

Solar - AC (120 Volt) Powered Illuminated LED Enhanced Traffic Sign

Solar Traffic Systems, Inc.

1. Sign Materials - Construction - Compliance

- a. Sign reflective sheeting in compliance with current MUTCD requirements for reflectivity, wording, materials and mounting guidelines
- b. Pole mounting requirements per MUTCD guidelines
- c. Sign constructed of .080 to .125 aluminum with stainless / aluminum fasteners and weatherproof sealant
- d. All mounting hardware fastener shall be theft deterrent hardware preferably Tuf-Nut security hardware where applicable
- e. 3/8" x 3" Stainless Steel tap bolts for standard mounting hardware
(other mounting options available)
- f. Battery access compartment located at lower portion of sign to allow access to battery compartment for maintenance. (field replaceable battery)
- g. Solar signs to have a 2" to 4" wide casing, depending on model, between front and rear sign faces to enclose all wiring, battery, PCB and LED light connections. AC powered signs 2" wide casing
- h. Security keyed ON/OFF switch located on side of casing controlling operation
- i. Vented weatherproof casing allowing ambient air to circulate for internal components and prevent condensation and excessive heat buildup
- j. Compression type solar panel connector allowing optimum directional placement of solar collector
- k. Anti-theft placards and decals for theft / vandalism deterrents
- l. Serial # plate with manufacture date for informational and warranty purposes

2. Battery / AC Power

	12 Volt	6 Volt
	12 Volt 22000mAh SLA	6 Volt 18000mAh SLA Battery Pack
Dimensions	7.14" x 3.03" x 6.59"	5.95" x 1.34 x 8.00
Weight	12.74 lbs.	6.18 lbs.
Terminal Connector	Nut/Bolt	T2 - Spade
Operating Temperature	-40F to 156F	-40F to 156F
Warranty	1 Year	1 Year

- a. Battery mounting with aluminum fasteners and brackets for in-field replacement after life cycle has expired
- b. Battery casing fully sealed in a moisture and corrosion proof casing
- c. Required battery replacement every 18 month from manufacture date
- d. AC power requirements - Up to 264 volts / 10 Amp. Higher voltages available

3. Solar Panel Collector

- a. Solar panels to be 6/12 volt - 15/20/30 watt collector type depending on type of sign, region, LED light quantities and application uses

	15 Watt	20 Watt	30 Watt
Max Power	15W	20W	30W
Operating Voltage	8.0	17.2V	17.4V
Operating Current	1.88	1.16A	1.73A
Max Voltage	10.8	21.6V	21.6V
Operating Temperature	-40C to +85C	-40C to +85C	-40C to +85C
Dimensions (inch)	16.75 x 14.00 x 1.125	22.75 x 16.75 x 1.125	26.5 x 16.75 x 1.125
Type	Polycrystalline	Polycrystalline	Polycrystalline

- b. Solar panel bracket constructed of aluminum alloy
- c. Schedule 40 ¾" aluminum tubing attached to the solar panel bracket to the upper casing of the sign casing
- d. Angle of panel shall be 45 deg. To 65 deg. Depending on region. Special attention required to insure solar collector has good access to solar power with no obstructions for optimum operation. Panel to face South
- e. Electrical connectors shall be insulated spade type connectors
- f. Tempered glass solar cell sealer/protector

4. LED Lights (Light Emitting Diodes)

- a. Sign shall have a series of either 4 - 8 LEDs depending on sign size and configuration
- b. All LEDs shall be compliant to MUTCD Section 2A.07 and match colors acceptable to each type of signal per this specification
- c. LED flash rate at 50 to 60 times per minute per MUTCD Section 2A.07 requirements
- d. LED Type: Cree High Power – 3.5 Watts Max.
- e. LED light dimensions: 1/8" Cree LED inside a 1 ¼" diameter lens
- f. 100000 hour rated LED Life (11.415 Years)
- g. Hi impact acrylic water/vibration proof housing lens
- h. Completely resin sealed lens
- i. Operating voltage: 6/12 VDC / Amp Draw 80 ma
- j. Rubber grommet LED mounting for easy in field replacement
- k. Output power of LEDs approximate 60000 mcd brightness
- l. LEDs wired in series for simultaneous flash pattern per MUTCD
- m. Wiring completely enclosed in sign casing with access for replacement

5. Circuitry / LED Lighting Control Unit

- a. Circuit shall have a minimum of 4 output LED light circuits for use
- b. Circuit shall control flash rates at 50 to 60 times per minute
- c. Circuit shall flash 500 milliseconds / 150 milliseconds per flash
- d. Available Dusk to Dawn flash mode
- e. Micro-Controller technology
- f. Keyed "ON/Off" activation for tamper/vandalism protection
- g. Operation of circuit temperatures -40c to 80c
- h. Circuit enclosed in weatherproof casing
- i. Low voltage protection program (protecting from total discharge of battery)
- j. All wiring connections in accordance to standard wiring protection guidelines

Warranty

10 Year Solar Panel

5 Year Sign Construction

2 Year LED Lights & Circuitry

1 Year Battery

Additional product information and technical questions can be obtained by contacting Solar Traffic Systems, Inc.

Information/Technical Support
Solar Traffic Systems, Inc.
16135 New Ave Suite #2
Lemont, IL. 60439
Corporate@ustrafficsystems.com
877-977-7446 Main
630-491-1583 Fax
(Revised 3-15)