

EVERGEN™ 1500

OFF-GRID SOLAR LED LIGHTING

The EverGEN 1500 is ideal for ...

parking lots, residential streets, sign, perimeter and other site lighting applications

new facilities where:

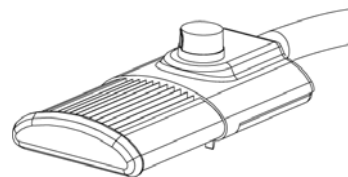
- access to the electrical grid requires extensive trenching
- grid connection is difficult or impossible
- underground checks and/or permits are costly

existing facilities where:

- access to the electrical grid requires extensive trenching or environmental disruption
- disruption of site will result in loss of business
- underground wiring / conduit is nearing end of life
- jurisdictional right-of-way issues exist



The EverGEN 1530 installed as parking lot lighting in Spokane, Washington



BetaLED™ LEDway™



BetaLED™ THE EDGE™

The Carmanah Difference:

- Energy management system (EMS) that protects long-term system and battery health
- Reduced project cost when compared to other solar LED lighting systems: a result of superior uniformity and lumen output
- Enhanced autonomy that ensures usable light even under unusual site or operating conditions
- Lumen depreciation performance data based on LM-80 test methods
- Backed by certified photometric reports per LM-79
- Operating profiles and occupancy sensing allow user to determine how light is applied
- Five year limited warranty
- RoHS compliant: completely recyclable batteries & components

Capabilities:

- Up to 7300 delivered lumens (equivalent to 70 - 200 W HID light)
- BetaLED™ LEDway™ & THE EDGE™ fixture options (direct and side arm mount options)
- Up to two fixtures per unit
- Operating profiles
- Occupancy sensing
- Standard IES distributions (Type II, III, IV, V)
- Floodlighting optics (15°, 25°, 40°, 60°)
- 6000K and 4300K colour temperature

BetaLED™ Fixtures

The EverGEN 1500 series is available with either the BetaLED LEDway or THE EDGE fixtures. With superior uniformity and light performance, BetaLED fixtures allow Carmanah EverGEN solar lighting to illuminate a given area with fewer systems than other solar solutions: providing significant savings in overall project cost.



Carmanah is backed by a worldwide network of lighting professionals.

To find a representative in your region:

- visit us at www.carmanah.com
- or call +1.250.380.0052 (toll-free US & Canada 1.877.722.8877)

REPRESENTED IN YOUR REGION BY:

EVERGEN™ 1500

OFF-GRID SOLAR LED LIGHTING

SOLAR PANEL		1520	1530
EPA*	15 deg	3.96 sq. ft. (0.37 sq. m.)	5.95 sq. ft. (0.55 sq. m.)
	35 deg	8.87 sq. ft. (0.84 sq. m.)	13.30 sq. ft. (1.26 sq. m.)
	45 deg	10.00 sq. ft. (0.93 sq. m.)	15.00 sq. ft. (1.39 sq. m.)
	65 deg	12.20 sq. ft. (1.13 sq. m.)	19.20 sq. ft. (1.78 sq. m.)
Weight	58 lb (26.3 kg)	79.5 lb (36 kg)	
Height	41 in (104 cm)	41 in (104 cm)	
Width	42 in (107 cm)	63 in (160 cm)	

ENCLOSURE		
EPA**	13.60 ft sq. (1.26 sq. m.)	
Weight (including batteries)	320 lb (145 kg)	450 lb (204 kg)
Height	49 in (124.5 cm)	
Width	16 in (40.6 cm)	
Depth	15 in (38.1 cm)	

BATTERIES		
Type	4 x group 27 absorbent glass mat (AGM)	4 x group 31 absorbent glass mat (AGM)
Rating	4,000 cycles to 20% depth of discharge at 20° C (68° F)	

FITTURE		
THE EDGE™	20 – 80 LEDs single fix. 20 – 40 LEDs dual fix.	20 – 80 LEDs single fix. 20 – 40 LEDs dual fix.
LEDway™	20 – 80 LEDs single fix. 20 – 40 LEDs dual fix.	20 – 80 LEDs single fix. 20 – 40 LEDs dual fix.
THE EDGE™ Flood	20 – 60 LEDs single fix. 20 – 40 LEDs dual fix.	20 – 60 LEDs single fix. 20 – 40 LEDs dual fix.

