

ITEM 0260701

LED BLANKOUT SIGN

DESCRIPTION

The work under this item shall consist of furnishing and installing Internally Illuminated Signs, illumination provided by light emitting diodes (LED) as shown on the plans or as directed and in accordance with these specifications:

REFERENCED ITEMS

None

REQUIRED SUBMITTALS

Material Certificate of Compliance:

Submit 5 copies of material certificate of compliance for the LED sign and all hardware accessories in accordance with the contract general requirements.

Shop Drawings:

Submit 5 copies of shop drawings for the LED sign and all hardware accessories in accordance with these specifications and the contract general requirements.

MATERIALS

The materials for this work shall conform to the following requirements:

General: Minimum character heights per line shall be 5.5" series B for a typical 24" x 24" sign in accordance with applicable Connecticut Department of Transportation standards and details. Character spacing shall be proportional. The sign shall be capable of displaying the legend as shown on the plans. Each sign shall show a lighted indication in one direction (1 side). The sign shall be mounted as shown on the plans. There shall be no movable parts to effect message illumination. It shall be possible to view message only when sign is illuminated. The sign shall display the message when energized and blank out completely when not energized. The sign shall consist of:

Weatherproof Housing

The sign shall be of such design as to enclose all components. All nuts and bolts used in assembling the sign shall be stainless steel. All components shall be

mounted so that there are no external penetrations- Weep holes shall be located in the lower corners of the housing. The frame shall be of extruded 6105--3'5 aluminum with a finished part thickness not greater than 1.5" x 1.5". Frame system consists of four parts which will be attached at each corner by 0.25" thick x 4.5" x 4.5" 90 degree joining bracket. These brackets are to be manufactured from 6105-T5 clear anodized aluminum.

A standard liquid tight strain relief shall be provided with a neoprene sealing sleeve allowing a watertight seal where the power cable exits the sign. A six (6) foot, 18AWG, 2 conductor, color coded cable shall be provided.

The finished color of the housing shall be powder coated forest green or as directed by the engineer. Top and bottom mounting tabs (or other approved method) shall be provided.

Face

The entire front face of the sign shall be protected by a sheet of UV protected polycarbonate. Lens material shall be a minimum of 1/4" thick, non-glare, frosted polycarbonate.

Display

The LED's used in the construction of the sign shall conform to the maximum extent possible to the following

- The LED sign module shall conform to "Proposed Specification for Light Emitting Diodes (LED) Vehicle Traffic Signal Modules", January 1997 Version (or subsequent revisions), Institute of Transportation Engineers (ITE), 525 School Street, SW, Suite 410, Washington D.C. 20024-2797.
- Text based signs shall utilize white LED's against a black background.
- Symbol based signs shall utilize white, amber or red LED's or colors as required.

All signs shall conform to the Manual of Uniform Traffic Control Devices (MUTCD).

The LED module circuitry shall be such that if one LED extinguishes no others are affected.

Power Supply

The power supply shall provide full isolation to EN/UL60950 specifications. It shall be housed in a sturdy aluminum, fully enclosed compact package with screw

terminal connections. Full input range of 85Y-265 VAC shall be provided for and the output shall be DC as required. It shall be capable of continuous operation from -10 to +60 degrees C.

Mounting

Mounting shall be accomplished without the need to drill into the sign frame. The Internally Illuminated Sign shall be rigidly mounted to the arm of the mast arm or span wire as shown on the plans and to achieve a minimum clearance of 16.5 to 17 feet from the road surface

Paint

All metal surfaces of the LED sign assembly shall be powder coated black.

Weight

The weight for the entire sign excluding power supply shall not exceed 5 pounds per square foot.

Warranty

The complete sign assembly, excluding the LED's shall carry a one (1) year warranty beginning on the date of final acceptance of the sign. Any defects shall be repaired at no cost to the agency. LED's shall carry a three (3) year warranty beginning on the date of final acceptance of the sign.

Quality

All printed circuit boards shall follow the ISO 9001:2000 quality control standards as well as IPC-A-610C, Class 2 for workmanship of printed circuit boards.

CONSTRUCTION METHODS

The LED Blankout Sign shall be complete prior to installing the sign.

The sign shall be mounted in a manner using fittings and attachments standard to the trade.

METHOD OF MEASUREMENT

The quantity to be paid for under this item will be the number of completed, installed and accepted LED Blankout Signs of the type specified.

BASIS OF PAYMENT

This work will be paid for at the contract unit price each for "LED Blankout Sign" of the type specified, which price shall include all materials, housings, brackets, visors,

LED module, transformers, mountings, paint and painting and necessary equipment, tools, labor and work incidental thereto.

PAY ITEM
0260701

DESCRIPTION
LED Blankout Sign

PAY UNIT
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