



# 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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## 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.

## Versions



CPO-TW Xtra 45W /628 PGZ12

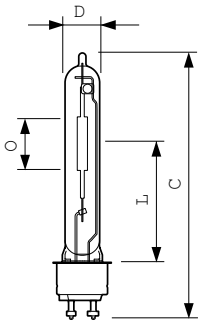
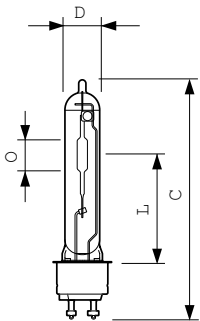


CPO-TW 140W /728 PGZ12



CPO-TW 140W /840 PGZ12

## Dimensional drawing

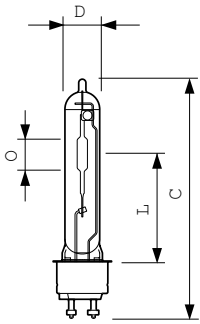


Product	D (max)	D	O	L	C (max)
MASTER CosmoWhite CPO-TW Xtra 60W/728 PGZ12	20 mm	19 mm	14 mm	59 mm	132 mm
MASTER CosmoWhite CPO-TW Xtra 90W/728 PGZ12	20 mm	19 mm	18 mm	66 mm	143 mm
MASTER CosmoWhite CPO-TW Xtra 45W/628 PGZ12	20 mm	19 mm	14 mm	59 mm	132 mm
MASTER CosmoWhite CPO-TW Xtra 140W/728 PGZ12	20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

Product	D (max)	D	O	L	C (max)
MASTER CosmoWhite CPO-TW 140W/840 PGZ12 1CT	20 mm	19 mm	22 mm	66 mm	149.8 mm

# MASTER CosmoWhite CPO-TW & CPO-TW Xtra

## Dimensional drawing



Product	D (max)	D	O	L	C (max)
MASTER CosmoWhite CPO-TW 60W/840 PGZ12 1CT	20 mm	19 mm	14 mm	59 mm	132 mm

Controls and Dimming	
Dimmable	Yes
Operating and Electrical	
Re-ignition Time (Min) (Max)	900 s
General Information	
Cap-Base	PGZ12
LSF 2000 h Rated	99 %
LSF 4000 h Rated	99 %
LSF 6000 h Rated	99 %
Operating Position	UNIVERSAL
Light Technical	
Color Designation	White (WH)
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)
928083805127	MASTER CosmoWhite CPO-TW Xtra 45W/628 PGZ12	45 kWh	2 mg	2.0 mg
928088505127	MASTER CosmoWhite CPO-TW Xtra 60W/728 PGZ12	60 kWh	2 mg	2.0 mg
928093505127	MASTER CosmoWhite CPO-TW Xtra 90W/728 PGZ12	90 kWh	3 mg	3.0 mg
928095005127	MASTER CosmoWhite CPO-TW 60W/840 PGZ12 1CT	66 kWh	-	1.54 mg
928088805127	MASTER CosmoWhite CPO-TW Xtra 140W/728 PGZ12	141 kWh	3.9 mg	3.9 mg
928095205127	MASTER CosmoWhite CPO-TW 140W/840 PGZ12 1CT	154 kWh	-	2.0 mg

## Operating and Electrical

Order Code	Full Product Name	Voltage (Max)	Voltage (Min)	Voltage (Nom)	Power (Rated) (Nom)
928083805127	MASTER CosmoWhite CPO-TW Xtra 45W/628 PGZ12	98 V	84 V	91 V	44.5 W
928088505127	MASTER CosmoWhite CPO-TW Xtra 60W/728 PGZ12	99 V	85 V	92 V	60.0 W
928093505127	MASTER CosmoWhite CPO-TW Xtra 90W/728 PGZ12	98 V	86 V	92 V	90.0 W

