

INDUSTRIAL OBSTRUCTION LIGHTING













CARMANAH OL SERIES

RELIABLE, LOW-COST SOLAR LED LIGHTING



SARTELCO® SISTEMI SRL

Via Torri Bianche, 1 20871 Vimercate (MB) Tel. +39-039-62905.1 Fax. +39-039-62905.99

info: sistemi@sartelco.it
ordini/promozioni:
amministrazione@sartelco.it

www.sartelco.it

OL SERIES: SOLAR LED INDUSTRIAL LIGHTING

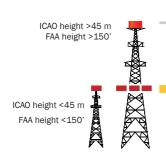












DEPENDABLE ILLUMINATION OF AIR HAZARDS IS NOT AN OPTION; IT'S A NECESSITY

Improve safety anywhere, any time, under any conditions. Operating independently from the grid, Carmanah solar obstruction lights provide reliable illumination without the need for wiring or other external components subject to breakage.

Field-proven and time-tested to perform in conditions ranging from desert heat to arctic cold, Carmanah lights are designed to endure the extreme environmental conditions encountered at tower and crane sites.

- Over 350,000 installations in 110 countries
- Vibration and shock-proof construction
- Immune to power surges and electrical failure
- Up to 5 years of maintenance-free operations (no bulb or battery changes)
- Designed to meet FAA and ICAO obstruction standards
- · Scalable solar engines for worldwide coverage
- · Visible and Infrared (IR) light options



BARRICADES & CONSTRUCTION SITES



MAXIMUM FLEXIBILITY IN A CONSTANTLY CHANGING ENVIRONMENT

Carmanah OL series lights offer a practical and cost-effective alternative for ground hazard marking, fence and barricade lighting, way-finding, equipment marking and more.

Our unique, portable designs ensure lights can be moved safely and easily within minutes - no specialized tooling or dedicated maintenance crews required. All components are housed in rugged, high-grade enclosures to ensure longterm performance at tough industrial locations.

- No trenching or cabling required
- No external charging pods required
- Easy activation and programming through on-board switches or infrared remote
- Rigorously tested in ambient temperatures from -140 to 60°C
- Steady-on or flashing modes (up to 250 flash patterns)
- Patented energy management systems for consistent performance throughout the calendar year









Lightweight general purpose

hazard marker



AT

Acceptable at Commercial Part 139 Airports per advisory circular AC 150/5370-2E









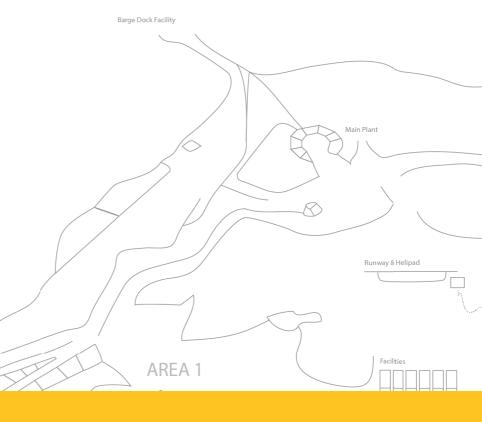
LOW-COST SIGNALLING ALTERNATIVES WHERE GRID POWER IS WEAK OR INACCESSIBLE

At industrial sites where electrical grid-based solutions are difficult to implement and fuel-powered generators expensive to operate and maintain, Carmanah solar-powered lights ensure safe operation around-the-clock.

- Reduce hardware and infrastructure costs by up to 50%
- · Minimize impact on local environments
- Eliminate outages from brownouts or generator failure

Carmanah offers a variety of industrial-grade lighting solutions to service your entire site.

