



The most reliable solution in road lighting

MASTER SON-T PIA Plus

High Pressure Sodium lamp with clear tubular outer bulb, high output and long reliable lifetime

Benefits

- Initial investment saving options with "Plus" concept
- High lumen output, maintained over life
- Minimal maintenance cost

Features

- Clear tubular 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
- Dimmable

Application

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

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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.

General Information	
Operating Position	UNIVERSAL
System Description	External Ignitor (E)
Light Technical	
Colour Code	220
Colour Rendering Index (Max)	25
Mechanical and Housing	
Bulb Finish	Clear

Approval and Application

Order Code	Full Product Name	Energy Consumption kWh/1000 h	Mercury (Hg) Content (Max)	Mercury (Hg) Content (Nom)
17987615	MASTER SON-T PIA Plus 250W E E40 1SL/12	257 kWh	15.1 mg	15.1 mg
18075300	MASTER SON-T PIA Plus 250W E40 1SL/12	257 kWh	15.1 mg	15.1 mg
17988315	MASTER SON-T PIA Plus 400W E E40 1SL/12	408 kWh	19.6 mg	20 mg
18077700	MASTER SON-T PIA Plus 400W E40 1SL/12	408 kWh	19.6 mg	20 mg
19229515	MASTER SON-T PIA Plus 150W/220 E40 - 1SL/12	155 kWh	15.1 mg	15 mg

Order Code	Full Product Name	Energy Consumption kWh/1000 h	Mercury (Hg) Content (Max)	Mercury (Hg) Content (Nom)
19230115	MST SON-T PIA PLUS 100W/220 E40 SL/12	101 kWh	16.3 mg	16.3 mg
19742915	MASTER SON-T PIA Plus 600W/220 E40 1SL/12	663 kWh	-	24 mg
18073900	MASTER SON-T PIA Plus 150W E40 1SL/12	155 kWh	15.1 mg	13.9 mg
19266015	MASTER SON-T PIA Plus 70W/220 E27 1SL/12	73 kWh	12.2 mg	12.2 mg
18069200	MASTER SON-T PIA Plus 70W E27 1SL/12	73 kWh	12.2 mg	12.2 mg

Controls and Dimming

Order Code	Full Product Name	Dimmable
17987615	MASTER SON-T PIA Plus 250W E E40 1SL/12	Yes
18075300	MASTER SON-T PIA Plus 250W E40 1SL/12	Yes
17988315	MASTER SON-T PIA Plus 400W E E40 1SL/12	Yes
18077700	MASTER SON-T PIA Plus 400W E40 1SL/12	Yes
19229515	MASTER SON-T PIA Plus 150W/220 E40 - 1SL/12	Yes

Order Code	Full Product Name	Dimmable
19230115	MST SON-T PIA PLUS 100W/220 E40 SL/12	Yes
19742915	MASTER SON-T PIA Plus 600W/220 E40 1SL/12	No
18073900	MASTER SON-T PIA Plus 150W E40 1SL/12	Yes
19266015	MASTER SON-T PIA Plus 70W/220 E27 1SL/12	Yes
18069200	MASTER SON-T PIA Plus 70W E27 1SL/12	Yes

Operating and Electrical

Order Code	Full Product Name	Lamp Current (EM) (Nom)	Voltage (Max)	Voltage (Min)	Voltage (Nom)	Power (Rated) (Nom)	Re-Ignition Time (Min) (Max)
17987615	MASTER SON-T PIA Plus 250W E E40 1SL/12	0.300 A	115 V	85 V	100 V	257 W	120 s
18075300	MASTER SON-T PIA Plus 250W E40 1SL/12	0.300 A	115 V	85 V	100 V	257 W	120 s
17988315	MASTER SON-T PIA Plus 400W E E40 1SL/12	0.441 A	115 V	85 V	105 V	408.0 W	120 s
18077700	MASTER SON-T PIA Plus 400W E40 1SL/12	0.441 A	115 V	85 V	105 V	408.0 W	120 s
19229515	MASTER SON-T PIA Plus 150W/220 E40 - 1SL/12	0.175 A	115 V	85 V	104 V	155.0 W	180 s

