LED Enhanced Signs

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

- ✔ Meets MUTCD requirements and is Buy America compliant
- ✔ Uses a compact and lightweight solar engine
- ✔ Includes an Energy Balance Report™ (EBR) 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. Our signs are MUTCD compliant, install quickly, and can be powered by any Carmanah solar or AC system.

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 sites in minutes, and new installations can be completed without the cost of larger poles, new bases, and trenching.

Advanced User Interface

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. Optional manual override switch or wireless connection for local or remote control.

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.

LED Enhanced Signs

✳ carmanah®

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

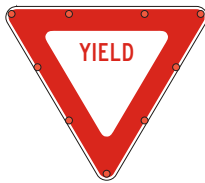| |
|---|
| MUTCD Chapter 7B compliant, S1-1 layout |
| 3M Diamond Grade DG3 retroreflective sheeting, 4083 fluorescent yellow green |
| 8 yellow LEDs |
| 30, 36, and 48" sign sizes |

OTHER SIGNS AVAILABLE

W1-2
Yellow

S5-1
White/Yellow

R1-2
Red

R5-1a
Red

POWER OPTIONS

E Series
Compact, integrated solar engine

F Series
Larger, integrated solar engine

G Series
Cabinet-based solar or AC systems

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 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
	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
	Activation counts and data reporting via OBUI or optional USB connection
Sign Construction	MUTCD compliant: 2009 MUTCD, Chapter 2A, 2B, 2C, and 7B Signs
	High-power LEDs in waterproof housings
	Aluminum channels protect wiring; includes junction box
	0.08-0.10" aluminum sign face with stainless steel hardware
Connectivity	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
	User-selectable multiple channels to group different signs and ensure a robust wireless signal
	Instantaneous wireless activation: <150 ms
	Wireless range: 1000 ft (305 m)
	Integrated, vandal-proof antenna
Power System	Solar or AC-powered
	AC: 100-240 VAC input, 6-14 AWG Replaceable AC-DC power supply, circuit breaker, terminal block wiring
Energy Collection	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	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
Solar Engine Construction	Weatherproof, gasketed enclosure with vents for ambient air transfer (NEMA 3R)
	Lockable, hinged enclosure for access to on-board user interface and batteries Optional padlockable latch
	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 165° F (-40 to 74° C) system operating temperature
	-40 to 140° F (-40 to 60° C) battery operating temperature
Warranty	**5-year limited warranty on power options**
	3-year limited warranty on signs

ite⫶ IMSA Your Partner in PUBLIC SAFETY MUTCD Buy American Act Compliant ASSEMBLED IN THE UNITED STATES