



A Bright Idea for Street & Parking Lot Lighting

Introducing the Carmanah EverGEN™
1500 Series – Available Summer 2009!

Meeting the demands of street and parking lot lighting applications, the Carmanah EverGEN 1500 series of solar LED lighting provides the capabilities of AC powered illumination in a solar lighting solution!

The Carmanah EverGEN 1500 series solar LED lighting solution is the most advanced solar lighting technology on the market offering up to 6800 lumens of delivered illumination. Built on a time-tested technology platform that offers versatility, adaptability and rugged reliability, the EverGEN 1500 series provides uncompromising performance in a visibly sustainable lighting solution.

we put solar to work™



System Components

The Carmanah EverGEN 1500 is made up of three components: the light fixture, the solar panel and the battery enclosure.

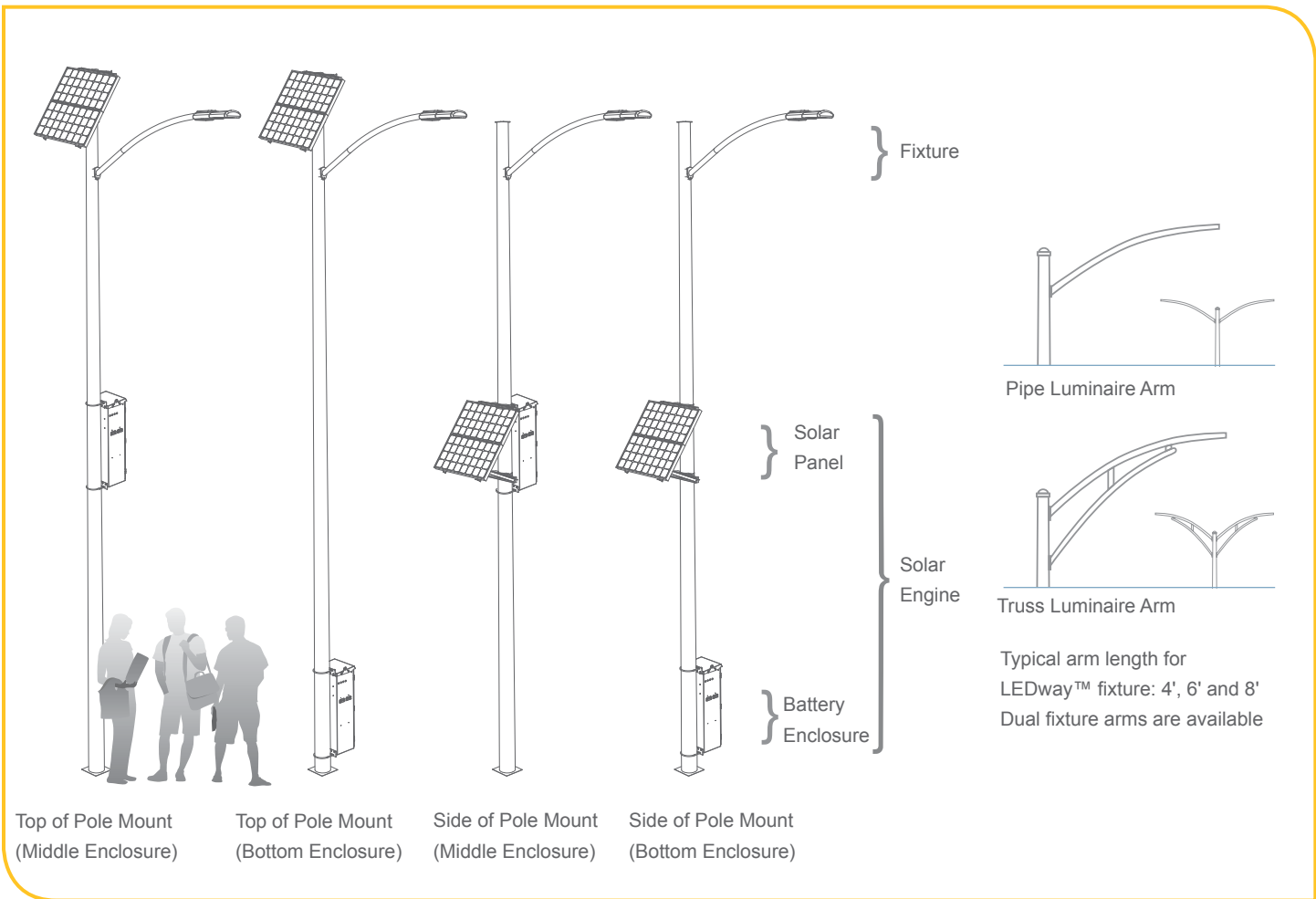
The exact system configuration will be dependant upon your installation location, the light output you require and the dimming features of your application.

For immediate answers on how solar area lighting fits into your application, contact your Carmanah lighting professional today.