- Obstruction lights
- · Runway, taxiway & helipad lighting
- Marine signalling lanterns
- Flood lights
- Traffic signalling



SOLAR DESIGN INNOVATION



OUTPERFORMING THE COMPETITION THROUGH BETTER DESIGN

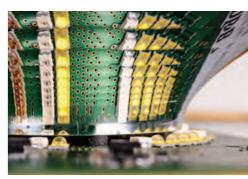
Carmanah has been an innovator in the solar industry since 1996. We are committed to providing our clients with the best available solar technology on the market. All of our products use premium components and leverage the latest in solar energy management to ensure consistent and reliable performance in demanding environments. Carmanah stands behind our products with multi-year warranties and extensive pre- and post-sales support.

Design Innovations

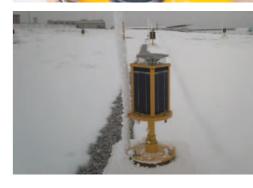
- High-performance LEDs and custom energy-efficient optics
- · Highest grade shock and vibration-proof chassis designs
- Premium vented and temperature-monitored battery packs
- Patented Automated Light Control

Customer Benefits

- Consistent chromaticity through all intensities and operating modes
- · Better energy efficiency for reliable performance around the globe
- Predictable illumination and reduced battery drain throughout the calendar year
- Reliable performance from the smallest format, self-contained solar engine on the market









Consortium for Solar Lighting www.consortiumforsolarlighting.com



Illuminating Engineering Societ www.ies.org



Restriction of Hazardous Substances Directive www.rohs.gov.uk



CE Conformité Européenn



International Dark-si Association www.darksky.org



Toronto Stock Exchange www.tmx.com



International Organization for Standardization www.iso.org



OL SERIES PRODUCT SPECIFICATIONS

OL2 MINI MARKER
OL4 GENERAL PURPOSE HAZARD MARKER
OL10A LOW-INTENSITY OBSTRUCTION LIGHT
OL32 LOW-INTENSITY OBSTRUCTION LIGHT
OL2000 MEDIUM-INTENSITY OBSTRUCTION LIGHT



GENERAL-PURPOSE HAZARD MARKER

THE CARMANAH OLZ OFFERS EXCELLENT VALUE AND EXTREMELY RELIABLE OPERATION FOR UP TO FIVE YEARS. THE OL2 IS DESIGNED TO SURVIVE AND PERFORM IN TOUGH INDUS-TRIAL ENVIRONMENTS WITH A WATERPROOF. VIBRATION-PROOF AND VANDAL-RESISTANT CASING.

- Self-contained and low-maintenance: the OL2 comes in a simple, place-and-go form factor. The small, lightweight unit installs within minutes virtually anywhere using just two bolts or screws.
- User-friendly: includes options for infrared programmer or external switch to simplify activation and configuration. Requires no bulb or battery replacement and features self-cleaning solar dome to minimize upkeep.
- Unprecedented reliability: innovative LED technology and patented energy management systems ensure consistent performance and a long product life.
- Quality components and manufacturing: the OL2 is manufactured in accordance with ISO 9001:2000 Quality Assurance Standards, and is IP68 certified to meet higher levels of water ingress protection standards.
- Green solution: a clean, renewable and reliable energy source with the lightest environmental footprint. The OL2 is entirely RoHS compliant.

A PRACTICAL, COMPACT AND LOW-MAINTENANCE SOLUTION FOR MARKING SMALLER HAZARDS AND **OBSTACLES IN REMOTE OR HARD-TO-ACCESS** LOCATIONS.

- Automatic dusk to dawn operation
- Optional external switch for easy activation and programming
- Field-proven durability



TECHNICAL FEATURES AND SPECIFICATIONS			
Solar Panel	High-efficiency cells with blocking diode function.		
Programming/Configuration	Infrared programmer or external switch optional		
Battery	Non-replaceable (average 5-year life)		
Light Source	High power LED, colour-specific		
Intensity	Peak intensity 1.2 cd		
Flash Patterns	7		
Autonomy	300 hours (flashing) at full charge		
Construction	Premium grade UV stabilized		
Colours	Red, blue, yellow, green, white		
To man a wate wa	-22 to 122 °F (-30 to 50 °C) operating		
Temperature	-40 to 176 °F (-40 to 80 °C) storage		
Weight	2.45 lbs (1.1 kg)		
Energy Management System	MICROSOURCE® code suite		
RoHS Compliant	Yes		
CE Approval	As per EN 60945:1997		
IP 68 waterproof rating	Yes		
Patents	US Patents: 6573659 and 6013985 Other Patents Pending		









