



Product Description

MASTER SON-T PIA Plus

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

Benefits

- Superior technology results in a long and reliable lifetime, high lumen maintenance and a reliable ignition over lifetime
- High energy efficacy and absence of lead (Pb) makes this a sound environmental offer
- High luminous efficacy makes this the most energy efficient HPS lamp

Features

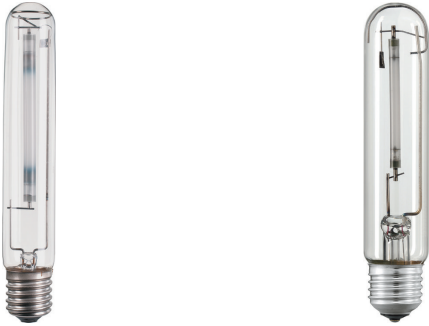
- Clear tubular outer bulb
- Ceramic discharge tube with Philips Integrated Antenna (PIA) for a long and reliable lifetime
- Robust construction with few welding points is highly vibration- and shock-resistant, further reducing early failures and extending lamp life
- ZrCo getter ensures high lumen maintenance and few early failures
- "Plus" concept with high efficacy translated into high light output
- Completely lead-free lamps

Application

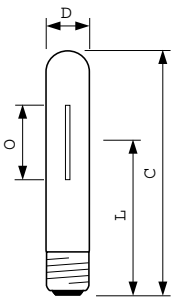
- Road and residential lighting
- Decorative floodlighting, illumination
- Industrial area lighting
- Recreational sports facilities Outdoor and Indoor
- Horticultural lighting

MASTER SON-T PIA Plus

Versions



Dimensional drawing



Product	D (max)	O	L	C (max)
MASTER SON-T PIA Plus 250W E40 1SL/12	48 mm	64 mm	158 mm	257 mm
MASTER SON-T PIA Plus 150W E40 1SL/12	47 mm	61 mm	132 mm	209 mm
MASTER SON-T PIA Plus 400W E40 1SL/12	48 mm	83 mm	175 mm	279 mm
MSTSON-TPIA Plus 70W E27 1CT/12	35.75 mm	42 mm	102 mm	156 mm
MASTER SON-T PIA Plus 100W E40 1SL/12	47 mm	47 mm	132 mm	209 mm
MASTER SON-T PIA Plus 100W/220 E40 1SL/12	48 mm	47 mm	132 mm	210 mm

General Information

Operating Position	UNIVERSAL
System Description	External Ignitor (E)

Light Technical

Colour Code	220
Correlated Colour Temperature (Nom)	2000 K
Colour Rendering Index (Max)	25

Mechanical and Housing

Bulb Finish	Clear (CL)
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Approval and Application

Order Code	Full Product Name	Energy Consumption kWh/1000 h	Energy Efficiency Label (EEL)	Mercury (Hg) Content (Nom)
928144709293	MASTER SON-T PIA Plus 250W E40 1SL/12	275 kWh	A+	15.1 mg

Order Code	Full Product Name	Energy Consumption kWh/1000 h	Energy Efficiency Label (EEL)	Mercury (Hg) Content (Nom)
928144809293	MASTER SON-T PIA Plus 400W E40 1SL/12	440 kWh	A++	20 mg

MASTER SON-T PIA Plus

Order Code	Full Product Name	Energy Consumption kWh/1000 h	Energy Efficiency Label (EEL)	Mercury (Hg) Content (Nom)
928151709230	MASTER SON-T PIA Plus 100W/220 E40 1SL/12	110 kWh	A+	16.3 mg
928483300095	MASTER SON-T PIA Plus 100W E40 1SL/12	110 kWh	A+	14.3 mg

Order Code	Full Product Name	Energy Consumption kWh/1000 h	Energy Efficiency Label (EEL)	Mercury (Hg) Content (Nom)
928483400095	MASTER SON-T PIA Plus 150W E40 1SL/12	169 kWh	A+	13.9 mg
928483200094	MSTSON-TPIA Plus 70W E27 1CT/12	80 kWh	A+	12.2 mg

