmoWhite CPO-TW Xtra 60W/728 PGZ12	90 %	120 lm/W	7200 lm	1.15
21121715	MASTER CosmoWhite CPO-TW Xtra 90W/728 PGZ12	93 %	120 lm/W	10800 lm	1.15
20853815	MST COSMOWH CPO-TW Xtra 140W/728 PGZ12	91 %	125 lm/W	17600 lm	1.30



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