Experience the increased performance and flexibility of the EverGEN 1500:

- Batteries and solar panels are mounted separately allowing for various mounting configurations on the pole.
- Ability to power one or two light fixtures from a single solar engine
- Increased light output – up to four light bars*
- Cost effective – ability to use fewer, larger systems to meet light output requirements

*maximum of one fixture of up to four light bars or two fixtures of up to two light bars. Maximum of three light bars for floodlight fixture.



Top of Pole Mount (Middle Enclosure) Top of Pole Mount (Bottom Enclosure) Side of Pole Mount (Middle Enclosure) Side of Pole Mount (Bottom Enclosure)

Mounting & Pole Details

Poles for the EverGEN 1500 can be ordered directly from Carmanah. Poles will be specified based on installation location as well as individual system size and configuration. To obtain weight and EPA specifications for the solar panel, batteries and fixture, please see the relevant specification table.

The EverGEN 1500 is configurable to meet specific application requirements. Suggested mounting configurations and the available pole arm options are listed above.

Note: We recommend the assistance of a Carmanah representative when specifying poles to ensure proper pole choice for system size and configuration.



Specifications – Light Fixture & Engine

Fixture

Utilizing the BetaLED™ LEDway™ and THE EDGE™ fixtures, the Carmanah EverGEN™ 1500 is engineered with industry-leading optics and thermal design to provide superior efficiency and uniform light distribution. With the ability to run up to four light bars of illumination, the EverGEN 1500 offers flexible fixture configuration with one fixture of up to four light bars or two fixtures of up to two light bars. Floodlight optics are also available.

Engine

The Carmanah EverGEN 1500 is available with two engine sizes. The engine size you require will be dependant upon your installation location, the light output you require and the dimming features of your application.

With flexible configuration and a variety of options available, the size and specifics of your Carmanah solar lighting system will be dependant on your needs.

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* Lumen output is determined by Carmanah online system sizing tool and is location and application dependant
 ** Measured at steepest mounting angle. Include fixture EPA for total system EPA. EPA's may not be additive if panels overlap enclosure.
 *** Ambient temperatures outside of this range may reduce battery life.
 **** Please consult a Carmanah representative for special wind zones.

Please note: The table below represents preliminary specification information.

FIXTURE		Street & Area	Floodlight
PHOTOMETRICS	Illumination technology	1, 2, 3, 4 high-intensity LED Lightbars with NanoOptics secondary optics	1,2, 3 high-intensity LED Light bars with NanoOptics secondary optics
	Light distribution	IESNA Type II, III, IV, V	15°, 25°, 40°, 60°
	Output colour	6000K	6000 K
	Lumen output	800 - 6800*	800 - 4800*
	Remote mounting	up to 100' from solar engine (using 10 gauge wire - not included)	up to 100' from solar engine (using 10 gauge wire - not included)
	MECHANICAL	Housing	Die cast aluminum
Finish		Colorfast DeltaGuard® finish	Colorfast DeltaGuard® finish
Hardware		Corrosion resistant	Corrosion resistant
Ingress protection (IP)		IP 65 per IEC 529	IP 65 per IEC 529
Colour		Silver	Silver, bronze, black, white
Mounting		Luminaire mounting arm (not included)	Side mount, 2" tenon
DIMENSIONS		Height	4.7 in (12 cm)
	Width	10.6 in (27 cm)	11.75 in (29.85 cm)
	Length	1 Light bar – 17.5 in (44.5 cm) 2 to 3 Light bars – 22 in (56 cm) 4 Light bars – 33 in (84 cm)	1 light bar - 16 in (40.64 cm) 2 light bars - 18 in (45.72 cm) 3 light bars - 20 in (50.8 cm)
	WEIGHT	1 light bar (20 LEDs)	13 lb (6 kg)
2 to 3 light bars (40 to 60 LEDs)		22 lb (10 kg)	14 lb (6.35 kg)
4 light bars (80 LEDs)		32 lb (14.5 kg)	n/a
EFFECTIVE PROJECTED AREA (EPA)	1 to 2 light bar	0.52 ft² (0.05 m²)	0.66 ft² (0.20 m²)
	2 to 3 light bars	0.685 ft² (0.06 m²)	0.66 ft² (0.20 m²)
	4 light bars	0.82 ft² (0.08 m²)	n/a
ENGINE		1520	1530
MECHANICAL	Mounting angles	5° increments between 30°– 60°	
WEIGHT	Solar panel	58 lb (26.3 kg)	79.5 lb (36 kg)
	Batteries and enclosure	320 lb (145 kg)	450 lb (204 kg)
EFFECTIVE PROJECTED AREA (EPA)**	Solar panels	10.2 ft² (0.95 m²)	15.3 ft² (1.42 m²)
	Enclosure	7.5 ft² (0.70 m²)	7.5 ft² (0.70 m²)
DIMENSIONS			
SOLAR PANELS	Height	1.37 in (3.5 cm)	1.37 in (3.5 cm)
	Width	41.5 in (105 cm)	62.25 in (158 cm)
	Length	40.8 in (103.6 cm)	40.8 in (103.6 cm)
ENCLOSURE	Height	14 in (35.5 cm)	14 in (35.5 cm)
	Length	16 in (40.6 cm)	16 in (40.6 cm)
	Width	52 in (132 cm)	52 in (132 cm)
COMMON SPECIFICATIONS			
MECHANICAL	Housing	Corrosion-resistant aluminum	
	Support bracket	Hardened steel or aluminium	
ENERGY MANAGEMENT SYSTEM	Operating profile	Configurable (see operating profiles)	
ENVIRONMENTAL	Operating temperature range	-22° to 122° F (-30° to 50° C)***	
	Wind load****	Steady wind speed not to exceed 100 mph (160 km/h)	
	Shock	10 g's	
	Vibration	1 Hz, 12" amplitude, 20 yrs.	
	Other	Direct sunlight required	

