

avero®
Precision pathway lighting™





Designed in Australia to suit Australian conditions and lighting standards.



Powered by renewable energy using high efficiency monocrystalline photovoltaics and lithium battery systems.



No cabling, no trenching - zero grid connected infrastructure needed.



Fast and Easy and installation with minimal environmental impact.



Built-in Adaptive Lighting Controls to minimise ecological impacts, enhance human comfort and ensure reliable utility.



Powered by the sun, Avero[®] is an architecturally designed stand-alone lighting system optimised for pathway, bikeway, driveway, minor road, jetty, and marina lighting applications.

The Avero[®] is an overhead pedestrian scale stand-alone lighting system architecturally designed to enhance public spaces.

The stand-alone design allows asset managers, municipalities, and developers to deliver lighting more easily to areas with no existing electrical infrastructure.

Avero[®] luminaires utilise Cree high powered LEDs and precision optics energised by a fully adjustable solar engine and a generously sized 410Wh lithium iron phosphate (LiFePO4) battery and monocrystalline photovoltaic module.

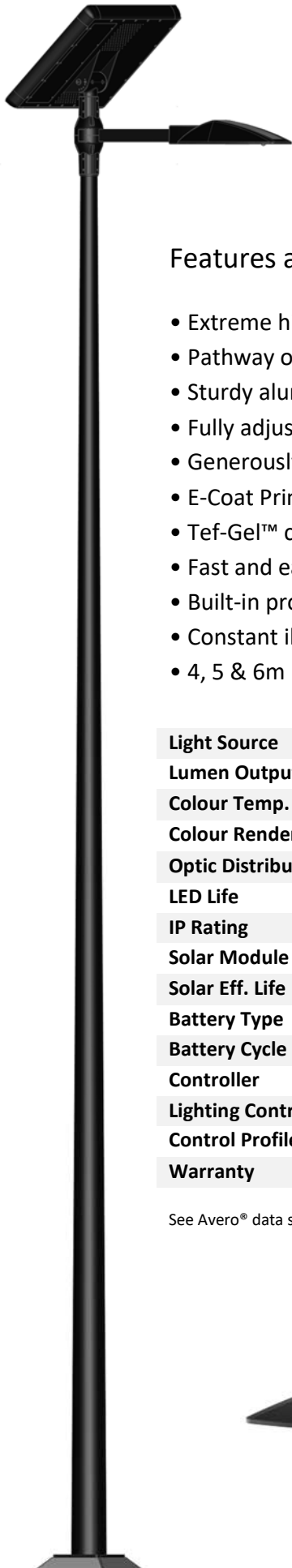
Engineered with the perfect balance between the solar engine power, the battery system capacity and adjustable power settings, the Avero[®] is built for reliability, low cost whole of life and best in class performance - Avero[®] provides peace of mind for the most discerning of lighting professionals.

Developed and optimised specifically for AS/NZS 1158.3.1:2020 Subcategory PP4 and PP5 Lighting Standards, Avero[®] Solar Lighting Systems provide superior illumination results through the integration of five advanced technologies:

- Cree[®] Extreme high-power LED's.
- LEDiL[®] multi-lens directional optics.
- Lithium Iron Phosphate (LiFePO4) Battery Systems.
- Multi-Directional monocrystalline photovoltaic modules.
- Programmable PIR sensory adaptive lighting controls.

Designed in Australia by Orca Solar Lighting[®]





Features and Specifications

- Extreme high-power Cree LEDs.
- Pathway optimised optics with zero upward waste light.
- Sturdy aluminium construction with low copper content suitable for marine applications.
- Fully adjustable solar panel tilt and orientation for maximum energy collection.
- Generously sized solar engine for maximum reliability in prolonged poor weather.
- E-Coat Prime and dual powder coat finish.
- Tef-Gel™ corrosion protected 316 stainless steel fasteners.
- Fast and easy installation with footing options to suit various wind regions.
- Built-in programmable adaptive lighting controls and PIR sensor.
- Constant illumination all night or sensor controlled bright light when required.
- 4, 5 & 6m Pole Height Options.