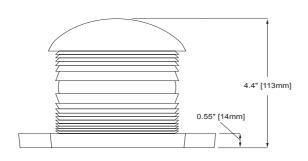




MODEL GENERAL-PURPOSE HAZARD MARKER

TECHNICAL DRAWINGS AND DIMENSIONS

SIDE VIEW

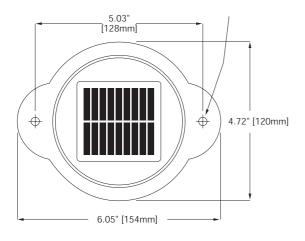


SETUP & CONFIGURATION

MOUNTING: 2-BOLT / SCREW



BOTTOM VIEW



PROGRAMMING



OPTIONAL EXTERNAL SWITCH

INFRARED PROGRAMMER

Additional accessories and mounting options available. For a complete list view our accessories specification sheet.

ORDER OPTIONS					
MODEL ▼	OUTPUT ▼	SWITCH ▼	CONTROL ▼		
OL2	RED BLUE GREEN WHITE YELLOW	SWITCHED /UNSWITCHED	NON- WIRELESS OPTIONAL INFRARED PROGRAMMER		

Specifications may be subject to change Carmanah is a Canadian public corporation - TSX:CMH © 2012, Carmanah Technologies Corp. Document: OL2_Spec_Sheet_RevB D-055 RevB

US Patent No 6573659 AND 6013985. Other patents pending. "Carmanah" and Carmanah logo are trademarks of Carmanah Technologies Corp.



MODE

GENERAL-PURPOSE HAZARD MARKER

THE OL4 IS A HIGH-PERFORMANCE LIGHT DESIGNED TO PERFORM RELIABLY AT TOUGH INDUSTRIAL LOCATIONS FROM RAIL YARDS TO CONSTRUCTION ZONES TO MINING OPERATIONS AND MORE. SUITABLE FOR PERMANENT, TEMPORARY OR EMERGENCY INSTALLATIONS.

- Easy installation and relocation: lights are immediately operational following a simple installation process. No specialized work crews required.
- Self-contained and low-maintenance: all components are safely encased in a durable, rugged enclosure. The OL4 includes a replaceable battery pack that extends the total cost of ownership beyond five years and offers significant cost savings.
- Intelligent deployment settings: the OL4 has the unique ability to be tuned to its precise installation location protecting it against improper configuration.
- Unprecedented reliability: microprocessor Energy Management System (EMS) monitors and adapts to environmental conditions for consistent operation and long life under the toughest conditions.
- Designed and tested to the toughest industrial standards: MIL-STD-2020G: Humidity, Immersion, Vibration, Shock; MIL-STD-810G: Solar Radiation, Salt-Fog; EN 60945: ESD, EMI, EMC; IP68; L70. The OL4 is acceptable for barricade and construction applications at Commercial Part 139 Airports under FAA Advisory Circular AC 150/5370-2E. The OL4 Blue is compliant with the requirements of ICAO Annex 14, Volume 1, Fourth Edition dated July 2004.
- User-friendly design: on-board user interface, optional infrared remote and USB device manager software offer easy configuration and programming.
- Green solution: recyclable batteries and an RoHS compliant design combined with natural solar charging ensure the lightest environmental footprint.

LIGHTWEIGHT AND SELF-CONTAINED WITH SOPHIS-TICATED SOLAR ENERGY MANAGEMENT - THE OL4 IS UNRIVALLED BY ANY OTHER HAZARD MARKING OR BARRICADE LIGHT CURRENTLY AVAILABLE.

