



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

Features

Application

Warnings and Safety

Versions



MASTER SON PIA Plus E40

MASTER SON PIA Plus

Dimensional drawing

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

| Controls and Dimming | |
|-------------------------------|--------------|
| Dimmable | Yes |
| General Information | |
| LSF 4000 h Rated | 99 % |
| LSF 6000 h Rated | 99 % |
| LSF 8000 h Rated | 99 % |
| Operating Position | UNIVERSAL |
| Luminaire Design Requirements | |
| Bulb Temperature (Max) | 350 °C |
| Light Technical | |
| Color Code | 220 |
| Color Rendering Index (Max) | 25 |
| Mechanical and Housing | |
| Bulb Finish | Coated glass |

Approval and Application

| Order Code | Full Product Name | Energy Consumption kWh/1000 h | Energy | |
|--------------|---|----------------------------------|---------------------------|-------------------------------|
| | | | Efficiency Label (EEL) | Mercury (Hg) Content (Nom) |
| 928061009835 | MASTER SON PIA Plus 70W E27 | 78 kWh | A | 12 mg |
| 928061109835 | MASTER SON PIA Plus 50W E27 | 56 kWh | A | 9.8 mg |
| 928150008835 | MASTER SON PIA Plus 70W/220 I E27 1CT/24 | 79 kWh | A | 16.3 mg |
| 928151409827 | MASTER SON PIA Plus 150W/220 E40 1SL/12 | 169 kWh | A+ | 15 mg |
| 928151608827 | MASTER SON PIA Plus 100W/220 E40 1SL/12 | 110 kWh | A+ | 16.3 mg |
| 928153309830 | MASTER SON PIA Plus 250W/220 E40 1SL/12 | 286 kWh | A+ | 15.1 mg |
| 928153409830 | MASTER SON PIA Plus 400W/220 E40 1SL/12 | 446 kWh | A++ | 20 mg |

Operating and Electrical (1/2)

| Order Code | Full Product Name | Lamp | | | |
|--------------|--|--------------------------|------------------|------------------|------------------|
| | | Current (EM) (Nom) | Voltage (Max) | Voltage (Min) | Voltage (Nom) |
| 928061009835 | MASTER SON PIA Plus 70W E27 | 0.98 A | 105 V | 75 V | 90 V |
| 928061109835 | MASTER SON PIA Plus 50W E27 | 0.74 A | 100 V | 70 V | 89 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 | 1.8 A | 115 V | 85 V | 100 V |

| Order Code | Full Product Name | Lamp | | | |
|--------------|---|--------------------------|------------------|------------------|------------------|
| | | Current (EM) (Nom) | Voltage (Max) | Voltage (Min) | Voltage (Nom) |
| 928151608827 | MASTER SON PIA Plus 100W/220 E40 1SL/12 | 1.2 A | 115 V | 85 V | 100 V |
| 928153309830 | MASTER SON PIA Plus 250W/220 E40 1SL/12 | 2.85 A | 115 V | 85 V | 100 V |
| 928153409830 | MASTER SON PIA Plus 400W/220 E40 1SL/12 | 4.3 A | 120 V | 90 V | 105 V |

Operating and Electrical (2/2)

MASTER SON PIA Plus

| Order Code | Full Product Name | Re-Ignition | |
|--------------|---|------------------------|---------------------|
| | | Power (Rated) (Nom) | Time (Min) (Max) |
| 928061009835 | MASTER SON PIA Plus 70W E27 | 71.0 W | 180 s |
| 928061109835 | MASTER SON PIA Plus 50W E27 | 51.0 W | 180 s |
| 928150008835 | MASTER SON PIA Plus 70W/220 I E27 ICT/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 | Re-Ignition | |
|--------------|--|------------------------|---------------------|
| | | Power (Rated) (Nom) | Time (Min) (Max) |
| 928151608827 | MASTER SON PIA Plus 100W/220 E40 1SL/12 | 100 W | 120 s |
| 928153309830 | MASTER SON PIA Plus 250W/220 E40 1SL/12 | 260.0 W | 120 s |
| 928153409830 | MASTER SON PIA Plus 400W/220 E40 1SL/12 | 405.0 W | 120 s |

General Information (1/2)

| 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 ICT/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 | 26000 h | 36000 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 ICT/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 | 98 % | 96 % | 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 | Correlated | | | |
|--------------|-----------------------------------|---------------------------------------|---------------------------------------|-------------------------------|--------------------------|
| | | Chromaticity Coordinate X (Nom) | Chromaticity Coordinate Y (Nom) | Color Temperature (Nom) | LLMF 12000 h Rated |
| 928061009835 | MASTER SON PIA Plus 70W E27 | 540 | 410 | 1900 K | 83 % |
| 928061109835 | MASTER SON PIA Plus 50W E27 | 540 | 410 | 1900 K | 87 % |
| 928150008835 | MASTER SON PIA Plus | - | - | 1900 K | 87 % |

| Order Code | Full Product Name | Correlated | | | |
|--------------|--|---------------------------------------|---------------------------------------|-------------------------------|--------------------------|
| | | Chromaticity Coordinate X (Nom) | Chromaticity Coordinate Y (Nom) | Color Temperature (Nom) | LLMF 12000 h Rated |
| 928151409827 | MASTER SON PIA Plus 150W/220 E40 1SL/12 | 535 | 420 | 2000 K | 96 % |
| 928151608827 | MASTER SON PIA Plus | 535 | 420 | 2000 K | 92 % |

