

LED Enhanced Signs

Data Sheet



LED flashing signs improve driver compliance at crosswalks, school zones, warning and stop signs:

- ✓ Brightest in the industry: more than 1,000,000 mcd daytime light intensity
- ✓ System is reliable, compact and lightweight
- ✓ Solar Power Report™ (SPR) prepared for every location to ensure battery longevity

High-Intensity Light Output

Our LED Enhanced Sign provides high-intensity light output that can improve driver response under all conditions, no matter the time of day or weather. We use the same quality LEDs found in our rectangular rapid flashing beacons, and each sign is powered by Carmanah's robust solar or AC engine. This sign includes nighttime dimming, multiple flash pattern and intensity settings and ambient auto adjust.

Easy Installation

Carmanah's LED Enhanced Signs are conveniently shipped pre-configured from the factory, and installation is quick and uncomplicated—dramatically reducing installation costs. Retrofitting can be done where existing sign bases are used to enhance these sites in minutes, and new installations can be completed without the cost of larger poles, new bases and trenching.

Solar Sizing for Reliable Performance

Carmanah's LED Enhanced Flashing Signs are the most reliable and brightest signs on the market because we're experts at sizing-up solar. Using your sign settings and environmental factors at your location site, Carmanah's solar modeling tool produces a Solar Power Report and recommended product model that will provide dependable, year-after-year operation.

Advanced LED Enhanced Sign Options

Our LED Enhanced Sign 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. An optional manual override switch or wireless connection for local or remote control are also available.



**MUTCD
compliant**



**Buy America
compliant**



**5-year solar
engine warranty**



**3-year LED sign
warranty**



**Solar-sized for
every location**

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SIGN TYPES

Regulatory Signs



R1-1

MUTCD Chapter 2B compliant, R1-1 layout
3M Diamond Grade DG3 retroreflective sheeting, 4092 red
8 red LEDs
24, 30, 36, and 48" sign sizes

Warning Signs



W11-2

MUTCD Chapter 2C compliant, W11-2 layout
3M Diamond Grade DG3 retroreflective sheeting, 4081 fluorescent yellow
8 yellow LEDs
24, 30, 36, and 48" sign sizes

School Signs



S1-1

MUTCD Chapter 7B compliant, S1-1 layout
3M Diamond Grade DG3 retroreflective sheeting, 4083 fluorescent yellow green
8 yellow LEDs
30, 36, and 48" sign sizes



W1-2
Yellow



S5-1
White/Yellow



R1-2
Red



R5-1a
Red

*Many sign shapes, sizes and configurations are available. Contact Carmanah for more information.

SOLAR ENGINE MOUNTING

2.0" - 2.5" Perforated Square Pole Mount



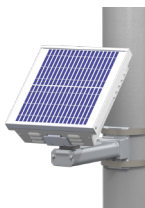
2.38" - 2.88" Diameter Round Pole Mount



3.5" - 4.5" Diameter Round Pole Mount

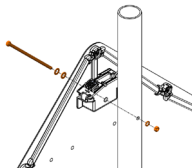


Side Pole Mount

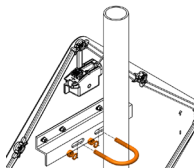


LED SIGN MOUNTING

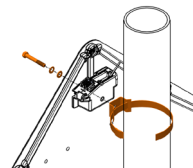
Through Bolt



U Bolt



Banding to Pole



ACTIVATION OPTIONS

Activation	Standard operation is flashing 24 hrs./day
	Optional internal time clock for calendar programming
	Optional manual override switch allows local control of beacons
	Optional junction box: lockable, hinged door, corrosion-resistant aluminum enclosure allows easy calendar programming and access to manual override switch
	Pushbutton: ADA-compliant, piezo-driven with visual LED and two-tone audible confirmation
	Audible pushbutton station: ADA-compliant, piezo-driven with visual LED and customizable voice message confirmation

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, dusk-to-dawn operation
	Flash duration: 5 sec. to 1 hr.
	Intensity setting: 20 to 1400 mA for multiple 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 LED enhanced signs
Optical	Calendar: internal time clock function
	Radio settings: enable/disable, selectable channel from 1 to 14
	Output: enabled when flashing daytime and nighttime, or nighttime only
Sign Construction	Activation counts and data reporting via OBUi or optional USB connection
	Light intensity: 1,000,000 mcd minimum daytime
	Viewing angle: 15°
Connectivity	LEDs meet MUTCD optical requirements for color, flash rate and dimming
	MUTCD compliant: 2009 MUTCD, Chapter 2A, 2B, 2C, and 7B Signs
	High-power LEDs in waterproof housings
Power System	UV-resistant polycarbonate channels protect wiring; includes fully integrated junction box
	0.08-0.10" aluminum sign face with stainless steel hardware
	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 signs and ensure a robust wireless signal
	Instantaneous wireless activation: <150 ms
Energy Storage	Wireless range: 1000 ft (305 m)
	Integrated, vandal-proof antenna
	Solar or AC-powered
Solar Engine Construction	AC: 100-240 VAC input, 6-14 AWG
	Replaceable AC-DC power supply, circuit breaker, terminal block wiring
	45 deg tilt for optimal energy collection
Environmental	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.
Warranty	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
Warranty	Optional padlockable latch
	Corrosion-resistant aluminum with stainless steel hardware
	Raw aluminum finish or yellow, black, or green powder coated
Warranty	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
	5-year limited on solar engine, 3-year limited on LED signs, 1-year limited on batteries

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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