SignAlert Chevron

SignAlert Light-Emitting Diode (LED) Sign Enhancement for W1-8L&R Chevron **Signs** **Solar Powered Version**, With SMART RADAR and LED Flashers

Description

High-Intensity LED's are visible in all weather and ambient light conditions to increase the conspicuity of the W1-8 Chevron sign. The LED arrays of (80) on an 18"x24" sign and (112) on a 24"x30" sign, clearly maintain the shape of the Chevron legend.

The Sign Alert LED Enhancement System is fully compliant with the Federal Highway Administration (FHWA) Manual on Uniform Traffic Control Devices (MUTCD). The LED array color and shape help to convey the sign type to roadway users, both day and night.

User selectable flasher patterns and speeds - Unison, 60, 90, or 120 Flashes per minute, or sequential.

Materials: The SignAlert (Sequential Chevron) assembly shall include the following items:

1. **LEDs**
   a. Each sign assembly shall consist of a single LED ring. An 18"x24" sign shall consist of 80 LED's and will provide a nominal on axis light intensity of 1,000,000 mcd (millicandelas). A 24" x 30" sign shall consist of 112 LED's and will provide maximum nominal light intensity of 1,400,000 mcd (millicandelas). Rings shall have an effective viewing angle of 30 degrees.
   b. LEDs match the color of the background or border, as per section 2A.07 of the MUTCD, 590nM.
   c. All LEDs are rated for 100,000 hours.
   d. All LED enclosures are mounted using accommodation (holes) for bolt mounting directly to sign and post.
   e. All LEDs are wired in strings to activate simultaneously per MUTCD standards and wired in a manner (parallel) that all remaining LEDs continue to flash in the event of failure of an individual LED.
   f. All wire used conforms to UL 1520, insulated and PVC jacketed wire.
   g. A single cable connects LEDs to power source.
   h. All LED connections are hermetically sealed providing protection from exposure to the elements and resisting corrosion by atmospheric chemicals typically encountered in roadside environments.
   i. The LED assembly is manufactured in an ISO 9001:2015 certified facility.

   Light Emissions:

   - Amber (590nM)
   - Up to 1,400,000 millicandela sign output (nominal daylight maximum) on a 24"x30" sign.
   - 80 LEDs (18"x24" sign) and 112 LEDs (24"x30" sign) arranged to outline arrow in harsh weather conditions
   - Effective Viewing Angle of 30 degrees
   - 100,000 hour LED life
   - Temperature compensated brightness

Materials:

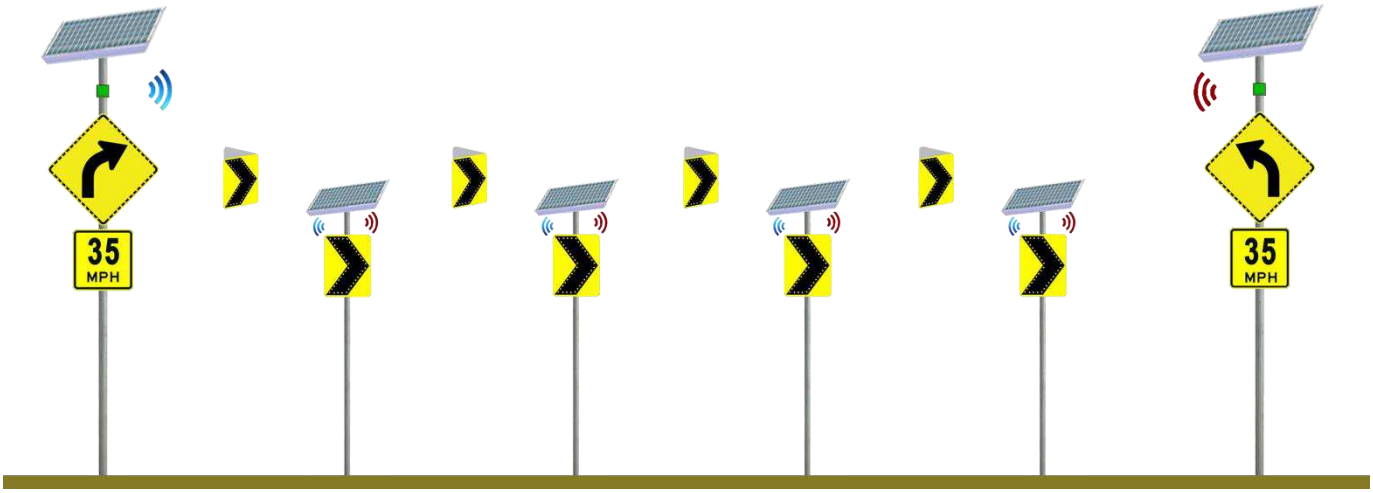
- 5052 Highway Grade Aluminum - .080"
- Powder-coated for surface durability

2. LED CHEVRON Components - Single Post, Single LED Assembly

a. Weight with Battery:	18” x 24”: 19lbs. Includes solar panel, battery, control box with communications, Chevron sign and LED ring 24” x 30”: 21lbs. Includes solar panel, battery, control box with communications, Chevron sign and LED ring.
b. Voltage:	12VDC Nominal
c. Charger:	MPPT solar charger 14.6VDC, 28W temperature protected.
d. Communications:	Wireless Meshnet Integration (device to device, +1000 ft range, repeatable signal, configurable network ID, AES-128 Encryption security, DSSS transmissions on selectable channels)
e. Battery:	LiFeP04 128Wh
f. Battery Reserve:	28 days @ standard load (standard load = 25% activations per day with a single flasher ring) with no sun light, depending on configuration.
g. Isolation:	2-hours of good sunlight each day @ standard load.
h. Panel Supplied:	20W, 17.2V MPPV, 21.6V open circuit
i. Outputs:	2 Chevrons @ 10W each
j. Enclosure Ratine:	NEMA 4
k. Mounting:	Pole Mount Adapter
l. System Operating Temperature:	-40 degree C to +74 degree C (Components) -40 degree C to +60 degree C (Battery)
m. Dimming:	255 levels as determined by solar panel illumination

2.2 RADAR

a. Speed Resolution and Range:	Min 5mph; Max 139 mph in 1 mph steps (min 8 kph, max 223 kph in 2 kph steps).
b. Radar Specification and Range:	K-band (24.15GHz) direction sensing; license free (FCC part 15 compliant); Typical range at 450 feet.
c. Chassis Size / Total Weight:	3.75"W x 2.5"H x 2.25"D
d. Electronics Enclosure Rating:	Weatherproof - NEMA 4
e. Power Requirements:	12V, low standby: average 0.5W
f. Operating Temperature:	Ambient Environment: -34 degree C to +60 degree C (-29 degree F to +140 degree F)



Installed firmware at each Chevron location allows systems operating on bi-directional roadways to work autonomously and independently of one another and provide multi-directional transmitting.

3.0 Warranty 5-Year Limited Warranty