- · Dusk to dawn operation
- Intuitive on-board user interface
- Intelligent deployment settings for reliable performance in a wide-range of locations
- Proven technology platform



SPECIFICATIONS			
Solar Panel	High-efficiency cells with bypass and blocking diode function. Maximum power point tracking (MPPT) for optimal energy collection		
Battery	Tool-less replaceable and recyclable best-in-class battery pack with extreme temperature range. Battery status feedback of Good, Charge or Bad (Replace)		
Light Source	High power LED, colour-specific temperature corrected LED drivers provide consistent intensity under all operating conditions		
Intensity	4 cd peak (red), steady-on (see photometric plot on reverse). 18 cd peak intensity, flashing, 12.5% duty cycle (Red LEDs)		
Flash Patterns	256+		
Construction	Premium grade UV resistant, polycarbonate/ polysiloxane co-polymer body and lens material. Double O-ring sealing with waterproof vent		
Colours	Red, blue, yellow, green, white ICAO and SAE25050 (FAA) compliant chromaticity		
Colour Indicator	Yes, FAA Eng. Brief 67 compliant		
Temperature	-45 to 124 °F (-43 to 51 °C) operating		
remperature	-45 to 176 °F (-43 to 80 °C) storage		
Weight	3.5 lbs (1.58 kg)		
Wind Loading	400 mph (180 m/s)		
Automatic Light Control (ALC)	When enabled, ALC will dynamically reduce brightness in response to unusually low amounts of sunlight to ensure continued operation.		

















MODEL

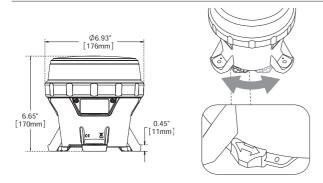
OL4

GENERAL-PURPOSE HAZARD MARKER

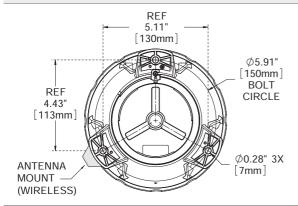
TECHNICAL DRAWINGS AND DIMENSIONS

SIDE VIEW

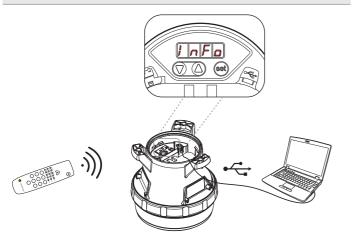
SWITCHED VIEW



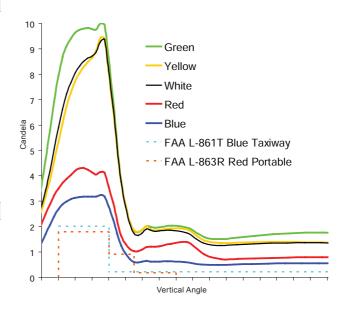
BOTTOM VIEW



PROGRAMMING AND CONFIGURATION



PHOTOMETRICS



ORDER OPTIONS				
MODEL ▼	OUTPUT ▼	SWITCH ▼	CONTROL ▼	
OL4	RED BLUE GREEN WHITE YELLOW	SWITCHED /UNSWITCHED	NON- WIRELESS OPTIONAL INFRARED PROGRAMMER	
ACCESSORY ORDERING CODES				

ACCESSOR	ACCESSORY ORDERING CODES				
Additional Bird	Deterrent (1 ships wit	h each light)	57003		
Bottom Cover Replacement Kit		57392 (With Switch) 57393 (Without Switch)			
Battery Replacement Pack		57383			
Battery Charger		59648 (110V) 59188 (220V)			
USB cable		57394			
Device manager software		61125			
Infrared Progra	ammer		56818		

Additional accessories and mounting options available. For a complete list consult our accessories specification sheet.

