



# 8-Inch Aluminum Signal

## Durable Housing

Housing and door assembly die castings were designed with the aid of a computer to deliver maximum strength with minimum weight for unmatched tolerance to wind loading and resistance to knock-down damage. Corrosion resistant aluminum alloy castings and stainless steel hardware make the unit virtually immune to weathering.

## Corrosion Resistant Finishes

A 90,000V negative charge is applied to the paint to insure proper application to the aluminum components. The paint is then baked on and cured in Econolite's finishing department.

## Positive Sealing

The door gasket seals out dirt and moisture, while the precision-molded lens gasket provides a second barrier to outside contamination.

## Shurlock Boss

Radial angular grooves cast into the top and bottom of the signal head housing (along with Econolite Shurlock fittings) permit alignment adjustments in five-degree increments and hold the head firmly in place. Two attaching washers and three bolts make it easy to add sections. They also permit any section to be rotated independently about the vertical axis and hold each section securely in place to prevent misalignment.

## Terminal Block

One five-position terminal block with "Fast-on" tabs on one side and screw clamps on the other side is provided. Mounting points for a second block are also present. Raised letters cast into the housing identify each position on the terminal block.

## Reversible Door Mounting

The door may be mounted on either side, permitting easy access to closely mounted signals. This is ideal for cluster-mounted signals. Two integrally-cast hinge lugs and latch screw slots are located on each side of the housing. Built upon a symmetrical concept, each housing is

capable of providing either a right or left-hand door opening. While the left hinge is standard, the right hinge is optional and must be specified.

## Versatility

In addition to most other manufacturers' signals, the 8-inch section may be used vertically or horizontally as a single-section beacon or in combination with 12-inch sections. Flat-back housing simplifies mounting for special applications. A complete line of visors, louvers, and back-plates is available.

## General

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

## Features

- Tested with over 80 mph wind loading on single point attachment
- Aesthetically designed - no protruding hinges or latches
- Stainless steel hardware
- Doors equipped with 2 latches
- Reversible door - left side standard, right side optional
- "Fast-on" tab terminal block
- Terminal block identifiers cast into housing
- Provisions for 2 five-position terminal blocks in each housing
- Ethylene Propylene Diene Monomer (EPDM)

## Housing

The housing of each section is a one-piece corrosion-resistant aluminum alloy die casting. Two integrally-cast hinge lugs and latch screw slots are cast on each side of the housing. Built upon a symmetrical concept, each housing is capable of providing either a right or left-hand door opening. While the left hinge is standard, the right hinge is special and must be specified. The top and bottom of the housing have an opening 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 allow sections to be rotated about a vertical axis.

The top and bottom opening of the signal housing has 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 cast bosses for two five-position terminal blocks. Each position shall be identified with both number and function cast on the housing. 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.

## Housing Door

The housing door of each section is a one-piece, corrosion-resistant, aluminum alloy die casting. Two hinge lugs are attached to the housing by two hinge pins. The door is easily removable without the use of tools. Two latch screws and wing nuts on one side of the door provide 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 against a raised bead on the housing, creating a positive seal. The outer face of the door has four holes equally spaced about the circumference of the lens opening with four screws to accommodate the signal head visors. The door has at least two index points to enable easy positive orientation of the lens. The door and visor overlap to prevent light escaping between the visor and the door (visor collar).

## Optical System

All LEDs shall be fully compliant to the ITE Vehicle Traffic Control Signal Heads (VTCSH) LED Circular Supplement specifications dated and adopted June 27, 2005. Tests of the LEDs 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 materials, which conform 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-ter-

minal, 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 a minimum of seven inches long. Visors are formed of corrosion-resistant aluminum alloy sheeting. They have twist-on attaching tabs to facilitate installation.

## Painting

All interior and exterior parts of the housing, door, back-plate, and visor are pretreated for painting in the following stages: degrease, hot rinse, etch with an iron phosphate solution, hot rinse, chemical seal, and dry for at least 10 minutes at 300°F. The parts are then painted with a single coat of environmentally-safe, ultraviolet-resistant, polyester powder coating, which is applied electrostatically at 90 kV and baked for 20 minutes at 375°F per ASTM D-3359, ASTM D-3363, and ASTM D-522. The signal head color, excluding the inside of the visor and the front side of the back-plate (which is painted dull black), is specified by the customer. Stainless steel latching devices are not painted.

## Standard colors are:

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

## Technical Data

- Dimensions (less visor): 10 in. H x 10.5 in. W x 6¾ in. D
- Weight, typical:
  - Poly = 7.2 lb (less visor)
  - Glass = 7.8 lb (less visor)

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