

Vehicle Detection Systems

Data Sheet



A smart vehicle detection system that leverages radar technology to trigger high-intensity flashing lights, increasing driver awareness of potential roadway hazards:

- ✓ Flashing light options include LED enhanced signs in various sizes or circular beacons
- ✓ Highest LED intensity output in the industry
- ✓ Configurable radar settings for detection speed, sensitivity and vehicle direction
- ✓ System mounts to standard poles
- ✓ Scalable design: multiple signs can be added with synchronized flashing
- ✓ Powered by solar or AC
- ✓ Solar Power Report™ (SPR) prepared for every location to ensure battery longevity

Superior Detection Technology

The system monitors roadways 24 hours a day for vehicles, without interfering with other traffic detection systems. When the radar unit detects a vehicle, the system activates the LEDs to warn the driver and make them aware of the oncoming hazard or warning sign.

Easy Solar Installation

With its highly efficient and compact solar design, installation is quick and uncomplicated, dramatically reducing installation costs. Existing signs can be retrofitted in minutes, and new installations can be completed without the cost of larger poles, new bases and trenching.

Advanced User Interface

The system comes with an on-board user interface for LED configuration and system status monitoring. It allows for simple, in-the-field adjustment of flash pattern, duration, intensity, ambient auto adjust, night dimming, and more. The radar is easily programmed using the included PC software, allowing for quick setting configuration for detection speed, sensitivity and more.

Reliable

Carmanah backs every system with a three-year limited warranty. Every solar-powered model is solar-sized by location to ensure year-after-year operation. Carmanah includes a Solar Power Report to prove sustainability over a 12-month period.



Curve warning ahead system with circular beacon

Intersection conflict system with LED enhanced sign



MUTCD compliant



Buy America compliant



3-year limited warranty



Solar-sized for every location

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SOLAR ENGINES



Compact, 15w integrated solar engine



Large, 30w integrated solar engine



Cabinet-based, 20w, 50w, and 80w solar and AC systems

SOLAR ENGINE MOUNTING

2.0" - 2.5" Perforated Square Pole Mount



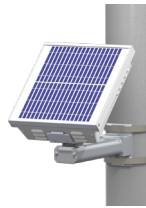
2.38" - 2.88" Diameter Round Pole Mount



3.5" - 4.5" Diameter Round Pole Mount



Side Pole Mount



APPLICATION OPTIONS

Curve Ahead Warning



Intersection Conflict



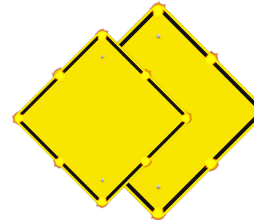
Hazard Ahead Warning



[See our wrong-way driving detection and warning system data sheet.](#)

FLASHING LIGHT OPTIONS

LED Enhanced Sign



Circular Beacon



* Many sign shapes, colors and sizes are available. Contact Carmanah for more options.

SYSTEM SPECIFICATIONS

On-Board User Interface	Adjustable system settings with auto-scrolling LED display
	System test, status, and fault detection: battery, solar, beacon, day/night
	Intensity setting: 20 to 1400 mA for LED enhanced signs or circular beacons
	Radio settings: enable/disable, selectable channel from 1 to 14
	Nighttime dimming: 10 to 100% of daytime intensity
	Ambient Auto Adjust: increases intensity during bright daytime
Connectivity	Automatic Light Control: reduces intensity if the battery is extremely low
	Encrypted, wireless radio with 2.4 GHz mesh technology
	User-selectable multiple channels to group different signs and ensure a robust wireless signal
	Communicates with all nearby wireless beacon systems
	Instantaneous wireless activation: <150 ms
	Wireless range: 1000 ft (305 m)
Energy Collection	Integrated, vandal-proof antenna
	Solar or AC-powered
	45-degree solar panel tilt for optimal energy collection
Energy Storage	Maximum Power Point Tracking with Temperature Compensation (MPPT-TC) battery charger for optimal energy collection in all solar and battery conditions
	Replaceable, recyclable, sealed, maintenance-free, best-in-class AGM batteries offer the widest temperature range and longest life
	Battery design life: +5 yrs.
Solar Engine Construction	Tool-less battery change with quick connect terminals and strapping for easy installation
	Weatherproof, gasketed enclosure with vents for ambient air transfer (NEMA 3R)
	Lockable, hinged enclosure for access to on-board user interface and batteries
	Corrosion-resistant aluminum with stainless steel hardware
	Raw aluminum finish or powder coated in yellow or black
Environmental	Prewired to minimize installation time
	High-efficiency optics and EMS = the most compact, lightweight system
	-40 to 165° F (-40 to 74° C) system operating temperature
Warranty	-40 to 140° F (-40 to 60° C) battery operating temperature
	3-year limited warranty (1-year battery warranty)

DETECTOR SPECIFICATIONS

Radar Unit	24 GHz radar unit detects vehicles
	Radar technology for accurate detection at night and in adverse weather conditions
	Adjustable radar parameters, such as detection speed, sensitivity, trigger event settings and duration, and others
	3rd-party tested radar detection range to 1000 ft
	Universal bracket mounts to pole with standard banding, through bolts, U-bolts, band clamps, and more

WARNING LIGHT SPECIFICATIONS

LED Enhanced Sign	MUTCD compliant: 2009 MUTCD, Chapter 2B Signs
	High-power LEDs in waterproof housings
	Aluminum channels protect wiring; includes junction box
Circular Beacon	MUTCD compliant: 2009 MUTCD, Chapter 4L, Flashing Beacons, Manual on Uniform Traffic Control Devices (MUTCD)
	ITE VTCSH-LED Circular Signal Supplement compliant: meets ITE or 1.7x ITE intensity when used as recommended
	12" (305 mm) or 8" (203 mm) diameter LED modules, yellow or red
	High-power LEDs: +90% lumen maintenance (L90) based on IES LM-80
	Yellow, black, or green signal heads in UV-resistant polycarbonate or aluminum

Specifications subject to local environmental conditions, and may be subject to change.

All Carmanah products are manufactured in facilities that are certified to ISO quality standards.

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