

12-Inch Polycarbonate Signal

The 12-inch signal is interchangeable with incandescent assemblies or LED modules and allows for a 180-degree door opening.

General

Each traffic signal consists of a number of identical signal sections rigidly fastened together to present a continuous, pleasing appearance. Each section has a separate and complete housing. The traffic signal meets or exceeds the latest version of the Equipment Standard from the Institute of Transportation Engineers' (ITE).

Housing

The housing of each section is a one-piece molded, ultraviolet, and heat-stabilized polycarbonate unit. Two integrally-cast hinge lugs and latch screws are cast on each side of the housing. Built upon a symmetrical concept, each housing is capable of providing either right or left-hand door openings. While the left hinge is standard, the right hinge must be specified. The top and bottom of the housing have openings to accommodate standard 1½-inch pipe brackets. Each signal section is rigidly attached, one above the other, by means of corrosion-resistant bolts and a washer attachment that allows sections to be rotated about a vertical axis. Alternate means for attaching sections together are available. The housing consists of four matching punch-out locations on the top and bottom of each section to allow sections to be bolted together with four 1½-inch and 10-32 corrosion-resistant screws.



The top and bottom of the signal housing have an integrally-cast Shurlock boss. The radial angular grooves of the Shurlock boss, when used with Shurlock fittings, provide positive five-degree increment positioning of the entire signal head to eliminate rotation or misalignment of the signal. Each housing has molded bosses for one five and one six-position terminal block. Each housing has provisions for easily adding a back-plate. Hinge pins, door latching hardware, visor back-plate, and lens clip screws are high-quality stainless steel.

Features

- Tested to ITE required wind loading on single-point attachment
- Reversible door - left side standard, right side optional
- Doors equipped with two latches
- "Fast-on" tab terminal block
- Provisions for one five-position and one six-position terminal block in each housing
- Ethylene Propylene Diene Monomer (EPDM)
- Aluminum or plastic reflector ring with spun ALZAK reflector
- Optional hydroformed reflector

Housing Door

The housing door of each section is a one-piece molded ultraviolet and heat-stabilized polycarbonate unit. Two hinge lugs are molded into one side and two latch jaws are molded onto the other side. The door is attached to the housing by means of two stainless steel hinge pins. Two stainless steel "eye" bolts and wing nuts on one side of the door allow for opening and closing the signal door without the use of any special tools. A gasket groove on the inside of the door accommodates a weatherproof and mildew-proof resilient gasket which, when the door is closed, seals flat against the housing, creating a positive seal. The outer face of the door has four metal threaded inserts, equally spaced about the circumference of the lens opening, with four screws to accommodate the signal head visors. The door and visor overlap to prevent light escaping between visor and door.

Optical System

All LED's shall be fully compliant to the ITE Vehicle Traffic Control Signal Heads (VTC SH) LED Circular Supplement specifications dated and adopted June 27, 2005. Tests of the LED's shall include but not be limited to the luminous intensity measurements and requirements outlined in the ITE specification sections 6.4.4 through

6.4.4.4.2 (25°C and 74°C/49°C). To ensure optimal quality of illumination, uniformity, reliability, and appearance all ball traffic signal modules shall utilize Hi-flux LED's rated at 1-watt or higher, as their source of illumination. The lens gasket's slotted design simplifies lens replacements and orientation in the field.

Wiring

Each receptacle provides two leads with "Fast-on" type terminals. Wires are color coded per customer specifications.

Lamp receptacle conductors are No. 18 AWG (or larger) 600V appliance wiring material, which conforms to Military Specification MIL-W-16878 D, Type-B with a vinyl nylon jacket rated 115°C.

Terminal Block

Each complete signal face is provided with a terminal block. The terminal block is placed in the bottom section, unless otherwise specified. The terminal block for a standard three-section head is a five-position, ten-terminal, barrier-type strip. To one side of each "Fast-on" terminal strip is the attached AC common, red, yellow, and green signal section leads, leaving the opposite screw clamp terminal for field wires.

Visors

Visors are tunnel, full-circle, or cap, and are a minimum of ten inches long. Visors are molded from ultraviolet and heat-stabilized polycarbonate and include attaching tabs to facilitate installation.

Color

The housing and door are molded of one-color polycarbonate material throughout. The inside of the yellow visors are painted dull black. The stainless steel parts are not to be painted.

Standard colors are:

- Dark Olive Green (matches Federal Standard 595b-14056)
- Yellow (matches Federal Standard 595b-13538)
- Black (matches Federal Standard 595b-17038)
- Dull Black (matches Federal Standard 595b-37038)

Technical Data

- Dimensions - 14 in. H x 15¼ in. W x 7¾ in. D
- Weight, typical:
 - Poly lens = 5.36 lb (less visor)
 - Glass lens = 6.92 lb (less visor)

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