

R829-E

Solar-Powered School Zone Flashing Beacon



Beacons decrease vehicle speeds by 8 to 11 km/h in school zones.

- ✓ Highest intensity output in the industry
- ✓ MUTCDC compliant
- ✓ Compact and lightweight solar engine
- ✓ Energy Balance Report™ (EBR) prepared for every location to ensure battery longevity

Superior Design and Technology

The R829-E utilizes a self-contained solar engine integrating the Energy Management System (EMS) with an on-board user interface, housed in a compact enclosure together with the batteries and solar panel. MUTCD flash patterns, available ITE intensity, and multiple configurations enable the R829-E to handle all school zone and speed limit sign applications.

Easy Installation

With its highly efficient and compact design, installation is quick and uncomplicated, dramatically reducing installation costs. Retrofitting can be done where existing sign bases are used to enhance existing school zones and speed limit signs in minutes, and new installations can be completed without the cost of larger poles, new bases, and trenching.

Calendar

Schedule beacon operation with our easy software-based calendar program.

Advanced User Interface

The R829-E comes with an on-board user interface for quick configuration and status monitoring. It allows for simple in-the-field adjustment of flash pattern, duration, intensity, ambient auto adjust, night dimming, and many more. Optional wireless connection enables one beacon's calendar settings to control multiple school zone beacons.

Reliable

Designed with Carmanah's industry-leading solar modeling tools to provide dependable year-after-year operation. We prepare an Energy Balance Report (EBR) for every location.

Trusted for 20+ Years

With thousands of installations, Carmanah's systems are the benchmark in traffic applications and other transportation applications worldwide.



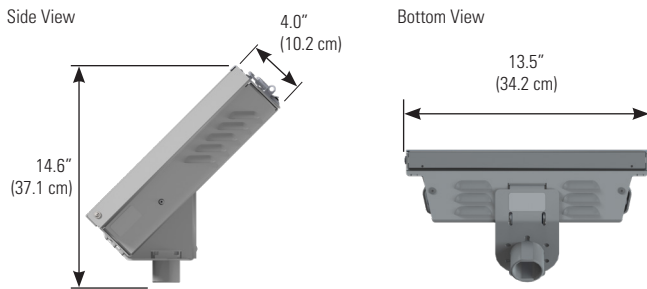
R829-E

Solar-Powered School Zone Flashing Beacon

1.844.412.8395 | traffic@carmanah.com | carmanah.com



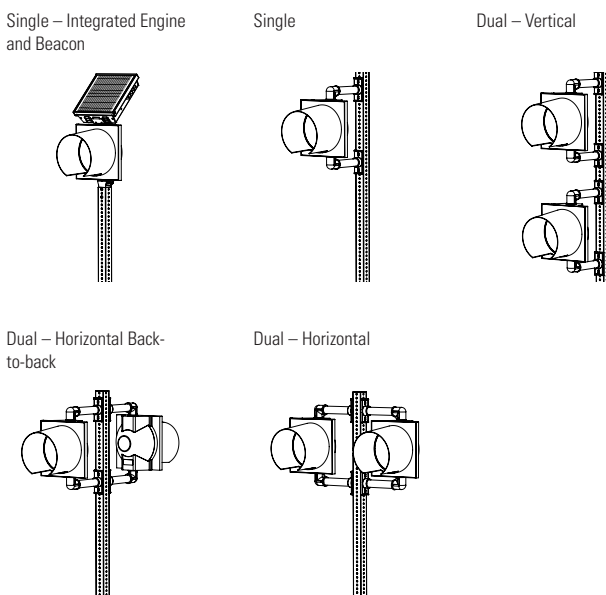
SOLAR ENGINE DIMENSIONS



SOLAR ENGINE MOUNTING



BEACON MOUNTING



BEACON SPECIFICATIONS

Optical	MUTCD and MUTCDC 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 in (305 mm) or 8 in (203 mm) diameter LED modules, yellow
	High-power LEDs: +90% lumen maintenance (L90) based on IES LM-80
	Yellow, black, or green signal heads in UV-resistant polycarbonate or aluminum

SYSTEM SPECIFICATIONS

On-Board User Interface (OBUI)	Adjustable system settings with auto-scrolling LED display on our latest EMS
	System test, status, and fault detection: battery, solar, button, beacon, radio, day/night
	Flash patterns: RFB (WW+S), RFB1 (WW+S legacy), RFB2 (WSDOT), 0.5 sec. alternating (MUTCD), 0.5 sec. unison (MUTCD), 0.5 sec. x3 alternating (MUTCD), 0.1 sec. unison, 0.25 sec. unison, 0.1 sec. x3 quick flashes unison, 0.1 sec. x3 quick flashes alternating, steady on
	Input: momentary for pushbutton activation, normally open switch, normally closed switch
	Flash duration: 5 sec. to 1 hr.
	Intensity setting: 20 to 1400 mA for multiple RFBs, circular beacons, or LED enhanced signs
	Nighttime dimming: 10 to 100% of daytime intensity
	Ambient Auto Adjust: increases intensity during bright daytime
	Automatic Light Control: reduces intensity if the battery is extremely low
	Temperature correction: yellow beacons
Beacon Communication	Calendar: internal time clock function
	Radio settings: enable/disable, selectable channel from 1 to 14
	Output: enabled when beacons flashing daytime and nighttime, or nighttime only
	Activation counts and data reporting via OBUI or optional USB connection
	Optional encrypted, wireless radio with 2.4 GHz mesh technology
Energy Collection	Optional radio allows calendar program, manual override switch, or input device from one system to remotely control other systems
	User-selectable multiple channels to group different beacons and ensure a robust wireless signal
	Instantaneous wireless activation: <150 ms
Energy Storage	Wireless range: 1000 ft (305 m)
	Integrated, vandal-resistant antenna
	15 W high-efficiency photovoltaic solar panel
Solar Engine Construction	45 deg tilt for optimal energy collection
	Maximum Power Point Tracking with Temperature Compensation (MPPT-TC) battery charger for optimal energy collection in all solar and battery conditions
	12 V 14 Ahr. battery system
Environmental	Replaceable, recyclable, sealed, maintenance-free, best-in-class AGM batteries offer the widest temperature range and longest life
	Battery design life: +5 yrs.
	Tool-less battery change with quick connect terminals and strapping for easy installation
Activation	Weatherproof, gasketed enclosure with vents for ambient air transfer (NEMA 3R)
	Lockable, hinged lid for access to on-board user interface and batteries
	Corrosion-resistant aluminum with stainless steel hardware
Warranty	Raw aluminum finish or yellow, black, or green powder coated
	Prewired to minimize installation time
	High-efficiency optics and EMS = the most compact, lightweight system
	19 lb (8.6 kg) including batteries, excluding beacons and pushbutton
	-35 to 165° F (-37 to 74° C) system operating temperature
	-40 to 140° F (-40 to 60° C) battery operating temperature
	150 mph (241 kph) wind speed as per AASHTO LTS-6
	Internal time clock: calendar programming via our simple software
	Manual override switch: allows local control of beacons
	Junction box: lockable, hinged door, corrosion-resistant aluminum enclosure allows easy calendar programming and access to manual override switch
5-year limited warranty, excluding batteries	



MUTCD



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.

"Carmanah" and Carmanah logo are trademarks of Carmanah Technologies Corp.

© 2021, Carmanah Technologies Corp.

Document: SPEC_TRA_R829-E-CAD_RevB