# R829-G

### **Cabinet-Based School Zone Flashing Beacon Data Sheet**

# Beacons decrease vehicle speeds by 5 to 7 mph in school zones:

- ✓ Highest intensity output in the industry
- ✓ MUTCD and Buy America compliant
- ✓ Solar or AC-powered
- ✓ Solar Power Report<sup>™</sup> (SPR) prepared for every location to ensure battery longevity

#### **Superior Design and Technology**

The R829-G is a cabinet-based system with a separate, high-power solar panel. This design enables the R829-G to work with third-party time clocks and remote monitoring, as well as operate at higher intensities in challenging environments. MUTCD flash patterns, available ITE intensity, and multiple configurations enable the R829-G to handle all school zone and speed limit sign applications.

#### **Easy Installation**

All components, including the battery or AC power supply, Energy Management System (EMS) and optional time clocks are housed in a compact, lockable, purposebuilt enclosure. It also incorporates a wire routing and termination system, and all components are wired at the factory for an efficient installation.

#### **Calendar Operation**

Schedule beacon operation with our easy software-based calendar program, or use third-party time clocks for local or remote control.

#### **Advanced User Interface**

The R829-G 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

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.







MUTCD compliant



5-year limited warranty



Buy America compliant



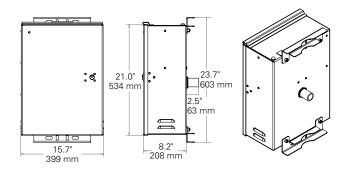
Solar-sized for every location

## R829-G

#### Cabinet-Based School Zone Flashing Beacon Data Sheet

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#### **CABINET DIMENSIONS**



#### **SOLAR PANELS AND MOUNTS**

3.5" - 4.5" Diameter Round Top of Pole Mount



Side of Pole Mount

	PANEL*	LENGTH	WIDTH
	50 W	26.3" (668 mm)	21.2" (538 mm)
Т	80 W	30.7" (780 mm)	26.5" (672 mm)

\* Carmanah will conduct a site assessment and provide an Solar Power Report\* to determine the correct solar panel and battery size.

#### **BEACON MOUNTING**

Single Beacon Dual Beacon Triple Beacon – Alternating Flashing

Quad Beacon



#### **BEACON SPECIFICATIONS**

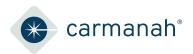
MUTCD compliant: 2009 MUTCD, Chapter 4L, Flashing Beacons, Manual on Uniform Traffic Control Devices (MUTCD)

ITE VTCSH-LED Circular Signal Supplement compliant: meets ITE or 1.7x ITE intensity when used as recommended

12 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 SPECI	FICATIONS	
	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, dusk-to-dawn operation	
	Flash duration: 5 sec. to 1 hr.	
On-Board User	Intensity setting: 20 to 1400 mA for multiple circular beacons, RRFBs, or LED enhanced signs	
Interface (OBUI)	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	
	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  E.g., for relay control of overhead lighting	
	Activation counts and data reporting via OBUI or optional USB connection	
	Optional encrypted, wireless radio with 2.4 GHz mesh technology	
	Optional radio allows calendar program, manual override switch, or input	
	device from one system to remotely control other systems	
Beacon	User-selectable multiple channels to group different beacons and ensure a	
Communication	robust wireless signal	
oommanaation	Instantaneous wireless activation: <150 ms	
	Wireless range: 1000 ft (305 m)	
	Integrated, vandal-proof antenna	
	Solar or AC-powered	
Power System	AC: 100-240 VAC input, 6-14 AWG	
	Replaceable AC-DC power supply, circuit breaker, terminal block wiring	
	50 or 80 W high-efficiency photovoltaic solar panel	
F C-II+:	45 deg tilt for optimal energy collection	
Energy Collection	Maximum Power Point Tracking with Temperature Compensation (MPPT-TC)	
	battery charger for optimal energy collection in all solar and battery condition	
	12 V battery system with multiple sizes: 35, 55, 100 Ahr.	
C+	Replaceable, recyclable, sealed, maintenance-free, best-in-class AGM	
Energy Storage	batteries offer the widest temperature range and longest life	
	Battery design life: +5 yrs.	
	Weatherproof, gasketed enclosure with vents for ambient air transfer	
	(NEMA 3R)	
	Lockable, hinged door with #2 lock	
Cabinet	Optional padlockable latch	
Construction	Corrosion-resistant aluminum with stainless steel hardware	
	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	
	-40 to 165° F (-40 to 74° C) system operating temperature	
Environmental	-40 to 162° F (-40 to 72° C) battery operating temperature	
	150 mph (241 kph) wind speed as per AASHTO LTS-6	
	Internal time clock: calendar programming via our simple software	
	Also compatible with 3rd-party time clocks:	
	Applied Information AI 500-070B	
	Temple FCU 500-071 (FL only)      TEMPLE FCU 500-071 (FL only)      TEMPLE FCU 500-071 (FL only)	
Activation	RTC AP21, AP22, CPR2102, and M2M modem     Other time clocks may also be compatible.	
	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	

 $\label{lem:conditions} \textbf{Specifications subject to local environmental conditions, and may be subject to change.}$ 

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

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