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Order Code	Full Product Name	Lamp Current (EM)					Power (Rated) (Nom)	Re-Ignition Time (Min) (Max)
		(Nom)	Voltage (Max)	Voltage (Min)	Voltage (Nom)	(Nom)		
19230115	MST SON-T PIA PLUS 100W/220 E40 SL/12	0.119 A	115 V	85 V	100 V	101.0 W	120 s	
19742915	MASTER SON-T PIA Plus 600W/220 E40 1SL/12	5.8 A	125 V	95 V	110 V	603 W	60 s	
18073900	MASTER SON-T PIA Plus 150W E40 1SL/12	1.8 A	115 V	85 V	100 V	155 W	180 s	
19266015	MASTER SON-T PIA Plus 70W/220 E27 1SL/12	0.96 A	105 V	75 V	92 V	73.0 W	30 s	
18069200	MASTER SON-T PIA Plus 70W E27 1SL/12	0.975 A	103 V	73 V	93 V	73.0 W	30 s	

General Information (1/2)

Order Code	Full Product Name	Cap-Base	Life To 10%	Life To 20%	Life To 50%	Life To 5%	LSF 12000 h	LSF 16000 h
			Failures (Nom)	Failures (Nom)	Failures (Nom)	Failures (Nom)	Rated	Rated
17987615	MASTER SON-T PIA Plus 250W E E40 1SL/12	E40	24000 h	28000 h	36000 h	20500 h	99 %	98 %
18075300	MASTER SON-T PIA Plus 250W E40 1SL/12	E40	24000 h	28000 h	36000 h	20500 h	99 %	98 %
17988315	MASTER SON-T PIA Plus 400W E E40 1SL/12	E40	24000 h	28000 h	36000 h	20500 h	99 %	98 %
18077700	MASTER SON-T PIA Plus 400W E40 1SL/12	E40	24000 h	28000 h	36000 h	20500 h	99 %	98 %
19229515	MASTER SON-T PIA Plus 150W/220 E40 - 1SL/12	E40	24000 h	28000 h	36000 h	20500 h	99 %	98 %
19230115	MST SON-T PIA PLUS 100W/220 E40 SL/12	E40	21000 h	25000 h	29000 h	17000 h	99 %	97 %
19742915	MASTER SON-T PIA Plus 600W/220 E40 1SL/12	E40	15000 h	20000 h	30000 h	12000 h	-	-
18073900	MASTER SON-T PIA Plus 150W E40 1SL/12	E40	24000 h	28000 h	32000 h	20500 h	-	-
19266015	MASTER SON-T PIA Plus 70W/220 E27 1SL/12	E27	20000 h	23500 h	30000 h	17000 h	99 %	96 %
18069200	MASTER SON-T PIA Plus 70W E27 1SL/12	E27	20000 h	23500 h	28000 h	17000 h	-	-

General Information (2/2)

Order Code	Full Product Name	LSF 2000 h	LSF 20000 h	LSF 4000 h	LSF 6000 h	LSF 8000 h	Order Code	Full Product Name	LSF 2000 h	LSF 20000 h	LSF 4000 h	LSF 6000 h	LSF 8000 h
		Rated	Rated	Rated	Rated	Rated			Rated	Rated	Rated	Rated	Rated
17987615	MASTER SON-T PIA Plus 250W E E40 1SL/12	100 %	95 %	99 %	99 %	99 %	19230115	MST SON-T PIA PLUS 100W/220 E40 SL/12	100 %	91 %	99 %	99 %	99 %
18075300	MASTER SON-T PIA Plus 250W E40 1SL/12	100 %	95 %	99 %	99 %	99 %	19742915	MASTER SON-T PIA Plus 600W/220 E40 1SL/12	-	-	-	-	-
17988315	MASTER SON-T PIA Plus 400W E E40 1SL/12	100 %	95 %	99 %	99 %	99 %	18073900	MASTER SON-T PIA Plus 150W E40 1SL/12	-	-	-	-	-
18077700	MASTER SON-T PIA Plus 400W E40 1SL/12	100 %	95 %	99 %	99 %	99 %	19266015	MASTER SON-T PIA Plus 70W/220 E27 1SL/12	99 %	90 %	99 %	99 %	99 %
19229515	MASTER SON-T PIA Plus 150W/220 E40 - 1SL/12	100 %	95 %	99 %	99 %	99 %	18069200	MASTER SON-T PIA Plus 70W E27 1SL/12	-	-	-	-	-

