



# R920

RECTANGULAR RAPID FLASHING BEACON

Pedestrian-actuated warning system for uncontrolled marked crosswalks.

- The R920 is the benchmark for Rectangular Rapid Flashing Beacons (RRFBs)
- Ultra-efficient optical and Energy Management System (EMS)
- Compact design to simplify installation
- Proven technology platform
- Exceeds FHWA standards

RRFBs have been found to provide vehicle yielding rates between 72 and 96 percent for crosswalk applications, including 4 lane roadways with average daily traffic (ADT) exceeding 12,000\*.

### Superior Design and Technology

The R920 utilizes a self-contained solar engine integrating the energy management system with an on-board user interface, housed in a compact enclosure together with the batteries and solar panel. In low light conditions, the ambient auto-adjust option provide over-lighting protection and system efficiency, while still meeting MUTCD light intensity requirements.

### 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 marked crosswalks in minutes, and new installations can be completed without the cost of larger poles and bases.

### Advanced User-Interface

The R920 is the first RRFB with an on-board user interface and display for quick configuration and status monitoring. It allows for simple in-the-field set-up adjustment to flash duration, ambient settings, and night intensity. Settings are automatically sent wirelessly to all units in the system.

### Reliable

Designed with Carmanah's industry leading solar modeling tools to provide dependable year-after-year operation.

### Trusted

With thousands of installations in the field, Carmanah solar beacons and solar LED lights have become the benchmark in traffic applications and other transportation applications worldwide.

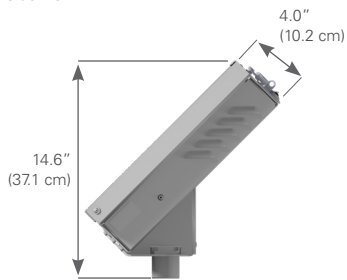


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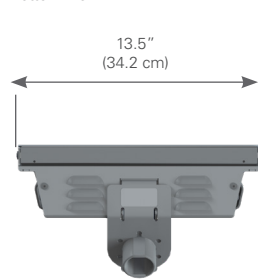
\* U.S. Department of Transportation Federal Highways Administration, Publication No. FHWA-HRT-10-043 - "Effects of Yellow Rectangular Rapid-Flashing Beacons on Yielding at Multilane Uncontrolled Crosswalks"

## DIMENSIONS

Side View



Bottom View



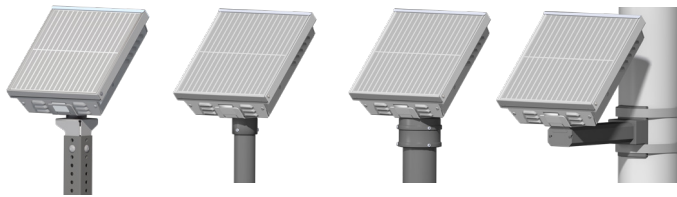
## MOUNTING OPTIONS

2.0" - 2.5" Perforated Square Post Mount

2.38" - 2.88" Diameter Round Post Mount

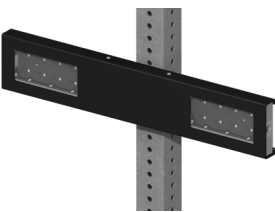
4.0" - 4.5" Diameter Round Post Mount

Side Post Mount

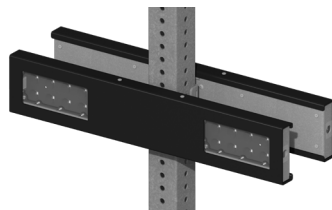


## SYSTEM CONFIGURATION

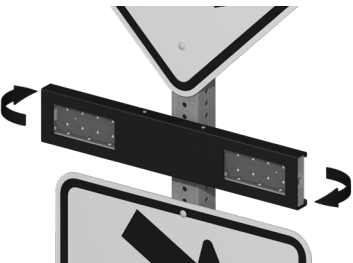
Uni-directional Configuration



Bi-directional Configuration



## IN THE FIELD AIMING



Rotate the lightbar towards the incoming vehicle lane, independent of the wire hole location.

## RRFB CAPACITY CALCULATOR

Calculate the performance of our Rectangular Rapid Flashing Beacon in your location with our RRFB Capacity Calculator.



[carmanah.com/RRFB-calculator](http://carmanah.com/RRFB-calculator)



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

Specifications subject to local environmental conditions.

Specifications may be subject to change.

US Patent No 6,573,659. Other patents pending.

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## RECTANGULAR RAPID FLASHING BEACON

	Adjustable, auto-scrolling LED display
	Field-configurable flash duration in one second increments
	Ambient auto-adjust configuration
On-Board User Interface (OBU)	Night dimming configuration
	Wireless update of configurable settings from any unit to all systems in local network
	Channel selection
	System test, status and fault detection
	Activation data reporting
	MUTCDC compliant
	Lens: 3" x 7", durable polycarbonate Lightbar Aperture: 2.6" x 5.8" LED Color: Amber
Optical	Side-emitting pedestrian confirmation lights
	Exceeds SAE J595 Class 1 Intensity
	Meets SAE J578 chromaticity
	High-power LEDs meets 90% lumen maintenance (L90) based on IES LM-80
Connectivity	Wireless 2.4GHz mesh technology
	10 watt high-efficiency photovoltaic cell with bypass diodes
Energy Collection	Maximum power point tracking with temperature compensation (MPPT-TC) for optimal energy collection in all solar conditions
	Replaceable, recyclable best in-class 12V dual battery system (sealed, maintenance-free)
Energy Storage	Designed for minimum 5 year battery life
	Lightweight for ease of handling
	Quick connect terminals and strapping for efficient installation
	Weatherproof, vented solar engine enclosure for ambient air transfer (NEMA 3R)
	Hinged access lid for access to on-board user interface and batteries
Solar Engine Construction	Compact, lightweight aluminum housing
	Top of pole mounting to standard 2" sign posts and 4" poles; side of pole mounting to standard 4" poles
	Pre-wired assembly designed to minimize installation time
	Weight: 19.8 lb (9 kg) including batteries, excluding light bars and push button
	Premium, UV-resistant polycarbonate lens
Lightbar Construction	Two-piece mounting bracket to facilitate mounting back-to-back lightbars
	Horizontal rotation adjustment for in-the-field aiming of lightbar
	Dimensions: 24" L x 1.5" W x 4.5" H (61.0 cm L x 3.8 cm W x 11.4 cm H)
	Rated for 300, 20 second activations per day, year-round operation with a minimum of 0.94 sun hours
Operating Performance	Wireless activation within 150 ms
	Wireless range of 500 ft (152 m)
Warranty	5-year limited warranty