Specifications may be subject to change Carmanah is a Canadian public corporation - TSX:CMH © 2012, Carmanah Technologies Corp. Document: OL4_Spec_Sheet_RevB D-056 RevB

US Patent No 6,573,659. Other patents pending. "Carmanah" and Carmanah logo are trademarks of Carmanah Technologies Corp.



SOLAR LED OBSTRUCTION LIGHT

CERTIFIED TO MEET THE REQUIREMENTS OF THE LOW-INTENSITY OBSTACLE LIGHT TYPE A, ACCORDING TO ICAO ANNEX 14, VOLUME 1, FIFTH EDITION, JULY 2009 (RED)

- Easy deployment, installation and relocation: solar-powered unit installs rapidly. No specialized work crews required and lights are immediately operational. The OL10A can also be quickly relocated for temporary or emergency applications.
- Self-contained and low-maintenance: all components are incorporated within a compact, standalone unit. The OL10A features a replaceable battery pack that extends the total cost of ownership and results in significant cost savings.
- Unprecedented reliability: microprocessor Energy Management System (EMS) monitors and adapts to environmental conditions for consistent operation and long life under the toughest conditions.
- Designed and tested to the toughest industrial standards: MIL-STD-2020G: Humidity, Immersion, Vibration, Shock; MIL-STD-810G: Solar Radiation, Salt-Fog; EN 60945: ESD, EMI, EMC; IP68; L70. The OL10A is acceptable for barricade and construction applications at Commercial Part 139 Airports under FAA Advisory Circular AC 150/5370-2E. The OL10A Blue is compliant with the requirements of ICAO Annex 14, Volume 1, Fourth Edition dated July 2004.
- Scalable design: The OL10A features the industry's only fully-self contained, scalable solar engine. Options for standard or high-performance energy packs offer cost-effective and reliable performance in virtually any
- Green solution: a clean, renewable and reliable energy source with the lightest environmental footprint. The OL10A uses recyclable batteries and is entirely RoHS compliant.

TAKE ADVANTAGE OF THE LATEST TECHNICAL DEVELOPMENTS IN OPTICS AND INCREASED SOLAR OUTPUT.

- Automated dusk to dawn operation
- · Visible and IR modes available
- Proven technology platform







Standard Solar Engine

High-Performance Solar Engine













Optional 2.5 mile (4 km) control range 900 MHz FHSS with encrypted signal Control 8 groups of lights independently

OL10A

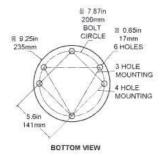
DIMENSIONS

SIDE VIEW - STANDARD

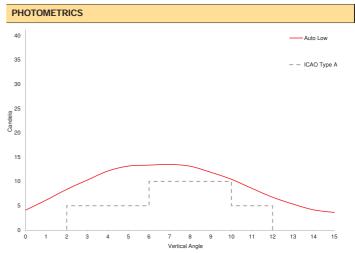
SOLAR LED OBSTRUCTION LIGHT

SPECIFICATIONS	
	ICAO: Complies with the requirements of the Low-Intensity Obstacle Light Type A and Type B according to ICAO Annex 14, Fifth Edition, July 2009 (Red)
Optical	High-power LEDs meet IES LM-80 lumen maintenance, ensuring consistent photometrics for life of product
Ориоси	ICAO, SAE25050 (FAA), and FAA EB 67 compliant chromaticity
	NVG-compatible infrared (IR) LEDs
	Steady-on and flash patterns
	High-efficiency cells with blocking diodes
Energy Collection	Maximum power point tracking with temperature compensation (MPPT-TC) for optimal energy collection in all solar conditions
	Pure-lead VRLA AGM battery with manufacturer operating range -85 to 176 °C (-65 to 80 °C)
Energy Storage	On-board battery status
	Designed for 5 year battery life; Replaceable and recyclable
	Port for battery charging and cabled operation
	Intelligent, microprocessor EMS
Energy Management System	On-board diagnostics and datalogger
(EMS)	Push button interface for local control
	Autonomous, Temporary, and Emergency Modes
Automatic Light Control (ALC)	ALC adjusts output intensity in response to unusually low amounts of sunlight to ensure continued operation
	Premium, UV-resistant polycarbonate lens
Construction	Powdercoated aluminum chassis with integrated handle
	Waterproof, vented battery compartment
T	-22 to 122 °F (-30 to 50 °C) operating
Temperature	-40 to 176 °F (-40 to 80 °C) storage
Weight	Standard Engine: 12 lbs (5.44 kg) High-Performance Engine: 17 lbs (7.71 kg)
Wind & Ice Loading	400 mph (179 m/s) wind; 0.03 psi (22 kg/m²) ice
Shock & Vibration	MIL-STD-202G and MIL-STD-810G
	EN 60529 IP 67 immersion
Ingress	MIL-STD-202G immersion & damp heat cycling
	MIL-STD-810G rain & salt fog
Electrostatic Discharge (ESD)	FAA-STD-019E, EN 61000-4-2

