

SOLARLIGHT.CO.ZA

SPECIFICATION SHEET - Products

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SOLARLIGHT.CO.ZA utilizes the latest technology in solar power generation, to ensure very bright light at night. The power for the light is harnessed during sufficient daylight conditions and stored in an internal battery. The stored energy is used to power an extremely effective and efficient light source at night. The new improved MPPT algorithm allows the system to use a smaller sized photo voltaic solar panel. The LED's used our products are the latest technology from LUMILEDS, capable to produce 135+ lumens per watt. The solar powered LED redundancy is determined by the model selected. The lockable battery box consists of a collar to allow it to be mounted on any pole up to a maximum of 100mm. The design allows complete angle adjustments for best solar panel positioning.

30W/675-X* System Performance

Designed System Performance

| | |
|--|--|
| Power usage during Night | 5W |
| Total Available Lumens | 675 lm |
| Operation Dusk to Dawn – Desgined for 14 hours during Winter | Dip switch selectable – Factory set Dusk to Dawn |
| Mapped Current output | 420mA |
| Used Watts (14 hours) | 70W |
| AvailableTotal Watts (Battery) | 213.6W |
| Depth of Discharge out of battery per Night | 32% |
| Working Redundency no Sun | 3 days |
| Number of Cycles | >1400 |
| Battery Replacement | >3.5 years |
| Operating Temperature | -20°C – 60°C |
| Recharge Time | 3.5 Hours per Day |
| MPPT Charge Algorithm | YES |
| Undervoltage Cut Out | YES |
| Overvoltgae Cut Out | YES |
| LED Protection | YES |
| Short Circuit Protected | YES |

PO Box 151
Wierdapark
Centurion

30W/675-X* *number of LED's

Enclosure

| | |
|-----------------------------------|--|
| IP Rating | 52 |
| Finishing | Powder Coated Dove Gray |
| Solar Degrees | Fixed 30° |
| Adjustable Light Output Direction | Fixed LED's (1,2,3 or 4) 30W/675-replace" X with amount of lights" 30W/675-1 = 1LED etc. LED's can be adjusted up and down |
| Weight | 13kg |
| Dimensions | 550mm x 338mm x 300mm |
| Maximum Pole Diameter | 63mm |
| Pole Fixing | 2 x 8mm lock Nuts |
| Mounting Height | 2.5m – 5m |
| External Cutouts on enclosure | On-Off Switch, Dip Switch Selector, 5 x Fault LED's |

LED's used on 30W/675-X Lights

| | |
|--|--|
| LUMILEDS | LXML-PWC2 |
| Quantity | X 3 per LED light Source 20W/675-1 = 1 Light Source 3 LEDS 20W/675-2 = 2 Light Source 6 LEDS 20W/675-3 = 3 Light Source 9 LEDS 20W/675-4 = 4 Light Source 12 LEDS |
| Nominal CCT/Color | 5650K Cool White |
| Typical CRI | 70 |
| Typical Luminous Flux (lm) @ 350mA Forward Current _(1W) | 135 lm per Watt |

Battery Used inside 30W/675-X Lights

| | |
|---|---|
| Capacity | 18Ap@20hr-rate to 1.75V per Cell @ 25°C |
| Weight | 6 kg |
| Type – EV | Frequently deep cycle applications |
| Cells per Unit | 6 |
| Voltage | 12 |
| Cylce Life in Relation to Depth of Discharge | |
| 50% | >1200 Cycles |
| 30% | >1400 Cycles |

30W/675-X* *number of LED's

Solar Panel

Electrical Performance at STC*

| | |
|-----------------------|--------|
| Maximum Power | 30Wp |
| Power Tolerance | 0/+5Wp |
| Maximum Power Voltage | 18V |
| Maximum Power Current | 1.11A |
| Open Circuit Voltage | 21.6V |
| Short Circuit Current | 1.28A |

*Standard Test Conditions : 1000W/m² irradiance, 25°C and AM = 1.5

Thermal Conditions

| | |
|---|-------------|
| Normal Operating Cell Temperature | 48°C + -2°C |
| 800W/m ² irradiance, 20°C and AM = 1.5 | |
| Power Temperature Coefficient | -0.5%/K |
| Current Temperature Coefficient | 0.0035%/K |
| Voltage Temperature Coefficient | -0.37MV/K |

Limits

| | |
|------------------------|---------------|
| Operating Temperature | -40°C to 85°C |
| Maximum System Voltage | 1000V DC |

General Characteristics

| | |
|------------------|--|
| Cell | Polycrystalline Solar Cell (78 x 52)mm |
| No Cells | 36 (6x6) |
| Panel Dimensions | 550 x 338 x 25 mm |
| Weight | 2.5 kg |