Light Source	Cree XHP70B Extreme high-power
Lumen Output	> 2,061 (adaptive), 867 (dusk to dawn)
Colour Temp.	3,000K (warm white), 4,000K (natural white)
Colour Rendering	CRI 80+
Optic Distribution	IESNA Type II medium (side throw)
LED Life	L90B10 > 100,000 hrs at 25°C T ³
IP Rating	IP67 (LED module, controller, and connections)
Solar Module	60W monocrystalline, 3.2mm tempered glass
Solar Eff. Life	Min. 80% > 25 Years
Battery Type	LiFePO4 32Ah 12.8v 410 Wh (Lithium Iron Phosphate)
Battery Cycle Life	≥ 4,000 Cycles at 0.2C to 80% Depth of Discharge
Controller	PWM with programmable step-up LED driver
Lighting Control	Programmable and adaptive with PIR function
Control Profiles	High mode, low mode, or full dusk to dawn
Warranty	5 Year limited warranty (extended periods available)

See Avero® data sheet for additional technical information.





Programmable PIR Sensor for Adaptive Lighting Control

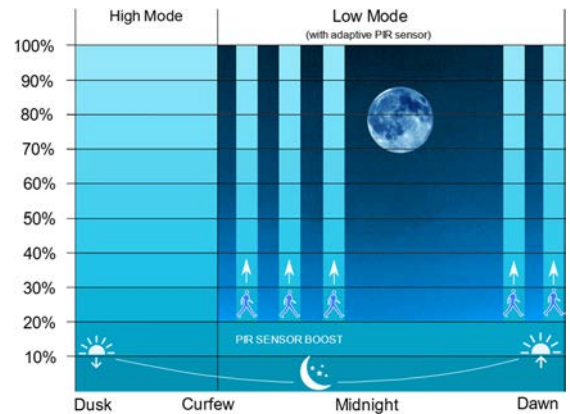
Avero[®] Solar Lights feature programmable PIR sensors which allow the user to set light output modes and timers.

Light output modes offer the ability to control the lighting so that high light levels can be applied when needed and reduce to low light levels when not needed.

The PIR Sensor can be enabled to increase light levels when pedestrian movements are detected. The PIR Sensor function can also be disabled if and where it is not suitable or desired.

This functionality reduces light pollution and assists with compliance of Obtrusive Light Limitations (AS/NZS 4282) and International Dark Sky Association recommendations.

Light Output Modes and Timers can be adjusted from the ground using the 2.4Ghz Remote Control.



Remote Control Parameter Setting and Diagnostics

The Avero 2.4Ghz multi-function remote control allows the user to adjust system parameters including light output profiles and timer settings.

In addition, the remote control reads current and historic system status data including battery and solar performance for fast and easy diagnostic reporting.

Parameter settings	Load settings	Running data	Running state
01 Battery type: Lithium 12V	01 First time: 00:30	01 Running state	01 System state: Discharging
14 Sensing delay: No	02 First power: 100%	02 Past data	02 Battery voltage: 12.3V
15 PV wake up: Yes	03 Second time: 02:00	03 Single battery voltage	03 PV voltage: 17.5V

Parameter settings	Load settings	Running data	Past data
01 Battery type: Lithium 12V	01 First time: 00:30	01 Running state	-----> 1 day before <-----
02 Sensing delay: 10S	02 Power with people sensed: 100%	02 Past data	02 Min. Voltage: 11.3V
03 PV wake up: Yes	03 Power with people sensed: 50%	03 Single battery voltage	03 Max. Voltage: 12.5V

Precise Pathway Application Optics

The Avero Solar Lighting system utilises the most advanced optical light distribution technology through multi-overlay Dow Corning[®] silicone lenses.

The optical design platform paired with Cree's XHP Series Extreme High-Power LED chips delivers the highest efficiency and control using full cut-off IESNA Type II distributions.

Avero is designed specifically to deliver superior pathway illumination with consideration of the pathway user and the surrounding environment being at the forefront.

Avero Solar Lighting Systems deliver high uniformity, precise light distribution, enhanced visual comfort, zero upward waste light and full compliance to glare limitations guaranteeing a better lighting outcome for municipalities, pathway users and surrounding ecologies.





PREFERRED
SUPPLIER
ARRANGEMENT



Copyright © 2021 Orca Solar Lighting Pty Ltd. All rights reserved.

orcasolarlighting.com.au

Suite 9, 39-41 Nerang Street
Nerang QLD 4211 Australia

Ph: (Aus) 1300 760 778
Ph: (Int) + 61 7 5448 7800
Fax: 1300 855 201

light@orcasolarlighting.com.au