7.8in 197mm 0.38 in 10mm



SIDE VIEW - HIGH-PERFORMANCE



CONFIGURATION					
MODEL ▼	ENGINE ▼	OUTPUT ▼	SWITCH ▼	CONTROL ▼	CHASSIS ▼
OL10A	STANDARD HIGH-PERF.	RED/IR BLUE/IR GREEN/IR WHITE/IR YELLOW/IR	SWITCHED	NON-WIRELESS WIRELESS* CHARGEPORT* GSM*	YELLOW CUSTOM*

^{*}Call for details

Specifications may be subject to change Carmanah is a Canadian public corporation - TSX:CMH © 2012, Carmanah Technologies Corp. Document: OL10a_Spec_Sheet_RevB D-053 RevB

US Patent No 6,573,659. Other patents pending. "Carmanah" and Carmanah logo are trademarks of Carmanah Technologies Corp.



SOLAR LED OBSTRUCTION LIGHT

COMPLIANT WITH OBSTRUCTION LIGHT TYPE L-810 AS PER FAA ADVISORY CIRCULAR AC 150/5345-43F 09/12/06 (RED)

CERTIFIED TO MEET THE REQUIREMENTS OF THE LOW-INTENSITY OBSTACLE LIGHT TYPE A, ACCORDING TO ICAO ANNEX 14, VOLUME 1, FIFTH EDITION, JULY 2009 (RED)

- Innovative design: takes advantage of the latest technical developments in optics and increased output. The OL32 also comes with the industry's only scalable solar engine for cost-effective and reliable performance in a wide range of locations.
- Industry compliant: provides ICAO Type B / FAA L810 intensities of visible light or can be switched to infrared (IR) light for night vision goggle (NVG) operations. The OL32 is also capable of simultaneous visible/IR modes.
- Installs in minutes, easily maintained: self-contained design requires no external components and supports multiple bolt patterns for simplified installation. The light operates automatically from dusk-to-dawn and also includes an external programming switch for simplified activation and programing. Replaceable battery pack ensures extended product life beyond five years.
- Designed and tested to the toughest industrial standards: MIL-STD-2020G: Humidity, Immersion, Vibration, Shock; MIL-STD-810G: Solar Radiation, Salt-Fog; EN 60945: ESD, EMI, EMC; IP68; L70. The OL10A is acceptable for barricade and construction applications at Commercial Part 139 Airports under FAA Advisory Circular AC 150/5370-2E. The OL10A Blue is compliant with the requirements of ICAO Annex 14, Volume 1, Fourth Edition dated July 2004.
- Green solution: a clean, renewable and reliable energy source with recyclable batteries. RoHS compliant.

THE NEW BENCHMARK FOR LOW-INTENSITY SOLAR LED OBSTRUCTION APPLICATIONS IN AN EASY-TO-INSTALL, LOW-MAINTENANCE PACKAGE.

