



Energy efficiency and long life

Ceramalux ALTO

These lamps pass the EPA's TCLP test for non-hazardous materials. Ideal for industrial applications, warehouses, post top applications and parking lots.

Benefits

- Low mercury - better for the environment.
- Long Life - 24,000 hours Rated Average Life.
- High efficacy up to 140 LPW.

Features

- Low total cost of ownership.
- Long life—up to 24,000 hours.
- High efficacy up to 140 LPW.
- ALTO® Lamp Technology - Sustainable solution.
- ED 18 Available in 200, 250 and 400 watt; ED-23 1/2 Available in 50, 70,100, and 150 watt

Application

- Ideal for street and roadway lighting, parking lots and garages, warehouses and manufacturing facilities where lower maintenance costs are desired.

Ceramalux ALTO

Versions



E39, ED-23 1/2, Coated



E39, E-25, Clear

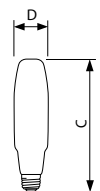
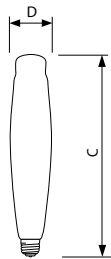
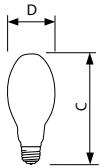


E39, ED-18, Clear



E39, ED-23 1/2, Clear

Dimensional drawing



Product

SON 150W E39 ED75 CL SL/12

C100S54/D ALTO PH 12PK

C150S55 3PK

C70S62 3PK

C50S68/ALTO 12PK

SON 100W E39 ED75 CL SL/12

SON 70W E39 ED75 CL SL/12

Product

C1000S52/ALTO

Product

SON 400W E39 ED58 CL SL/12

C200S66/ALTO 12PK

SON 250W E39 ED58 CL SL/12

Ceramalux ALTO

| General Information | |
|------------------------------------|--------------------------------|
| Cap-Base | E39 |
| Main Application | General and Street Lighting |
| Operating Position | Universal |
| Luminaire Design Requirements | |
| Bulb Temperature (Max) | 400 °C |
| Light Technical | |
| Correlated Color Temperature (Nom) | 2100 K |
| Mechanical and Housing | |
| Bulb Material | Hard Glass |

Approval and Application

| Order Code | Full Product Name | Mercury | | |
|------------|--------------------------------|----------------------------|--------------------|-------------------------|
| | | Mercury (Hg) Content (Max) | (Hg) Content (Nom) | Picogram Per Lumen Hour |
| 332270 | C100S54/D ALTO PH 12PK | 22.1 mg | - | - |
| 368837 | C100S52/ALTO | - | 32 mg | 11.3 pg/lm.h |
| 467373 | C400S51/ALTO 12PK | 23.5 mg | - | 26.4 pg/lm.h |
| 467217 | C250S50/ALTO 12PK | 23.5 mg | - | - |
| 467225 | C200S66/ALTO 12PK | 31 mg | - | - |
| 140961 | SON ALTO 150W LV E E39 CL SL/3 | 17 mg | - | - |

| Order Code | Full Product Name | Mercury | | |
|------------|-------------------------------|----------------------------|--------------------|-------------------------|
| | | Mercury (Hg) Content (Max) | (Hg) Content (Nom) | Picogram Per Lumen Hour |
| 467233 | C150S54/ALTO 12PK | 17 mg | - | - |
| 467241 | C100S55/ALTO 12PK | 22.1 mg | - | - |
| 140947 | SON ALTO 70W LV E E39 CL SL/3 | 17 mg | - | - |
| 467258 | C70S62/ALTO 12PK | 17 mg | - | - |
| 467266 | C50S68/ALTO 12PK | 17.7 mg | - | - |

Operating and Electrical

| Order Code | Full Product Name | Lamp Current (Nom) | Voltage (Max) | Voltage (Min) | Voltage (Nom) | Re-Ignition Time (Min) (Max) |
|------------|--------------------------------|--------------------|---------------|---------------|---------------|------------------------------|
| 332270 | C100S54/D ALTO PH 12PK | 2.1 A | 62 V | 45 V | 55 V | 2 min |
| 368837 | C100S52/ALTO | 4.7 A | 275 V | 210 V | 250 V | 3 min |
| 467373 | C400S51/ALTO 12PK | 4.6 A | 115 V | 84 V | 100 V | 1 min |
| 467217 | C250S50/ALTO 12PK | 3.0 A | 110 V | 79 V | 95 V | 2 min |
| 467225 | C200S66/ALTO 12PK | 2.4 A | 115 V | 90 V | 100 V | 1 min |
| 140961 | SON ALTO 150W LV E E39 CL SL/3 | 3.2 A | 62 V | 48 V | 55 V | 2 min |
| 467233 | C150S54/ALTO 12PK | 3.2 A | 62 V | 48 V | 55 V | 2 min |
| 467241 | C100S55/ALTO 12PK | 2.1 A | 62 V | 45 V | 55 V | 2 min |
| 140947 | SON ALTO 70W LV E E39 CL SL/3 | 1.6 A | 60 V | 44 V | 52 V | 2 min |
| 467258 | C70S62/ALTO 12PK | 1.6 A | 60 V | 44 V | 52 V | 2 min |
| 467266 | C50S68/ALTO 12PK | 1.18 A | 62 V | 46 V | 52 V | 2 min |