Controls and Dimming

Order Code	Full Product Name	Dimmable
928144709293	MASTER SON-T PIA Plus 250W E40 1SL/12	yes
928144809293	MASTER SON-T PIA Plus 400W E40 1SL/12	yes
928151709230	MASTER SON-T PIA Plus 100W/220 E40 1SL/12	yes

Order Code	Full Product Name	Dimmable
928483300095	MASTER SON-T PIA Plus 100W E40 1SL/12	no
928483400095	MASTER SON-T PIA Plus 150W E40 1SL/12	no
928483200094	MSTSON-TPIA Plus 70W E27 1CT/12	no

Operating and Electrical

Order Code	Full Product Name	Lamp Current (EM)			Power (Rated)		Re-ignition Time (Min)
		(Nom)	Voltage (Max)	Voltage (Min)	Voltage (Nom)	(Nom)	(Max)
928144709293	MASTER SON-T PIA Plus 250W E40 1SL/12	3 A	115 V	85 V	100 V	250.0 W	120 s
928144809293	MASTER SON-T PIA Plus 400W E40 1SL/12	4.5 A	115 V	85 V	100 V	400.0 W	120 s
928151709230	MASTER SON-T PIA Plus 100W/220 E40 1SL/12	1.2 A	115 V	85 V	100 V	100.0 W	120 s
928483300095	MASTER SON-T PIA Plus 100W E40 1SL/12	1.2 A	115 V	85 V	100 V	100.0 W	120 s
928483400095	MASTER SON-T PIA Plus 150W E40 1SL/12	1.8 A	115 V	85 V	100 V	154.0 W	180 s
928483200094	MSTSON-TPIA Plus 70W E27 1CT/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% Failures (Nom)	Life To 20% Failures (Nom)	Life To 50% Failures (Nom)	Life To 5% Failures (Nom)	LSF 12000 h Rated	LSF 16000 h Rated
928144709293	MASTER SON-T PIA Plus 250W E40 1SL/12	E40	24000 h	28000 h	36000 h	20500 h	99 %	98 %
928144809293	MASTER SON-T PIA Plus 400W E40 1SL/12	E40	24000 h	28000 h	36000 h	20500 h	99 %	98 %
928151709230	MASTER SON-T PIA Plus 100W/220 E40 1SL/12	E40	21000 h	26000 h	36000 h	17000 h	98 %	96 %
928483300095	MASTER SON-T PIA Plus 100W E40 1SL/12	E40	-	23500 h	28000 h	17000 h	-	-
928483400095	MASTER SON-T PIA Plus 150W E40 1SL/12	E40	24000 h	28000 h	32000 h	20500 h	-	-
928483200094	MSTSON-TPIA Plus 70W E27 1CT/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
928144709293	MASTER SON-T PIA Plus 250W E40 1SL/12	100 %	95 %	99 %	99 %	99 %	928151709230	MASTER SON-T PIA Plus 100W/220 E40 1SL/12	100 %	91 %	99 %	99 %	99 %
928144809293	MASTER SON-T PIA Plus 400W E40 1SL/12	100 %	95 %	99 %	99 %	99 %	928483300095	MASTER SON-T PIA Plus 100W E40 1SL/12	-	-	-	-	-

MASTER SON-T PIA Plus

Order Code	Full Product Name	LSF	LSF	LSF	LSF	LSF
		2000 h	20000 h	4000 h	6000 h	8000 h
Order Code	Full Product Name	Rated	Rated	Rated	Rated	Rated
928483400095	MASTER SON-T PIA Plus 150W E40 1SL/12	-	-	-	-	-

Order Code	Full Product Name	LSF	LSF	LSF	LSF	LSF
		2000 h	20000 h	4000 h	6000 h	8000 h
Order Code	Full Product Name	Rated	Rated	Rated	Rated	Rated
928483200094	MSTSON-TPIA Plus 70W E27 1CT/12	-	-	-	-	-

Luminaire Design Requirements

Order Code	Full Product Name	Bulb Temperature (Max)
928144709293	MASTER SON-T PIA Plus 250W E40 1SL/12	450 °C
928144809293	MASTER SON-T PIA Plus 400W E40 1SL/12	450 °C
928151709230	MASTER SON-T PIA Plus 100W/220 E40 1SL/12	450 °C

