

Louisiana
Department of Transportation
and
Development

Traffic Control Standard
736-05-P0210

LED Modules
5 Year Warranty



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7/18/25

Revised July 2, 2025

DESCRIPTION

This specification sets forth the minimum requirements for 12-inch LED Modules with a 5-year manufacturer's warranty. LED modules shall meet the requirements of the Institute of Transportation Engineers (ITE) Vehicle Traffic Control Signal Heads: Light Emitting Diode (LED) Circular Signal Supplement, 2005, and Vehicle Traffic Control Signal Heads: Light Emitting Diode (LED) Arrow Traffic Signal Supplement, 2008, and NEMA Standard TS 2-2021.

LED MODULES

Product ID 10914: Red Ball LED Module

Product ID 10915: Yellow Ball LED Module

Product ID 10916: Green Ball LED Module

Product ID 50570: Red Arrow LED Module

Product ID 10917: Yellow Arrow LED Module

Product ID 10918: Green Arrow LED Module

GENERAL REQUIREMENTS

LED modules shall be designed to fit into a 12" traffic signal housing, must operate on VAC power, and shall comply with Section 4 of the respective ITE documents.

Modules must be tested by a third party with Intertek ETL or equal certification as recognized by OSHA's Nationally Recognized Testing Laboratory.

PHYSICAL REQUIREMENTS

The LED module shall be a single, self-contained device that does not require on-site assembly for installation into existing traffic signal housing.

The module's outer shell shall be made of UV stabilized polycarbonate.

The module's lens shall be clear with the incandescent look. Individual LEDs shall not be directly visible through the lens. Tinted lenses are not acceptable.

LEDs shall be mounted on an independent polycarbonate plate or PC board.

ELECTRICAL REQUIREMENTS

Each module shall incorporate a regulated power supply engineered to electrically protect the LEDs and maintain safe and reliable operation. The power supply shall provide capacitor filtered DC regulated current to the LEDs per the LED manufacturer's specification. Design of the power supply shall be such that the failure of any configuration of the component(s) cannot cause the signal to be illuminated after power is removed.

Modules shall be designed to sense a loss of light output due to catastrophic LED failure and react in compliance with the failed state impedance provision of the ITE VTCSHs Circular Signal Supplement.

The electrical connection shall include two (2) captive, color-coded jacketed wires. The wires shall be 3.5 (+/- 0.5) feet in length, 600 V 18 AWG minimum, rated for service at 221°F and NEC compliant. The wires shall be terminated with an insulated 0.25" female spade quick connector.

Modules shall have on-board circuitry, including voltage surge protection, to withstand high-repetition noise transients, low-repetition high-energy transients and high-repetition low-energy transients in accordance with NEMA Standard TS 2-2021.

LABELING

The back of the module shall indicate the module's color and orientation. Additionally, the back of the module must also be permanently labeled with the manufacturer's name, model number, serial number, and, at a minimum, the month and year of manufacture.

DOCUMENTATION

One (1) set of the documents noted below shall be provided on a per model number/product ID basis:

- ITE Certification
- NEMA Compliance –2003 or Newer
- Intertek ETL Certification
- Proof of Warranty

WARRANTY

The LED module shall come with a minimum five (5) year manufacturer's warranty.