Operating Profile

Carmanah's intelligent operating profile allows for change in illumination levels throughout the course of a night.

Split Night

Designed to provide bi-level illumination, a split-night profile turns the fixture on at an initial intensity for a set number of hours after dusk, and reduces power to 33% for a portion of the night. As facility usage increases during dawn hours, the unit returns to initial intensity once again.

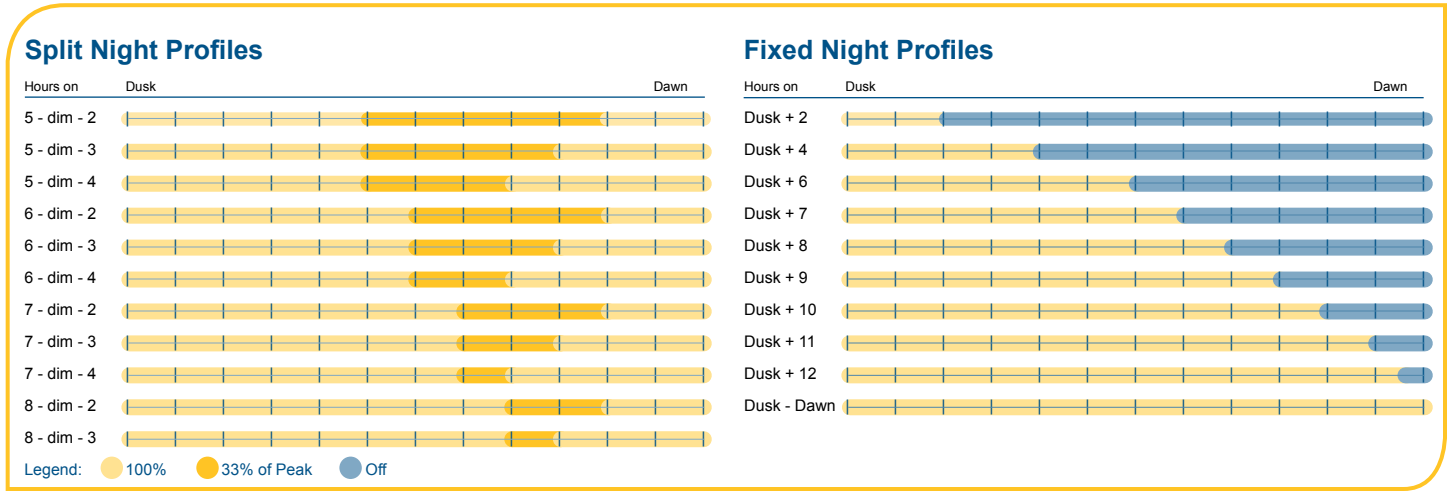
Carmanah recommends a 5-dim-2 profile for most lighting applications.

Fixed Night

Designed for a steady level of illumination, a fixed-night profile turns the fixture on for a set number of hours and then shuts it off.

All Night

Designed to provide a consistent level of illumination throughout the night, the all night profile turns the fixture on at dusk and off at dawn.



About BetaLED

BetaLED, a brand of Beta Lighting, was established to dedicate resources to the emerging use of LED technology for general illumination. Beta Lighting, a Wisconsin based division of Ruud Lighting, provides the lighting industry with high quality, specification-grade luminaires for exterior lighting applications.

For additional exterior LED fixture information, visit www.BetaLED.com.



About Carmanah Technologies Corporation

As one of most trusted names in solar technology, Carmanah has earned a reputation for delivering strong and effective products for industrial applications worldwide. Industry proven to perform reliably in some of the world's harshest environments, Carmanah's lights and power systems provide a durable, dependable and cost effective energy alternative.

For more information on Carmanah solar lighting technology, visit carmanahlighting.com.

Carmanah Technologies Corp.

Toll free: 1.877.722.8877
(US & Canada)
Worldwide: 1.250.380.0052
Fax: 1.250.380.0062
WebSite: carmanah.com

For more information or to find the regional office nearest you, visit carmanah.com.



Specifications may be subject to change.
Carmanah Technologies Corporation assumes no liability for third-party products and services used in the installation of this product and work performed by third-party service providers. Purchasers are advised that the security and strength of any product installation will be dependent upon the type of pole on which the product is mounted, the footing, the fasteners and materials used in fixing the product to the pole and the site conditions.
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