Order Code	Full Product Name	Voltage (Max)	Voltage (Min)	Voltage (Nom)	Power (Rated) (Nom)
928095005127	MASTER CosmoWhite CPO-TW 60W/840 PGZ12 1CT	99 V	85 V	92 V	60.0 W
928088805127	MASTER CosmoWhite CPO-TW Xtra 140W/728 PGZ12	100 V	88 V	94 V	141.0 W
928095205127	MASTER CosmoWhite CPO-TW 140W/840 PGZ12 1CT	105 V	93 V	99 V	140.0 W

## General Information (1/2)

## MASTER CosmoWhite CPO-TW & CPO-TW Xtra

Order Code	Full Product Name	Life To	Life To	Life To	Life To
		10% Failures (Nom)	20% Failures (Nom)	50% Failures (Nom)	Life To 5% Failures (Nom)
928083805127	MASTER CosmoWhite CPO-TW Xtra 45W/628 PGZ12	24000 h	27000 h	32000 h	21500 h
928088505127	MASTER CosmoWhite CPO-TW Xtra 60W/728 PGZ12	24000 h	27000 h	32000 h	21500 h
928093505127	MASTER CosmoWhite CPO-TW Xtra 90W/728 PGZ12	24000 h	27000 h	32000 h	21500 h
928095005127	MASTER CosmoWhite CPO-	16000 h	18000 h	22000 h	14000 h

Order Code	Full Product Name	Life To	Life To	Life To	Life To
		10% Failures (Nom)	20% Failures (Nom)	50% Failures (Nom)	Life To 5% Failures (Nom)
	TW 60W/840 PGZ12 1CT				
928088805127	MASTER CosmoWhite CPO-TW Xtra 140W/728 PGZ12	20000 h	24000 h	30000 h	18000 h
928095205127	MASTER CosmoWhite CPO-TW 140W/840 PGZ12 1CT	12000 h	13000 h	15000 h	11000 h

### General Information (2/2)

Order Code	Full Product Name	LSF 12000 h	LSF 16000 h	LSF 20000 h	LSF 24000 h	LSF 30000 h	LSF 8000 h
		Rated	Rated	Rated	Rated	Rated	Rated
928083805127	MASTER CosmoWhite CPO-TW Xtra 45W/628 PGZ12	99 %	99 %	97 %	90 %	63 %	99 %
928088505127	MASTER CosmoWhite CPO-TW Xtra 60W/728 PGZ12	99 %	99 %	97 %	90 %	63 %	99 %
928093505127	MASTER CosmoWhite CPO-TW Xtra 90W/728 PGZ12	99 %	99 %	97 %	90 %	63 %	99 %
928095005127	MASTER CosmoWhite CPO-TW 60W/840 PGZ12 1CT	98 %	90 %	67 %	-	-	99 %
928088805127	MASTER CosmoWhite CPO-TW Xtra 140W/728 PGZ12	99 %	97 %	90 %	80 %	50 %	99 %
928095205127	MASTER CosmoWhite CPO-TW 140W/840 PGZ12 1CT	90 %	30 %	-	-	-	98 %

### Luminaire Design Requirements

Order Code	Full Product Name	Bulb Temperature (Max)
928083805127	MASTER CosmoWhite CPO-TW Xtra 45W/628 PGZ12	380 °C
928088505127	MASTER CosmoWhite CPO-TW Xtra 60W/728 PGZ12	400 °C
928093505127	MASTER CosmoWhite CPO-TW Xtra 90W/728 PGZ12	470 °C

Order Code	Full Product Name	Bulb Temperature (Max)
928095005127	MASTER CosmoWhite CPO-TW 60W/840 PGZ12 1CT	400 °C
928088805127	MASTER CosmoWhite CPO-TW Xtra 140W/728 PGZ12	550 °C
928095205127	MASTER CosmoWhite CPO-TW 140W/840 PGZ12 1CT	550 °C

