

EG300 SERIES

OFF-GRID SOLAR LED LIGHTING

The EG300 is ideal for ...

Highways and public roadways, parking lots, perimeter lighting and many other general 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
- Copper theft and vandalism is a concern

The Carmanah Difference:

- Reduced project cost when compared to other solar LED lighting systems: a result of superior uniformity and lumen output
- Adaptive lighting allows user to determine how light is applied
- Pole-top integrated design for easy installation and theft prevention
- Recyclable batteries & components
- Reliable, year-round performance

Capabilities:

- BetaLED™ LEDway™ fixture
- Up to two fixtures per unit
- Adaptive lighting (operating profiles)
- Standard IES distributions (Type II, III, IV, V)
- 6000K and 4300K colour temperature options
- CIE 115:2010 M2 - M6 classification

BetaLED™ Fixtures

The EG300 series features the BetaLED LEDway fixture. With superior uniformity and light performance, BetaLED fixtures allow Carmanah solar lighting systems to illuminate a given area with fewer systems than other solar solutions, providing significant savings in overall project cost.



Carmanah EG300-Series Off-Grid Solar LED Lighting System

Adaptive Lighting

Adaptive lighting allows for different light levels during the course of the night, based on vehicle and pedestrian activity. A choice of operating profiles permits 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 energy is conserved and light levels during peak hours are maximized. This allows for brighter illumination, smaller system size and lower system cost.

Energy Management System

The Energy Management System (EMS) is a critical part of the EG300 system providing bright, reliable light output and healthy, high-functioning lighting systems for years of autonomous operation.

The EMS provides:

- Efficient transfer and dynamic management of energy
- Seven operating profile options
- Smaller sized systems with greater lumen output

REPRESENTED IN YOUR REGION BY:



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OFF-GRID SOLAR LED LIGHTING

SOLAR ENGINE	EG320	EG340
EPA*	0.69 m ² (7.45 ft ²)	1.32 m ² (14.17 ft ²)
APA	0.53 m ² (5.73 ft ²)	1.01 m ² (10.90 ft ²)
Weight (without batteries)	39 kg (85 lb)	59 kg (130 lb)
Weight (with batteries)	95 kg (210 lb)	175 kg (385 lb)
Dimension A	157.5 cm (62 in)	157.5 cm (62 in)
Dimension B	82.6 cm (32.5 in)	165.2 cm (65 in)

BATTERIES

Type	2 x group 27 absorbent glass mat (AGM)	4 x group 27 absorbent glass mat (AGM)
Rating	4,000 cycles to 20% depth of discharge at 20° C (68° F)	

FIXTURE

LEDway™	20 – 120 LEDs single fix. 20 – 60 LEDs/fix. dual fix.
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MOUNTING

Solar Engine	Top of pole, round tenon 8.9 cm (3.5 in) OD X 15.2 cm (6.0 in) long
LEDway™	Horizontal tenon 4.25 cm (1.675 in) or 6 cm (2.375 in) OD
Wind Load Rating	250 kph (155 mph)**

ENERGY MANAGEMENT SYSTEM (EMS)

Optional Operating Profiles	Dusk-to-Dawn Fixed Night, 6hr Fixed Night, 8hr
	Split Night 5hr, 25%, 2hr Split Night 5hr, 25%, 4hr Split Night 7hr, 25%, 2hr Split Night 7hr, 25%, 4hr
Day/night transitioning	Via solar panels
Status Indicators	Day/night transition, battery connection, low/high voltage disconnect

PHOTOMETRICS

Fixture Efficacy	Up to 85 lumens/watt
IES Light Distributions	Type II, Type III, Type IV, Type V, (backlight control available)
Other	International Dark-Sky Association (IDA) approved, measured for performance using IESNA standards including IES BUG rating system
Photometry	Certified photometry per IESNA LM-79-2008 & LM-80-2008
Typical Applications	Streets, roadways, parking lots, general site lighting

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

CLASSIFICATIONS

CIE	M4 -M6	M2 - M4
Mexico	Secondary residential Type A roadways or lower	Primary and collector ways or higher
Brazil	A3, B, C1 – C3 (L, M)	A3, B, C1 – C3 (L, M, I)
Chile	M4 – M5, P3 – P6, C4 – C5	M2 – M4, P1 – P3, C2 – C4
Colombia	M4 - M5	M2 - M4
Peru	III - V	II - III
Venezuela	E	C-D

CERTIFICATIONS

CE 2004-108-CE, EN 55015, EN 61547 for emissions and immunity

* Effective Projected Area (EPA) calculated as the Actual Projected Area (APA) multiplied by a drag coefficient of 1.3. EPA of engine only; does not include fixture EPA.
** 3 second gust as per AASHTO 2001

