



The most reliable solution in road lighting

MASTER SON PIA Plus

High Pressure Sodium lamp with opalized ovoid outer bulb, high output and long reliable lifetime

Benefits

- High efficacy/lumen output resulting in low energy cost
- Long and reliable lifetime reducing maintenance cost
- Constant light over lifetime

Features

- Ovoid, white coated outer bulb
- Ceramic discharge tube with Unique Philips Integrated Antenna (PIA) concept enabling long and reliable lifetime
- "Plus" concept with high efficacy translates into high light output and improved lumen maintenance
- Robust construction with few welding points is highly vibration- and shock-resistant, further reducing early failures and extending lamp life

Application

- Road and residential lighting
- Decorative floodlighting, illumination
- Industrial area lighting
- Recreational sports facilities, indoor and outdoor

MASTER SON PIA Plus

Warnings and Safety

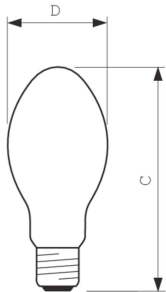
- Control gear must include end-of-life protection (IEC60662, IEC 62035)
- A lamp breaking is extremely unlikely to have any impact on your health. If a lamp breaks, ventilate the room for 30 minutes and remove the parts, preferably with gloves. Put them in a sealed plastic bag and take it to your local waste facilities for recycling. Do not use a vacuum cleaner.

Versions



MASTER SON PIA Plus E40

Dimensional drawing



Product	D (max)	C (max)
MASTER SON PIA Plus 70W E27	71 mm	156 mm
MASTER SON PIA Plus 50W E27	71 mm	156 mm
MASTER SON PIA Plus 70W/220 I E27 1CT/24	70 mm	152 mm
MASTER SON PIA Plus 150W/220 E40 1SL/12	91 mm	227 mm
MASTER SON PIA Plus 100W/220 E40 1SL/12	76 mm	186 mm
MASTER SON PIA Plus 250W/220 E40 1SL/12	91 mm	227 mm
MASTER SON PIA Plus 400W/220 E40 1SL/12	122 mm	290 mm

MASTER SON PIA Plus

Controls and dimming

Dimmable	Yes
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General information

LSF 4000 h Rated	99 %
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LSF 6000 h Rated	99 %
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LSF 8000 h Rated	99 %
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Operating Position	UNIVERSAL
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Luminaire design requirements

Bulb Temperature (Max)	350 °C
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Light technical

Color Code	220
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Color Rendering Index (Max)	25
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Color Rendering Index (Nom)	-
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Mechanical and housing

Bulb Finish	Coated glass
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Approval and application

Order Code	Full Product Name	Energy Consumption	Mercury (Hg)	Mercury (Hg)
		kWh/1000 h	Content (Max)	Content (Nom)
928061009835	MASTER SON PIA Plus 70W E27	72 kWh	12.2 mg	12.2 mg
928061109835	MASTER SON PIA Plus 50W E27	52 kWh	9.8 mg	9.8 mg
928150008835	MASTER SON PIA Plus 70W/220 I E27 1CT/24	72 kWh	16.3 mg	16.3 mg
928151409827	MASTER SON PIA Plus 150W/220 E40 1SL/12	154 kWh	15.1 mg	15 mg
928151608827	MASTER SON PIA Plus 100W/220 E40 1SL/12	101 kWh	16.3 mg	16.3 mg
928153309830	MASTER SON PIA Plus 250W/220 E40 1SL/12	250 kWh	15.1 mg	15.1 mg
928153409830	MASTER SON PIA Plus 400W/220 E40 1SL/12	408 kWh	19.6 mg	20 mg

Operating and electrical (1/2)

Order Code	Full Product Name	Lamp	Voltage (Max)	Voltage (Min)	Voltage (Nom)
		Current (EM) (Nom)			
928061009835	MASTER SON PIA Plus 70W E27	0.97 A	105 V	75 V	90 V
928061109835	MASTER SON PIA Plus 50W E27	0.750 A	100 V	70 V	85 V
928150008835	MASTER SON PIA Plus 70W/220 I E27 1CT/24	0.980 A	105 V	77 V	92 V
928151409827	MASTER SON PIA Plus 150W/220 E40 1SL/12	0.178 A	115 V	85 V	100 V