### Light Technical (1/3)

# MASTER CosmoWhite CPO-TW & CPO-TW Xtra

Order Code	Full Product Name	Chromaticity	Chromaticity	Correlated Color Temperature	
		Coordinate X (Nom)	Coordinate Y (Nom)	Color Code	Temperature (Nom)
928083805127	MASTER CosmoWhite CPO-TW Xtra 45W/628 PGZ12	0.447	0.4	628	2800 K
928088505127	MASTER CosmoWhite CPO-TW Xtra 60W/728 PGZ12	0.447	0.4	728	2800 K
928093505127	MASTER CosmoWhite CPO-TW Xtra 90W/728 PGZ12	0.447	0.4	728	2800 K
928095005127	MASTER CosmoWhite	382	392	840	-

Order Code	Full Product Name	Chromaticity	Chromaticity	Correlated Color Temperature	
		Coordinate X (Nom)	Coordinate Y (Nom)	Color Code	Temperature (Nom)
	CPO-TW 60W/840 PGZ12 1CT				
928088805127	MASTER CosmoWhite CPO-TW Xtra 140W/728 PGZ12	0.447	0.4	728	2800 K
928095205127	MASTER CosmoWhite CPO-TW 140W/840 PGZ12 1CT	385	400	840	-

## Light Technical (2/3)

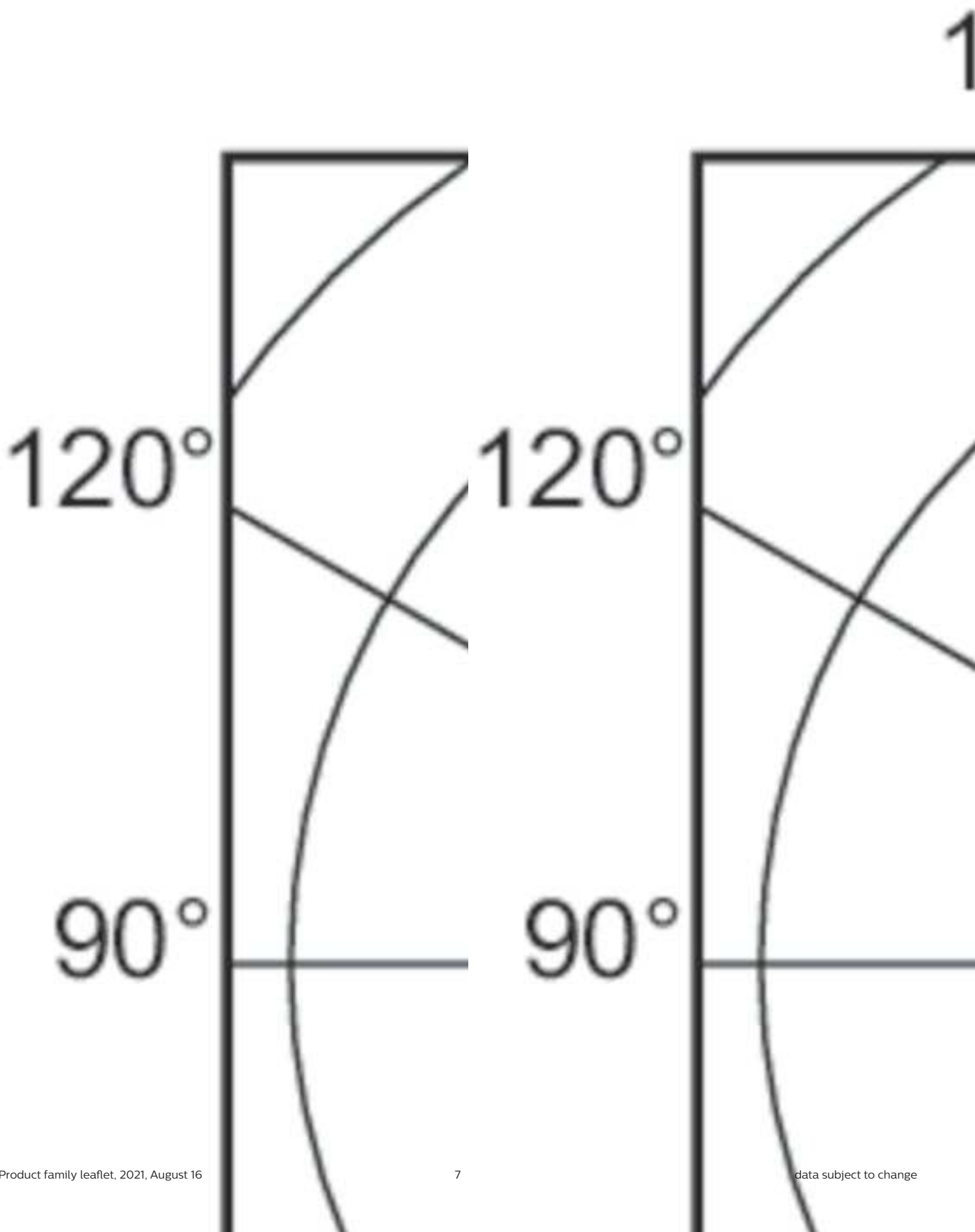
Order Code	Full Product Name	Color Rendering	Color Rendering	LLMF		LLMF	LLMF	LLMF	LLMF
		Index (Min)	Index (Nom)	LLMF 12000 h Rated	LLMF 16000 h Rated	LLMF 2000 h Rated	LLMF 20000 h Rated	LLMF 24000 h Rated	LLMF 30000 h Rated
928083805127	MASTER CosmoWhite CPO-TW Xtra 45W/628 PGZ12	63	66	89 %	87 %	92 %	86 %	84 %	82 %
928088505127	MASTER CosmoWhite CPO-TW Xtra 60W/728 PGZ12	70	73	89 %	87 %	92 %	86 %	84 %	82 %
928093505127	MASTER CosmoWhite CPO-TW Xtra 90W/728 PGZ12	67	70	92 %	91 %	94 %	90 %	-	-
928095005127	MASTER CosmoWhite CPO-TW 60W/840 PGZ12 1CT	81	83	85 %	-	91 %	-	-	-
928088805127	MASTER CosmoWhite CPO-TW Xtra 140W/728 PGZ12	-	72	89 %	88 %	94 %	87 %	86 %	-
928095205127	MASTER CosmoWhite CPO-TW 140W/840 PGZ12 1CT	77	80	90 %	-	98 %	-	-	-