MOUNTING	
Solar Panel	Top of pole to 2.88 in (7.06 cm) OD tenon: adjustable tilt Side of pole via clamp-style brackets: adjustable tilt
Enclosure Position	Mid-pole - up to 15 ft (1.52m) from ground Bottom pole – up to 5 ft (1.52m) from ground
Enclosure Attachment	Round pole clamp style: 4 in to 8 in (101.6 mm to 203.2 mm) diameter, or Square pole clamp style: 2 in to 9 in (50.8 mm to 229 mm), or U-bolt clamp: 3 in to 4 in pole
THE EDGE™	Side of pole direct, or Floodlight mount - 2.375" OD tenon
LEDway™	1.375 - 2.375 OD pipe, horizontal tenon

COLOURS	
Enclosure	Silver
THE EDGE™ (incl. flood)	Silver (standard), white, black, bronze
LEDway™	Silver

PHOTOMETRICS		
Typical Lumen Range	2,000 to 5,000 lumens	3,000 to 7,000 lumens
Colour Temperature Options	6000K, 4300K	
Colour Rendering Index (CRI)	Minimum 70	
Fixture Efficacy	Up to 85 lumens/watt	
IES Light Distributions	Type II, Type III, Type IV, Type V, (backlight control available), 15°, 25°, 40°, 60° flood	
Other	International Dark-Sky Association (IDA) approved, measured for performance using IESNA standards including IES BUG rating system.	
Photometry	Certified photometry per IESNA LM-79 & LM-80	
Typical Applications	Parking lots, roadways, sign lighting	

Photometric performance depends on the solar environment of location and specified operating profile. Contact Carmanah rep. for exact lumen output and specifications for your application.

CERTIFICATIONS	
ISO 9001:2008, RoHS, pending system level: IEC60598-1, IEC60598-2-3, CE 2004-108-EC, EN55015, EN61547, solar panel IEC 61215 rated, system compliant with Buy American Act, Section 1605 of the ARRA.	

*EPA is taken as the Actual Projected Area multiplied by a drag coefficient of 1.3 drag coefficients taken from AASHTO 2001 standard, sec 3-17.
**EPA is taken as the Actual Projected Area multiplied by a drag coefficient of 1.9 drag coefficients taken from AASHTO 2001 standard, sec 3-17.
Specifications may be subject to change.

Operating Profiles

An operating profile determines how the light will behave. It allows for the light to be dimmed or turned off completely when facility usage is reduced.

By dimming or turning the system off when light is not needed, or adjusting illumination levels with occupancy sensing, energy is conserved and light levels during peak hours are maximized. This allows for brighter illumination, smaller system size and lower system cost.



Sample Operating Profile with Occupancy Sensing



Sample Split-Night Operating Profile

Energy Management System

The Energy Management System (EMS) is a critical part of the EverGEN system providing bright, reliable light output and healthy, high-functioning lighting systems for over five years of autonomous operation.

The EMS provides:

- efficient transfer & dynamic management of energy (95% efficiency)
- maximum power point tracking (MPPT)
- enhanced autonomy for reliable operation through extreme conditions
- occupancy sensing
- 63 operating profile options
- smaller sized systems with greater lumen output

Enhanced Autonomy

Through real time monitoring of surrounding conditions enhanced autonomy allows the EverGEN to continue providing useful light even under unusual conditions such as excessive shading, long periods of bad weather and other extreme conditions that prevent the system from charging over an extended period of time.

Enhanced autonomy provides useful light for much longer than other solar solutions and prevents deep discharging of the battery, protecting long-term health.