Order Code	Full Product Name	Lamp	Voltage (Max)	Voltage (Min)	Voltage (Nom)
		Current (EM) (Nom)			
928151608827	MASTER SON PIA Plus 100W/220 E40 1SL/12	0.119 A	115 V	85 V	100 V
928153309830	MASTER SON PIA Plus 250W/220 E40 1SL/12	0.300 A	115 V	85 V	96 V
928153409830	MASTER SON PIA Plus 400W/220 E40 1SL/12	0.441 A	120 V	90 V	105 V

Operating and electrical (2/2)

Order Code	Full Product Name	Power (Nom)	Re-Ignition
			Time (Min) (Max)
928061009835	MASTER SON PIA Plus 70W E27	72.0 W	180 s
928061109835	MASTER SON PIA Plus 50W E27	52.0 W	180 s
928150008835	MASTER SON PIA Plus 70W/220 I E27 1CT/24	71.5 W	600 s
928151409827	MASTER SON PIA Plus 150W/220 E40 1SL/12	154.0 W	180 s

Order Code	Full Product Name	Power (Nom)	Re-Ignition
			Time (Min) (Max)
928151608827	MASTER SON PIA Plus 100W/220 E40 1SL/12	101.0 W	120 s
928153309830	MASTER SON PIA Plus 250W/220 E40 1SL/12	250.0 W	120 s
928153409830	MASTER SON PIA Plus 400W/220 E40 1SL/12	408.0 W	120 s

General information (1/2)

MASTER SON PIA Plus

Order Code	Full Product Name	Cap-Base	Life To 10%	Life To 20%	Life To 50%
			Failures (Nom)	Failures (Nom)	Failures (Nom)
928061009835	MASTER SON PIA Plus 70W E27	E27	20000 h	23500 h	30000 h
928061109835	MASTER SON PIA Plus 50W E27	E27	17000 h	22000 h	30000 h
928150008835	MASTER SON PIA Plus 70W/220 I E27 1CT/24	E27	17000 h	22000 h	30000 h
928151409827	MASTER SON PIA Plus 150W/220 E40 1SL/12	E40	24000 h	28000 h	36000 h

Order Code	Full Product Name	Cap-Base	Life To 10%	Life To 20%	Life To 50%
			Failures (Nom)	Failures (Nom)	Failures (Nom)
928151608827	MASTER SON PIA Plus 100W/220 E40 1SL/12	E40	21000 h	25000 h	29000 h
928153309830	MASTER SON PIA Plus 250W/220 E40 1SL/12	E40	24000 h	28000 h	36000 h
928153409830	MASTER SON PIA Plus 400W/220 E40 1SL/12	E40	24000 h	28000 h	36000 h

General information (2/2)

Order Code	Full Product Name	Life To 5% Failures	LSF 12000 h	LSF 16000 h	LSF 2000 h	LSF 20000 h	System Description
		(Nom)	Rated	Rated	Rated	Rated	
928061009835	MASTER SON PIA Plus 70W E27	17000 h	99 %	96 %	99 %	90 %	External Ignitor
928061109835	MASTER SON PIA Plus 50W E27	14000 h	96 %	92 %	99 %	83 %	External Ignitor
928150008835	MASTER SON PIA Plus 70W/220 I E27 1CT/24	14000 h	96 %	92 %	99 %	83 %	Internal Ignitor
928151409827	MASTER SON PIA Plus 150W/220 E40 1SL/12	20500 h	99 %	98 %	100 %	95 %	External Ignitor
928151608827	MASTER SON PIA Plus 100W/220 E40 1SL/12	17000 h	99 %	97 %	100 %	91 %	External Ignitor
928153309830	MASTER SON PIA Plus 250W/220 E40 1SL/12	20500 h	99 %	98 %	100 %	95 %	External Ignitor
928153409830	MASTER SON PIA Plus 400W/220 E40 1SL/12	20500 h	99 %	98 %	100 %	95 %	External Ignitor

Light technical (1/3)

Order Code	Full Product Name	Chromaticity Coordinate X (Nom)	Chromaticity Coordinate Y (Nom)	Correlated	
				Color Temperature (Nom)	LLMF 12000 h Rated
928061009835	MASTER SON PIA Plus 70W E27	0.54	0.42	1900 K	83 %
928061109835	MASTER SON PIA Plus 50W E27	0.540	0.420	1900 K	87 %
928150008835	MASTER SON PIA Plus 70W/220 I E27 1CT/24	0.54	0.42	1900 K	87 %
928151409827	MASTER SON PIA Plus	0.535	0.42	2000 K	96 %

