



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%)

MASTER CosmoWhite CPO-TW & CPO-TW Xtra

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
- Use only with electronic control gear
- Control gear must include end-of-life protection (IEC61167, IEC 62035)
- 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.

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	
Chromaticity Coordinate X (Nom)	0.447
Chromaticity Coordinate Y (Nom)	0.4
Colour Designation	White (WH)
Correlated Colour Temperature (Nom)	2800 K
Mechanical and Housing	
Bulb Finish	Clear
Bulb Shape	T19

Approval and Application

Order Code	Full Product Name	Energy Consumption kWh/1000 h	Mercury (Hg) Content (Max)	Mercury (Hg) Content (Nom)
15001500	MASTER CosmoWhite CPO-TW Xtra 45W/628 PGZ12	45 kWh	2 mg	2.0 mg
20851415	MASTER CosmoWhite CPO-TW Xtra 60W/728 PGZ12	60 kWh	2 mg	2.0 mg
21121715	MASTER CosmoWhite CPO-TW Xtra 90W/728 PGZ12	90 kWh	3 mg	3.0 mg
20853815	MST COSMOWH CPO-TW Xtra 140W/728 PGZ12	141 kWh	3.9 mg	3.9 mg

Operating and Electrical

Order Code	Full Product Name	Voltage (Max)	Voltage (Min)	Voltage (Nom)	Power (Nom)
15001500	MASTER CosmoWhite CPO-TW Xtra 45W/628 PGZ12	98 V	84 V	91 V	44.5 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 (Max)	Voltage (Min)	Voltage (Nom)	Power (Nom)
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	141.0 W

General Information (1/2)

MASTER CosmoWhite CPO-TW & CPO-TW Xtra

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)

Order Code	Full Product Name	Colour Code	Colour	Colour	LLMF
			Rendering Index (Min)	Rendering Index (Nom)	12000 h Rated
15001500	MASTER CosmoWhite CPO-TW Xtra 45W/628 PGZ12	628	63	66	89 %
20851415	MASTER CosmoWhite CPO-TW Xtra 60W/728 PGZ12	728	70	73	89 %

Order Code	Full Product Name	Colour Code	Colour	Colour	LLMF
			Rendering Index (Min)	Rendering Index (Nom)	12000 h Rated
21121715	MASTER CosmoWhite CPO-TW Xtra 90W/728 PGZ12	728	67	70	92 %
20853815	MST COSMOWH CPO-TW Xtra 140W/728 PGZ12	728	-	72	89 %

Light Technical (2/3)

Order Code	Full Product Name	LLMF	LLMF	LLMF	LLMF	LLMF	LLMF	LLMF	LLMF	LLMF	Luminous Efficacy (rated) (Nom)
		16000 h Rated	2000 h Rated	20000 h Rated	24000 h Rated	30000 h Rated	4000 h Rated	6000 h Rated	8000 h Rated		
15001500	MASTER CosmoWhite CPO-TW Xtra 45W/628 PGZ12	87 %	92 %	86 %	84 %	82 %	90 %	90 %	90 %	90 %	110 lm/W

MASTER CosmoWhite CPO-TW & CPO-TW Xtra

Order Code	Full Product Name	LLMF			LLMF		LLMF			Luminous Efficacy (rated) (Nom)
		16000 h Rated	2000 h Rated	20000 h Rated	24000 h Rated	30000 h Rated	4000 h Rated	6000 h Rated	8000 h Rated	
20851415	MASTER CosmoWhite CPO-TW Xtra 60W/728 PGZ12	87 %	92 %	86 %	84 %	82 %	90 %	90 %	90 %	120 lm/W
21121715	MASTER CosmoWhite CPO-TW Xtra 90W/728 PGZ12	91 %	94 %	90 %	-	-	93 %	93 %	93 %	120 lm/W
20853815	MST COSMOWH CPO-TW Xtra 140W/728 PGZ12	88 %	94 %	87 %	86 %	-	93 %	92 %	91 %	125 lm/W

Light Technical (3/3)

Order Code	Full Product Name	Luminous Flux (Nom)	Luminous Flux (Rated) (Nom)	Ratio
				Scotopic/Photopic Lumens
15001500	MASTER CosmoWhite CPO-TW Xtra 45W/628 PGZ12	4900 lm	4900 lm	1.15
20851415	MASTER CosmoWhite CPO-TW Xtra 60W/728 PGZ12	7200 lm	7200 lm	1.15

Order Code	Full Product Name	Luminous Flux (Nom)	Luminous Flux (Rated) (Nom)	Ratio
				Scotopic/Photopic Lumens
21121715	MASTER CosmoWhite CPO-TW Xtra 90W/728 PGZ12	10800 lm	10800 lm	1.15
20853815	MST COSMOWH CPO-TW Xtra 140W/728 PGZ12	17600 lm	17600 lm	1.30