Light Technical (1/2)

| Order Code | Full Product Name | Chromaticity Coordinate X (Nom) | Chromaticity Coordinate Y (Nom) | Color Rendering Index (Nom) | Luminous Efficacy (rated) (Min) | Luminous Efficacy (rated) (Nom) | Design Mean Lumens | Luminous Flux (Rated) (Min) |
|------------|-------------------|---------------------------------|---------------------------------|-----------------------------|---------------------------------|---------------------------------|--------------------|-----------------------------|
| | | 332270 | C100S54/D ALTO PH 12PK | 523 | 417 | 21 | 83 lm/W | 93 lm/W |
| 368837 | C100S52/ALTO | 515 | 420 | 21 | 121.5 lm/W | 135 lm/W | 126000 lm | 121500 lm |
| 467373 | C400S51/ALTO 12PK | 515 | 420 | 20 | 112.5 lm/W | 125 lm/W | 45000 lm | 45000 lm |

Ceramalux ALTO

| Order Code | Full Product Name | Chromaticity | Chromaticity | Color | Luminous Efficacy (rated) (Min) | Luminous Efficacy (rated) (Nom) | Design Mean Lumens | Luminous Flux (Rated) (Min) |
|------------|--------------------------------|--------------------|--------------------|-----------------------|---------------------------------|---------------------------------|--------------------|-----------------------------|
| | | Coordinate X (Nom) | Coordinate Y (Nom) | Rendering Index (Nom) | | | | |
| 467217 | C250S50/ALTO 12PK | 523 | 412 | 26 | 102 lm/W | 114 lm/W | 24300 lm | 25600 lm |
| 467225 | C200S66/ALTO 12PK | 521 | 420 | 16 | 104 lm/W | 115 lm/W | 19260 lm | 20700 lm |
| 140961 | SON ALTO 150W LV E E39 CL SL/3 | 514 | 424 | 17 | 96 lm/W | 107 lm/W | 14220 lm | 14400 lm |
| 467233 | C150S54/ALTO 12PK | 514 | 424 | 17 | 96 lm/W | 107 lm/W | 14220 lm | 14400 lm |
| 467241 | C100S55/ALTO 12PK | 520 | 420 | 18 | 85 lm/W | 94 lm/W | 8460 lm | 8500 lm |
| 140947 | SON ALTO 70W LV E E39 CL SL/3 | 522 | 425 | 13 | 87.4 lm/W | 97 lm/W | 5670 lm | 6100 lm |
| 467258 | C70S62/ALTO 12PK | 522 | 425 | 13 | 87.4 lm/W | 97 lm/W | 5670 lm | 6100 lm |
| 467266 | C50S68/ALTO 12PK | 529 | 420 | 16 | 74 lm/W | 82 lm/W | 3600 lm | 3700 lm |

Light Technical (2/2)

| Order Code | Full Product Name | Luminous Flux (Rated) (Nom) | Photosynthetic Photon Flux (PPF) |
|------------|--------------------------------|-----------------------------|----------------------------------|
| 332270 | C100S54/D ALTO PH 12PK | 9300 lm | - |
| 368837 | C1000S52/ALTO | 135000 lm | 1550 µmol/s |
| 467373 | C400S51/ALTO 12PK | 50000 lm | 595 µmol/s |
| 467217 | C250S50/ALTO 12PK | 28500 lm | - |
| 467225 | C200S66/ALTO 12PK | 23000 lm | - |
| 140961 | SON ALTO 150W LV E E39 CL SL/3 | 16000 lm | - |

| Order Code | Full Product Name | Luminous Flux (Rated) (Nom) | Photosynthetic Photon Flux (PPF) |
|------------|-------------------------------|-----------------------------|----------------------------------|
| 467233 | C150S54/ALTO 12PK | 16000 lm | - |
| 467241 | C100S55/ALTO 12PK | 9400 lm | - |
| 140947 | SON ALTO 70W LV E E39 CL SL/3 | 6800 lm | - |
| 467258 | C70S62/ALTO 12PK | 6800 lm | - |
| 467266 | C50S68/ALTO 12PK | 4100 lm | - |

Mechanical and Housing

| Order Code | Full Product Name | Bulb Finish | Bulb Shape |
|------------|--------------------------------|-------------|------------|
| 332270 | C100S54/D ALTO PH 12PK | CO | ED23 1/2 |
| 368837 | C1000S52/ALTO | CL | E25 |
| 467373 | C400S51/ALTO 12PK | CL | ED18 |
| 467217 | C250S50/ALTO 12PK | CL | ED18 |
| 467225 | C200S66/ALTO 12PK | CL | ED18 |
| 140961 | SON ALTO 150W LV E E39 CL SL/3 | CL | ED23 1/2 |

| Order Code | Full Product Name | Bulb Finish | Bulb Shape |
|------------|-------------------------------|-------------|------------|
| 467233 | C150S54/ALTO 12PK | CL | ED23 1/2 |
| 467241 | C100S55/ALTO 12PK | CL | ED23 1/2 |
| 140947 | SON ALTO 70W LV E E39 CL SL/3 | CL | ED23 1/2 |
| 467258 | C70S62/ALTO 12PK | CL | ED23 1/2 |
| 467266 | C50S68/ALTO 12PK | CL | ED23 1/2 |