Order Code	Full Product Name	Chromaticity Coordinate X (Nom)	Chromaticity Coordinate Y (Nom)	Correlated	
				Color Temperature (Nom)	LLMF 12000 h Rated
928151608827	MASTER SON PIA Plus 100W/220 E40 1SL/12	0.535	0.42	2000 K	92 %
928153309830	MASTER SON PIA Plus 250W/220 E40 1SL/12	0.535	0.42	2000 K	96 %
928153409830	MASTER SON PIA Plus 400W/220 E40 1SL/12	0.535	0.42	2000 K	92 %

Light technical (2/3)

MASTER SON PIA Plus

Order Code	Full Product Name	LLMF		LLMF			Luminous Efficacy (rated) (Nom)	Luminous Flux (Nom)	Luminous Flux (Rated) (Min)	
		16000 h Rated	LLMF 2000 h Rated	20000 h Rated	LLMF 4000 h Rated	LLMF 6000 h Rated				LLMF 8000 h Rated
928061009835	MASTER SON PIA Plus 70W E27	82 %	90 %	81 %	87 %	86 %	85 %	83.33 lm/W	6000 lm	-
928061109835	MASTER SON PIA Plus 50W E27	86 %	92 %	86 %	90 %	89 %	88 %	71 lm/W	3700 lm	3330 lm
928150008835	MASTER SON PIA Plus 70W/220 I E27 1CT/24	86 %	92 %	86 %	90 %	89 %	88 %	80 lm/W	5750 lm	5040 lm
928151409827	MASTER SON PIA Plus 150W/220 E40 1SL/12	95 %	99 %	94 %	98 %	97 %	96 %	107.79 lm/W	16600 lm	-
928151608827	MASTER SON PIA Plus 100W/220 E40 1SL/12	90 %	98 %	89 %	96 %	95 %	94 %	95 lm/W	9600 lm	-
928153309830	MASTER SON PIA Plus 250W/220 E40 1SL/12	95 %	99 %	94 %	98 %	97 %	96 %	120 lm/W	30000 lm	-
928153409830	MASTER SON PIA Plus 400W/220 E40 1SL/12	90 %	99 %	88 %	97 %	96 %	94 %	136.27 lm/W	55600 lm	-

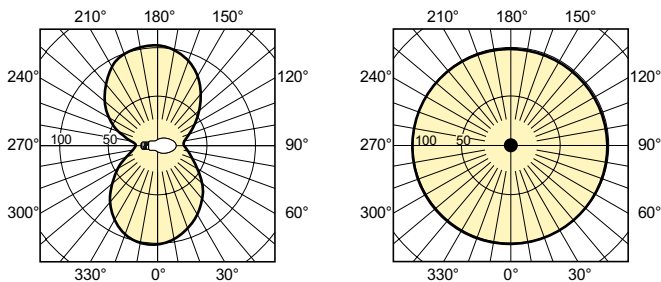
Light technical (3/3)

Order Code	Full Product Name	Luminous Flux (Rated) (Nom)	Ratio
			Scotopic/ Photopic Lumens
928061009835	MASTER SON PIA Plus 70W E27	6000 lm	0.50
928061109835	MASTER SON PIA Plus 50W E27	3700 lm	0.50
928150008835	MASTER SON PIA Plus 70W/220 I E27 1CT/24	5600 lm	-
928151409827	MASTER SON PIA Plus 150W/220 E40 1SL/12	16600 lm	0.55

Order Code	Full Product Name	Luminous Flux (Rated) (Nom)	Ratio
			Scotopic/ Photopic Lumens
928151608827	MASTER SON PIA Plus 100W/220 E40 1SL/12	9600 lm	0.55
928153309830	MASTER SON PIA Plus 250W/220 E40 1SL/12	30000 lm	0.60
928153409830	MASTER SON PIA Plus 400W/220 E40 1SL/12	55600 lm	0.60

Mechanical and housing

Order Code	Full Product Name	Bulb Shape
928061009835	MASTER SON PIA Plus 70W E27	B70
928061109835	MASTER SON PIA Plus 50W E27	BF70
928150008835	MASTER SON PIA Plus 70W/220 I E27 1CT/24	B70
928151409827	MASTER SON PIA Plus 150W/220 E40 1SL/12	BD90
928151608827	MASTER SON PIA Plus 100W/220 E40 1SL/12	B75
928153309830	MASTER SON PIA Plus 250W/220 E40 1SL/12	BD90
928153409830	MASTER SON PIA Plus 400W/220 E40 1SL/12	BD120



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