MASTER SON PIA Plus

| Order Code | Full Product Name | Chromaticity | Chromaticity | Correlated | |
|--------------|--|--------------------|--------------------|-------------------------|--------------------|
| | | Coordinate X (Nom) | Coordinate Y (Nom) | Color Temperature (Nom) | LLMF 12000 h Rated |
| 928153309830 | MASTER SON PIA Plus 100W/220 E40 1SL/12 | 530 | 420 | 2000 K | 96 % |

| Order Code | Full Product Name | Chromaticity | Chromaticity | Correlated | |
|--------------|---|--------------------|--------------------|-------------------------|--------------------|
| | | Coordinate X (Nom) | Coordinate Y (Nom) | Color Temperature (Nom) | LLMF 12000 h Rated |
| 928153409830 | MASTER SON PIA Plus 250W/220 E40 1SL/12 400W/220 E40 1SL/12 | 525 | 425 | 2000 K | 92 % |

Light Technical (2/3)

| Order Code | Full Product Name | LLMF | LLMF | | | Luminous | | | | |
|--------------|--|---------------|-------------------|---------------|-------------------|-------------------|-------------------|---------------------------------|--------------------|-----------------------------|
| | | 16000 h Rated | LLMF 2000 h Rated | 20000 h Rated | LLMF 4000 h Rated | LLMF 6000 h Rated | LLMF 8000 h Rated | Luminous Efficacy (rated) (Nom) | Flux (Rated) (Min) | Luminous Flux (Rated) (Nom) |
| 928061009835 | MASTER SON PIA Plus 70W E27 | 82 % | 90 % | 81 % | 87 % | 86 % | 85 % | 83 lm/W | - | 5900 lm |
| 928061109835 | MASTER SON PIA Plus 50W E27 | 86 % | 92 % | 86 % | 90 % | 89 % | 88 % | 74 lm/W | - | 3900 lm |
| 928150008835 | MASTER SON PIA Plus 70W/220 I E27 1CT/24 | 86 % | 92 % | 86 % | 90 % | 89 % | 88 % | 80 lm/W | 5040 lm | 5600 lm |
| 928151409827 | MASTER SON PIA Plus 150W/220 E40 1SL/12 | 95 % | 99 % | 94 % | 98 % | 97 % | 96 % | 108 lm/W | - | 16100 lm |
| 928151608827 | MASTER SON PIA Plus 100W/220 E40 1SL/12 | 90 % | 98 % | 89 % | 96 % | 95 % | 94 % | 97 lm/W | - | 9700 lm |
| 928153309830 | MASTER SON PIA Plus 250W/220 E40 1SL/12 | 95 % | 99 % | 94 % | 98 % | 97 % | 96 % | 120 lm/W | - | 30900 lm |
| 928153409830 | MASTER SON PIA Plus 400W/220 E40 1SL/12 | 90 % | 99 % | 88 % | 97 % | 96 % | 94 % | 136.5 lm/W | - | 55400 lm |

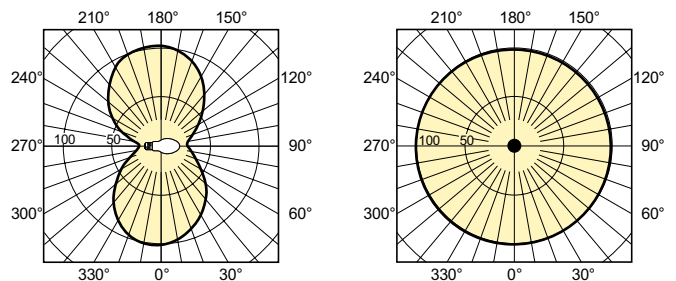
Light Technical (3/3)

| Order Code | Full Product Name | Ratio Scotopic/Photopic Lumens |
|--------------|--|--------------------------------|
| 928061009835 | MASTER SON PIA Plus 70W E27 | 0.50 |
| 928061109835 | MASTER SON PIA Plus 50W E27 | 0.50 |
| 928150008835 | MASTER SON PIA Plus 70W/220 I E27 1CT/24 | - |
| 928151409827 | MASTER SON PIA Plus 150W/220 E40 1SL/12 | 0.55 |

| Order Code | Full Product Name | Ratio Scotopic/Photopic Lumens |
|--------------|---|--------------------------------|
| 928151608827 | MASTER SON PIA Plus 100W/220 E40 1SL/12 | 0.55 |
| 928153309830 | MASTER SON PIA Plus 250W/220 E40 1SL/12 | 0.60 |
| 928153409830 | MASTER SON PIA Plus 400W/220 E40 1SL/12 | 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 | B70 |
| 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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