## Light Technical (3/3)

Order Code	Full Product Name	LLMF 6000 h	LLMF 8000 h	Luminous Efficacy	Luminous Flux	Luminous Flux	Ratio Scotopic/Photopic
		Rated	Rated	(rated) (Nom)	(Nom)	(Rated) (Nom)	Lumens
928083805127	MASTER CosmoWhite CPO-TW Xtra 45W/628 PGZ12	90 %	90 %	110 lm/W	4900 lm	4900 lm	1.15
928088505127	MASTER CosmoWhite CPO-TW Xtra 60W/728 PGZ12	90 %	90 %	120 lm/W	7200 lm	7200 lm	1.15
928093505127	MASTER CosmoWhite CPO-TW Xtra 90W/728 PGZ12	93 %	93 %	120 lm/W	10800 lm	10800 lm	1.15
928095005127	MASTER CosmoWhite CPO-TW 60W/840 PGZ12 1CT	91 %	89 %	117 lm/W	-	7020 lm	1.65
928088805127	MASTER CosmoWhite CPO-TW Xtra 140W/728 PGZ12	92 %	91 %	125 lm/W	17600 lm	17600 lm	1.30

## MASTER CosmoWhite CPO-TW & CPO-TW Xtra

Order Code	Full Product Name	LLMF 6000 h Rated	LLMF 8000 h Rated	Luminous Efficacy (rated) (Nom)	Luminous Flux (Nom)	Luminous Flux (Rated) (Nom)	Ratio Scotopic/ Photopic Lumens
928095205127	MASTER CosmoWhite CPO-TW 140W/840 PGZ12 1CT	94 %	94 %	115 lm/W	-	16100 lm	1.65



# MASTER CosmoWhite CPO-TW & CPO-TW Xtra