Order Code	Full Product Name	Bulb Temperature (Max)
928483300095	MASTER SON-T PIA Plus 100W E40 1SL/12	450 °C
928483400095	MASTER SON-T PIA Plus 150W E40 1SL/12	450 °C
928483200094	MSTSON-TPIA Plus 70W E27 1CT/12	350 °C

Light Technical (1/3)

Order Code	Full Product Name	Chromaticity	Chromaticity	Colour	LLMF 12000 h Rated	LLMF 16000 h Rated	LLMF 2000 h Rated	LLMF 20000 h Rated
		Coordinate X (Nom)	Coordinate Y (Nom)	Rendering Index (Nom)				
928144709293	MASTER SON-T PIA Plus 250W E40 1SL/12	530	420	-	96 %	95 %	99 %	94 %
928144809293	MASTER SON-T PIA Plus 400W E40 1SL/12	525	425	-	92 %	90 %	99 %	88 %
928151709230	MASTER SON-T PIA Plus 100W/220 E40 1SL/12	535	420	-	92 %	90 %	98 %	89 %
928483300095	MASTER SON-T PIA Plus 100W E40 1SL/12	525	420	-	-	-	-	-
928483400095	MASTER SON-T PIA Plus 150W E40 1SL/12	535	420	-	-	-	-	-
928483200094	MSTSON-TPIA Plus 70W E27 1CT/12	540	420	-	-	-	-	-

Light Technical (2/3)

Order Code	Full Product Name	LLMF	LLMF	LLMF	Lumen	Lumen	Lumen	Lumen	Lumen	Luminous
		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)	Efficacy (rated) (Nom)
928144709293	MASTER SON-T PIA Plus 250W E40 1SL/12	98 %	97 %	96 %	-	-	-	-	-	127 lm/W
928144809293	MASTER SON-T PIA Plus 400W E40 1SL/12	97 %	96 %	94 %	95 %	99 %	88 %	90.5 %	96.5 %	137 lm/W
928151709230	MASTER SON-T PIA Plus 100W/220 E40 1SL/12	96 %	95 %	94 %	-	-	-	-	-	106 lm/W
928483300095	MASTER SON-T PIA Plus 100W E40 1SL/12	-	-	-	94 %	97 %	-	90 %	95 %	107 lm/W
928483400095	MASTER SON-T PIA Plus 150W E40 1SL/12	-	-	-	94 %	97 %	-	88 %	95 %	117 lm/W
928483200094	MSTSON-TPIA Plus 70W E27 1CT/12	-	-	-	90 %	95 %	-	85 %	92 %	91 lm/W

Light Technical (3/3)

MASTER SON-T PIA Plus

Order Code	Full Product Name	Luminous Flux (Rated) (Min)	Luminous Flux (Rated) (Nom)	Ratio
				Scotopic/Photopic Lumens
928144709293	MASTER SON-T PIA Plus 250W E40 1SL/12	-	33000 lm	0.60
928144809293	MASTER SON-T PIA Plus 400W E40 1SL/12	-	55800 lm	0.60
928151709230	MASTER SON-T PIA Plus 100W/220 E40 1SL/12	-	10700 lm	0.55

Order Code	Full Product Name	Luminous Flux (Rated) (Min)	Luminous Flux (Rated) (Nom)	Ratio
				Scotopic/Photopic Lumens
928483300095	MASTER SON-T PIA Plus 100W E40 1SL/12	8700 lm	10700 lm	-
928483400095	MASTER SON-T PIA Plus 150W E40 1SL/12	14500 lm	18000 lm	-
928483200094	MSTSON-TPIA Plus 70W E27 1CT/12	5940 lm	6600 lm	-

Mechanical and Housing

Order Code	Full Product Name	Bulb Shape
928144709293	MASTER SON-T PIA Plus 250W E40 1SL/12	T46
928144809293	MASTER SON-T PIA Plus 400W E40 1SL/12	T46
928151709230	MASTER SON-T PIA Plus 100W/220 E40 1SL/12	T46
928483300095	MASTER SON-T PIA Plus 100W E40 1SL/12	T46
928483400095	MASTER SON-T PIA Plus 150W E40 1SL/12	T46
928483200094	MSTSON-TPIA Plus 70W E27 1CT/12	T35

