
Special Specification 6227

Solar Powered LED Roadside Sign



1. DESCRIPTION

Fabricate, furnish and install solar powered light emitting diode (LED), embedded signs consisting of embedded LED lights placed along the border of the sign, and solar panels and batteries for each sign. This solar LED embedded lights function is to flash in order to enhance the sign to draw the motorist's attention to the message of the roadway sign.

2. MATERIALS

Furnish and construct materials in accordance with the following:

- Item 636, "Signs,"
- Item 643, "Sign Identification Decals," and
- Item 644, "Small Roadside Sign Supports and Assemblies."

Provide signs that meet TMUTCD. Provide sign substrate that meets Department Material Specification DMS-7110. Provide sign reflective sheeting as shown on the plans and in accordance with Traffic Operations Division's Typical Sign Requirements (TSR) standard sheets. Provide sign with LED lights embedded along the border of the sign. Provide high powered 1 W LEDs wired in a manner that all LEDs continue to flash in the event of failure of an individual LED. Sign must output 550 candelas at daytime peak ensuring sign is daylight visible.

Provide LEDs that have dimming capabilities and automatically adjust flash brightness to varying light conditions. LEDs will be rated to operate at least 100,000 hr. Provide solar panels and batteries sized to allow the system to work 24 hours a day, 7 days a week. Batteries must have a 5 yr. lifespan while operating 24 hr. per day. Batteries must be installed in a box mounted on a pole underneath the solar panel as per manufacturer's recommendations.

3. CONSTRUCTION

Install signs in accordance to Item 644, "Small Roadside Sign Assemblies."

4. WARRANTY

The LED lighting system as a whole will have a minimum 2 yr. warranty from the time of installation and acceptance of the system. Manufacturer will ship replacement parts at no cost as required during 2 yr. warranty period, except when installation has been damaged by outside forces.

5. MEASUREMENT

This Item will be measured by each solar powered LED roadside sign.

6. PAYMENT

The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Solar Powered LED Roadside Sign."

This price is full compensation for furnishing and installing complete solar powered LED signs including sign connections and all hardware; attaching signs to the supports; washing and cleaning the signs; testing of the LED sign and making adjustments as needed; installing solar panels to ensure optimal recharging of batteries and solar powered batteries to the satisfaction of the Engineer; and all equipment, materials, labor, tools, and incidentals.

The roadside sign assembly (excluding the solar powered LED sign) and foundation will be paid for under Item 644, "Small Roadside Sign Assemblies."