- Automated dusk to dawn operation
- Visible and IR modes available
- · Proven technology platform

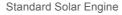














High-Performance Solar Engine











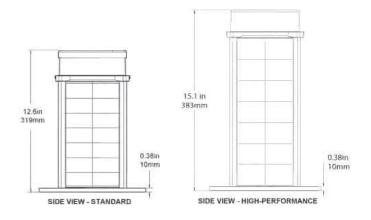


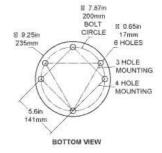
Optional 2.5 mile (4 km) control range 900 MHz FHSS with encrypted signal Control 8 groups of lights independently

MODEL OLS SOLAR LED OBSTRUCTION LIGHT

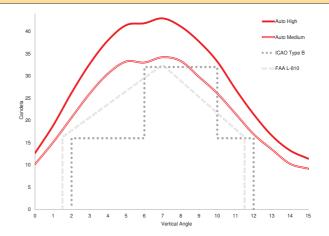
SPECIFICATIONS	
	FAA: Meets Obstruction light Type L-810 as per FAA Advisory Circular AC 150/5345-43F 09/12.06 (Red)
	ICAO: Complies with the requirements of the Low-Intensity Obstacle Light Type A and Type B according to ICAO Annex 14, Fifth Edition, July 2009 (Red)
Optical	High-power LEDs meet IES LM-80 lumen maintenance, ensuring consistent photometrics for life of product
	ICAO, SAE25050 (FAA), and FAA EB 67 compliant chromaticity
	NVG-compatible infrared (IR) LEDs
	Steady-on and flash patterns
	High-efficiency cells with blocking diodes
Energy Collection	Maximum power point tracking with temperature compensation (MPPT-TC) for optimal energy collection in all solar conditions
	Pure-lead VRLA AGM battery with manufacturer operating range -85 to 176 °C (-65 to 80 °C)
Energy Storage	On-board battery status
3, 111 131	Designed for 5 year battery life; Replaceable and recyclable
	Port for battery charging and cabled operation
	Intelligent, microprocessor EMS
Energy Management System	On-board diagnostics and datalogger
(EMS)	Push button interface for local control
	Autonomous, Temporary, and Emergency Modes
Automatic Light Control (ALC)	ALC adjusts output intensity in response to unusually low amounts of sunlight to ensure continued operation
	Premium, UV-resistant polycarbonate lens
Construction	Powdercoated aluminum chassis with integrated handle
	Waterproof, vented battery compartment
	-22 to 122 °F (-30 to 50 °C) ambient
Temperature	-40 to 176 °F (-40 to 80 °C) storage
Weight	Standard Engine: 17 lbs (7.7 kg) High-Performance Engine: 26 lbs (11.8 kg)
Wind & Ice Loading	400 mph (179 m/s) wind; 0.03 psi (22 kg/m²) ice
Shock & Vibration	MIL-STD-202G and MIL-STD-810G
	EN 60529 IP 67 immersion

DIMENSIONS





PHOTOMETRICS



CONFIGUR	CONFIGURATION				
MODEL ▼	ENGINE ▼	OUTPUT ▼	SWITCH ▼	CONTROL ▼	CHASSIS ▼
OL32	STANDARD HIGH-PERF.	RED/IR BLUE/IR GREEN/IR WHITE/IR YELLOW/IR	SWITCHED	NON-WIRELESS WIRELESS* CHARGEPORT* GSM*	YELLOW CUSTOM*

^{*}Call for details

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Ingress

Electrostatic Discharge (ESD)

US Patent No 6,573,659. Other patents pending. "Carmanah" and Carmanah logo are trademarks of Carmanah Technologies Corp.