Luminaire Design Requirements

Order Code	Full Product Name	Bulb Temperature (Max)	Order Code	Full Product Name	Bulb Temperature (Max)
17987615	MASTER SON-T PIA Plus 250W E E40 1SL/12	450 °C	19230115	MST SON-T PIA PLUS 100W/220 E40 SL/12	450 °C
18075300	MASTER SON-T PIA Plus 250W E40 1SL/12	450 °C	19742915	MASTER SON-T PIA Plus 600W/220 E40 1SL/12	450 °C
17988315	MASTER SON-T PIA Plus 400W E E40 1SL/12	450 °C	18073900	MASTER SON-T PIA Plus 150W E40 1SL/12	450 °C
18077700	MASTER SON-T PIA Plus 400W E40 1SL/12	450 °C	19266015	MASTER SON-T PIA Plus 70W/220 E27 1SL/12	350 °C
19229515	MASTER SON-T PIA Plus 150W/220 E40 - 1SL/12	450 °C	18069200	MASTER SON-T PIA Plus 70W E27 1SL/12	350 °C

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Light Technical (1/3)

Order Code	Full Product Name	Chromaticity	Chromaticity	Correlated Colour Temperature (Nom)	Colour	LLMF 12000 h Rated	LLMF 16000 h Rated	LLMF 2000 h Rated
		Coordinate X (Nom)	Coordinate Y (Nom)		Rendering Index (Nom)			
17987615	MASTER SON-T PIA Plus 250W E E40 1SL/12	0.535	0.420	2000 K	-	96 %	95 %	99 %
18075300	MASTER SON-T PIA Plus 250W E40 1SL/12	0.535	0.420	2000 K	-	96 %	95 %	99 %
17988315	MASTER SON-T PIA Plus 400W E E40 1SL/12	0.535	0.42	2000 K	-	92 %	90 %	99 %
18077700	MASTER SON-T PIA Plus 400W E40 1SL/12	0.535	0.42	2000 K	-	92 %	90 %	99 %
19229515	MASTER SON-T PIA Plus 150W/220 E40 - 1SL/12	0.535	0.42	2000 K	-	96 %	95 %	99 %
19230115	MST SON-T PIA PLUS 100W/220 E40 SL/12	0.535	0.42	2000 K	-	92 %	90 %	98 %
19742915	MASTER SON-T PIA Plus 600W/220 E40 1SL/12	0.526	0.424	2000 K	-	-	-	-
18073900	MASTER SON-T PIA Plus 150W E40 1SL/12	0.535	0.42	2000 K	-	-	-	-
19266015	MASTER SON-T PIA Plus 70W/220 E27 1SL/12	0.54	0.42	1900 K	-	78 %	77 %	86 %
18069200	MASTER SON-T PIA Plus 70W E27 1SL/12	0.54	0.42	1900 K	-	-	-	-

Light Technical (2/3)

