R820-G
SOLAR AND AC CROSSWALK FLASHING BEACON

MUTCD-compliant, pedestrian-activated warning beacon for uncontrolled marked crosswalks

- Improve pedestrian safety by increasing driver yield rates
- Passive activation: microwave-based sensor detects pedestrian
- Audible push button station
- Solar power performance even in partially shaded applications
- Solar and AC-powered models wirelessly communicate and can be used together in the same application
- Ultra-efficient optics and Energy Management System (EMS) enable it to meet and exceed MUTCD light intensity requirements

Superior Design and Technology
The R820-G is a cabinet-based system with a separate, high-power solar panel. This design enables the R820-G to work with audible push button stations, passive activation sensors, and remote monitoring, as well as operate at higher intensities and increased activations in challenging environments. MUTCD flash patterns, available ITE intensity, and multiple configurations enable the R820-G to handle all crosswalk applications.

Easy Installation
All components, including the battery or AC power supply, Energy Management System (EMS) and optional audible push button controller are housed in a compact, lockable, purpose-built enclosure. It also incorporates a wire routing and termination system, and all components are wired at the factory for an efficient installation.

Advanced User-Interface
The R820-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. Settings are automatically sent wirelessly to all units in the system.

Compatibility
Compatible with the Carmanah R820-E, R820-F, and our RRRFBs. Interchange solar and AC power models within the same application.

Trusted
With thousands of installations, Carmanah’s beacons are the benchmark in traffic applications and other transportation applications worldwide.

WE SIMPLIFY PLANNING.
Contact us to get your Energy Balance Report and purchase specifications.

1.844.412.8395
traffic@carmanah.com
carmanahtraffic.com
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: RFB1 (WW+S), RFB2 (WSDOT), 0.5 sec. alternating (MUTCD), 0.5 sec. unison (MUTCD), 0.1 sec. unison, 0.25 sec. unison, 0.1 sec. x3 quick flashes unison, 0.1 sec. x3 quick flashes alternating
Input: momentary for push button activation, normally open switch, normally closed switch
Flash duration: 5 sec. to 1 hr.
Intensity setting: 20 to 1400 mA for multiple circular beacons, RRFBs, 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 or red 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
Activation counts and data reporting via OBUI or optional USB connection
Optical 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
High-power LEDs: >600 lumens based on IES LM-80
Yellow, black, or green signal heads in UV-resistant polycarbonate or aluminum
Connectivity Encrypted, wireless radio with 2.4 GHz mesh technology
Wireless update of settings from any unit to all systems on the same radio channel
User-selectable multiple channels to group different beacons and ensure a robust wireless signal
Communicates with all other Gen III radio-enabled systems including our R920-E, R920-F, and SC315 RRFBs
Instantaneous wireless activation: <150 ms
Wireless range: 1000 ft (305 m)
Integrated, vandal-proof antenna
Power System Solar or AC-powered
AC: 90-264 VAC input, 6-14 AWG
Replaceable AC-DC power supply, circuit breaker, terminal block wiring
Energy Collection 20, 50, or 80 W high-efficiency photovoltaic solar panel
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
Energy Storage 12 V battery system with multiple sizes: 33, 35, 75, 100 Ahr.
Replaceable, recyclable, sealed, maintenance-free, best-in-class AGM batteries offer the widest temperature range and longest life
Battery design life: >5 yrs.
Cabinet Construction Weatherproof, gasketed enclosure with vents for ambient air transfer (NEMA 3R)
Lockable, hinged door with #2 lock
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
Environmental -40 to 155° F (-40 to 74° C) system operating temperature
-40 to 162° F (-40 to 72° C) battery operating temperature
150 mph (241 kph) wind speed as per AASHTO LTS-6
Activation Push button: ADA-compliant, piezo-driven with visual LED and two-tone audible confirmation
Audible push button station: ADA-compliant, piezo-driven with visual LED and customizable voice message confirmation
Passive activation: microwave-based sensor detects pedestrian
Warranty 5-year limited warranty
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.
US Patent No 6,573,659, Other patents pending.
"Carmanah" and Carmanah logo are trademarks of Carmanah Technologies Corp.