MIL-STD-202G immersion & damp heat cycling

MIL-STD-810G rain & salt fog

FAA-STD-019E, EN 61000-4-2



MODE

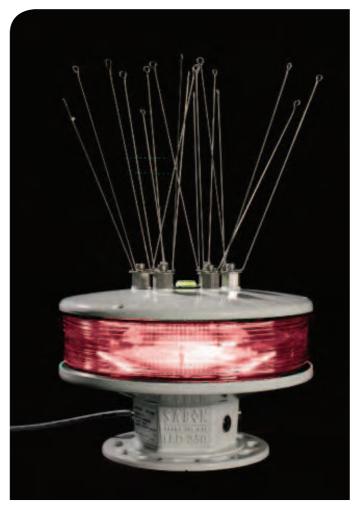
OL2000

LED INDUSTRIAL AND OBSTRUCTION LIGHT

THE OL2000 IS AN INDUSTRIAL GRADE, HIGH-POWER LED LIGHT THAT MEETS ICAO TYPE B/C MEDIUM INTENSITY OBSTRUCTION LIGHTING STANDARDS (ICAO ANNEX 14, FIFTH EDITION, JULY 2009 (RED). THIS SELF-CONTAINED LIGHT IS IDEAL FOR FIXED INSTALLATIONS.

- Durable design: rugged aluminum housing withstands installation in extreme environments.
- Flexible and user-friendly: Adjustable intensity and range. Programmed with a wireless Easy Programmer, PDA Programmer or with USB/IR interface
- Low power consumption: Suitable for solar and battery consumption
- Integrated Black Box function: 365 day event log
- Optional GPS synchronization
- Optional GSM remote monitoring
- Infrared communications port
- Photocell for automated dust-to-dawn activation
- Stainless steel bird deterrents are standard equipment

THE OL2000 IS A SELF-CONTAINED HIGH POWER LED LANTERN DESIGNED TO MEET AND EXCEED ICAO TYPE C MEDIUM INTENSITY OUTPUT. STAND-ALONE CAPABILITY, LOW MAINTENANCE DESIGN AND EASY INSTALLATION MAKES THE OL2000 AN OPTIMAL SOLUTION FOR TOWER AND OBSTACLE LIGHTING.





PDA Programmer - Wireless two-way communication using a Windows based PDA programmer.

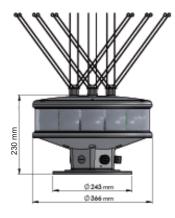


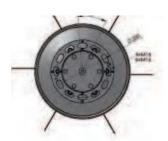
Easy Programmer
User friendly and compact wireless
two-way programmer.





DIMENSIONS





MODEL

OL2000

LED INDUSTRIAL AND OBSTRUCTION LIGHT

TECHNICAL FEATURES AND SPECIFICATIONS		
Supply Voltage	20-30 VDC	
Lens Material	UV Stabilized Polycarbonate	
Light Source	High power Light Emitting Diode (LED)	
Intensity	2000 cd intensity, steady-on in Red	
Unit Lifetime	Up to 10 Years	
Solar Panel Charger	16 Ampere PWM charger. Solar panel production (Ah) is logged	
Temperature Range	-40 to 140°F (-40 to +60 °C)	
Degree of Protection	IP 67	
Weight	22 lb (10 kg)	

OPTIONS	
GSM	Integrated GSM based monitoring with GSM antenna
GSM + GPS	Integrated GSM based monitoring with GSM/GPS antenna
GPS Sync	Integrated GPS sync (only available on units with GPS antenna)
Optical Feedback System	Integrated LED performance measurement

CONFIGURATION					
MODEL	OUTPUT ▼	SWITCH ▼	CONTROL ▼		
OL2000	RED	NON-SWITCHED	NON- WIRELESS GSM GPS GSM		



Level Indicator: Level in field using the integrated bubble level indicator.



IR port and photocell: Combined infrared communication port and photocell



Performance: Specially designed lens allows for exceptional output performance.



Additional cable entry: Equipped as standard with two cable entries.



Grounding plug: Baseplate grounding against electromagnetic interference.

Specifications may be subject to change

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Document: OL2000_SpecSheet_RevA

US Patent No 6,573,659. Other patents pending. "Carmanah" and Carmanah logo are trademarks of Carmanah Technologies Corp.