

Vehicle & Pedestrian Signals

12-Inch Polycarbonate Ped Signal

What, exactly, is a signal?

A traffic signal is a signaling device that is positioned at road intersections, and other sites that control traffic. The signals are designed to ensure an orderly flow of traffic for vehicles, motorcycles, bicycles, and pedestrians by displaying colored lights in a sequence of phases. The colors signal the user to proceed (green), warn that a signal is changing to red (yellow) or prohibits any traffic from proceeding (red).

Why do agencies use signals?

Traffic signals provide an opportunity for pedestrians or vehicles to safely cross an intersection from different directions. Traffic signals can also alleviate traffic capacity of an intersection or a given route which leads to lowering emissions from vehicles that are waiting in traffic.

How do signals benefit the driving public?

Traffic signals increase the overall safety for all roadway users by reducing traffic collisions and providing efficient intersection operations. Traffic signals also provide a continuous movement of traffic at a defined speed along a given route which contributes to reducing commuting times.





Optical System

All LED pedestrian signal modules shall be fully compliant to the Institute of Transportation Engineers' (ITE) Pedestrian Traffic Control Signal Indications (PTCSI) Part 2: LED Pedestrian Traffic Signal Modules specifications adopted March 19, 2004.

The on-board circuitry of all LED traffic signal modules shall include voltage surge protection, to withstand high-repetition noise transients and low-repetition high-energy transients as stated in Section 2.1.8, NEMA Standard TS 2-2003.

Electrical

At 120 AC power line voltage, the average power consumption for the signal does not exceed ten watts.

The electrical light circuits for the hand and pedestrian symbols have their own 120 AC power connection to the intersection controller via clearly labeled screw terminals. A separate power transformer is used to step down the incoming 120 VAC power for each circuit.

For ease of replacement, the LED board and transformers are part of the door assembly, which is easily removable without the use of special tools.

Housing

The main housing is a one-piece, ultraviolet and heat-stabilized, flame-retardant polycarbonate molding. Two integrally-molded hinge lugs and two integrally-cast latch screw slots are on opposite sides of the housing. The housing is capable of providing either right or left-hinged door opening (left is standard, right must be specially ordered). The top and bottom of the housing have openings to accommodate standard 1½-inch (38 mm) pipe brackets. Each opening has a Shurlock boss integrally-cast into the housing. The radial angular grooves of this boss, when used with Shurlock fittings, allow positive five-degree increment alignment of the signal head.

Housing Door

The structural part of the door is a one-piece, ultraviolet and heat-stabilized, flame-retardant polycarbonate unit molding. Two integrally-molded hinge lugs and two integrally-cast latch screw slots are on opposite sides of the door. The door is attached to the housing by means of two stainless-steel hinge pins that allow easy removal without the use of tools. Two latch screws with wing nuts on one side of the door allow quick door opening and closing without the use of tools.

A closed-cell, resilient neoprene gasket is mounted in a groove inside the door and compressed against the main housing once the door is closed to provide a positive environmental seal against external dirt and moisture.

Standard Colors

- Green (matches Federal Standard 595b-14056)
- Yellow (matches Federal Standard 595b-13538)
- Flat Black (matches Federal Standard 595b-37038)
- Gray (matches Federal Standard 595b-26373)

The optical lens in the door is made of shatter-proof polycarbonate plastic. The lens is mounted into a molded full-circle silicone gasket, which is pressed against the molded door to provide an additional positive seal. The gasket lens and the circuit board holding the LEDs are secured to the door with four easily removable stainless steel screws. The lens is slightly frosted to avoid unwanted reflections.

The outer face of the door provides four equally-spaced holes for attachment of an optional square cutaway visor or round cap visor. Visors are made of ultraviolet and heat-stabilized polycarbonate. Visors have twist-on attaching ears to facilitate installation.

In addition to the signal head visor, there is an available honeycomb sunscreen lens cover or a slatted (louvered) sunscreen lens cover. The honeycomb sunscreen is installed parallel to the face of the message. The honeycomb cells are diamond-shaped with nominal diagonal measurements of 1½ inches (38 mm) horizontal by ¾ inch (19 mm) vertical and a depth of 1½ inches (38 mm). The louvers of the slatted sunscreen have a depth of 1½ inches (38 mm) and a vertical pitch of 11⁄8 inches (29 mm). They recess from top to bottom with a horizontal pitch of 0.52 inches (13.2 mm).

Stainless-steel is used for the hinge pins, door-latching hardware, and screws to hold the visor screws and sunscreen. Stainless-steel parts are not painted.