Order Code	Full Product Name	LLMF	LLMF	LLMF	LLMF	Lumen	Lumen	Lumen	Lumen	Lumen
		20000 h Rated	4000 h Rated	6000 h Rated	8000 h Rated	Maintenance 2000 h (Min)	Maintenance 2000 h (Nom)	Maintenance 20000 h	Maintenance 5000 h (Min)	Maintenance 5000 h (Nom)
17987615	MASTER SON-T PIA Plus 250W E E40 1SL/12	94 %	98 %	97 %	96 %	-	-	-	-	-
18075300	MASTER SON-T PIA Plus 250W E40 1SL/12	94 %	98 %	97 %	96 %	-	-	-	-	-
17988315	MASTER SON-T PIA Plus 400W E E40 1SL/12	88 %	97 %	96 %	94 %	95 %	99 %	88 %	90.5 %	96.5 %
18077700	MASTER SON-T PIA Plus 400W E40 1SL/12	88 %	97 %	96 %	94 %	95 %	99 %	88 %	90.5 %	96.5 %
19229515	MASTER SON-T PIA Plus 150W/220 E40 - 1SL/12	94 %	98 %	97 %	96 %	-	-	-	-	-
19230115	MST SON-T PIA PLUS 100W/220 E40 SL/12	89 %	96 %	95 %	94 %	-	-	-	-	-
19742915	MASTER SON-T PIA Plus 600W/220 E40 1SL/12	-	-	-	-	85 %	96 %	77 %	80 %	90 %
18073900	MASTER SON-T PIA Plus 150W E40 1SL/12	-	-	-	-	94 %	97 %	-	88 %	95 %
19266015	MASTER SON-T PIA Plus 70W/220 E27 1SL/12	76 %	83 %	81 %	80 %	-	90 %	81 %	-	86.5 %
18069200	MASTER SON-T PIA Plus 70W E27 1SL/12	-	-	-	-	90 %	95 %	-	85 %	92 %

Light Technical (3/3)

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Order Code	Full Product Name	Luminous Efficacy (rated) (Nom)	Luminous Flux (Nom)	Luminous Flux (Rated) (Min)	Luminous Flux (Rated) (Nom)	Ratio Scotopic/Photopic Lumens
17987615	MASTER SON-T PIA Plus 250W E E40 1SL/12	126 lm/W	32100 lm	-	32100 lm	0.60
18075300	MASTER SON-T PIA Plus 250W E40 1SL/12	126 lm/W	32100 lm	-	32100 lm	0.60
17988315	MASTER SON-T PIA Plus 400W E E40 1SL/12	137 lm/W	55900 lm	-	55900 lm	0.60
18077700	MASTER SON-T PIA Plus 400W E40 1SL/12	137 lm/W	55900 lm	-	55900 lm	0.60
19229515	MASTER SON-T PIA Plus 150W/220 E40 - 1SL/12	115.16 lm/W	17800 lm	-	17800 lm	0.55
19230115	MST SON-T PIA PLUS	105 lm/W	10600 lm	-	10600 lm	0.55

Order Code	Full Product Name	Luminous Efficacy (rated) (Nom)	Luminous Flux (Nom)	Luminous Flux (Rated) (Min)	Luminous Flux (Rated) (Nom)	Ratio Scotopic/Photopic Lumens
	100W/220 E40 SL/12					
19742915	MASTER SON-T PIA Plus 600W/220 E40 1SL/12	143.5 lm/W	-	-	86500 lm	0.60
18073900	MASTER SON-T PIA Plus 150W E40 1SL/12	117 lm/W	17800 lm	14500 lm	18000 lm	-
19266015	MASTER SON-T PIA Plus 70W/220 E27 1SL/12	90.41 lm/W	6600 lm	-	6600 lm	0.50
18069200	MASTER SON-T PIA Plus 70W E27 1SL/12	91 lm/W	6600 lm	5940 lm	6600 lm	-

Mechanical and Housing

Order Code	Full Product Name	Bulb Shape
17987615	MASTER SON-T PIA Plus 250W E E40 1SL/12	T46
18075300	MASTER SON-T PIA Plus 250W E40 1SL/12	T46
17988315	MASTER SON-T PIA Plus 400W E E40 1SL/12	T46
18077700	MASTER SON-T PIA Plus 400W E40 1SL/12	T46
19229515	MASTER SON-T PIA Plus 150W/220 E40 - 1SL/12	T46

Order Code	Full Product Name	Bulb Shape
19230115	MST SON-T PIA PLUS 100W/220 E40 SL/12	T46
19742915	MASTER SON-T PIA Plus 600W/220 E40 1SL/12	T46
18073900	MASTER SON-T PIA Plus 150W E40 1SL/12	T46
19266015	MASTER SON-T PIA Plus 70W/220 E27 1SL/12	T35
18069200	MASTER SON-T PIA Plus 70W E27 1SL/12	T35

