



## Fiber Optic Blank Out Sign

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### Features

- Ideal for all standard traffic control applications.
- Single or double face models.
- Cost-efficient, layered message panel.
- Up to seven messages per panel.
- Utilizes all standard ITE colors.
- Dual 42-watt lamps provide burnout protection (fail safe).
- Exceptional message visibility and clarity.
- Complete blank out when not energized.
- Low power consumption.
- Easy to service.
- UL approved.

### 1.0 Message

1.1 Most standard FHWA legends available in single or multi- message overlay.

### 2.0 General Description (Two-Way)

2.1 Each side of a two-way Fiber Optic Blank Out Traffic Sign shall be capable of displaying messages (s) as in 1.1. 2.2 A two-way sign shall be serviceable from either of the two sides.

### 3.0 Functional Requirements

3.1 All messages shall be clearly legible, attracting attention under any lighting conditions. At full intensity the sign will be highly visible anywhere within an approximate 60 degree cone centered about the optic axis. 3.2 The sign shall completely blank out when not energized. No phantom words or legend shall be seen under any ambient light conditions. 3.3 Messages are displayed by a single or double row of glass fiber bundles (depending upon application). 3.4 In most applications bundles shall be arranged so that in the event of failure of one light source, the other shall continue to provide a discernable message. 3.5 The entire sign face is protected by a 1/8" matte/clear polycarbonate lens mounted in the door frame. 3.6 The sign face shall consist of: a. Weatherproof housing and door. b. Fiber optic module. c. Color filters for desired message colors d. Light sources. e. Transformers. 3.7

The color of any message may be changed in the field by replacement of the color filters without removing the sign from the case. 3.8 42-watt lamps shall be used and operated at 10.8 volts. The lamps shall sustain an average 8,000-hour life. 3.9 Transformers shall be used to reduce the incoming 120 volts AC to 10.8 volts AC. The transformers shall contain Class A insulation and weatherproofing and shall be rated at 48.5 volt-amperes. 3.10 The sign shall be capable of continuous operation over a range in temperature from -35 F to +165 F (-31 C to +75 C).

## 4.0 Mechanical Construction

4.1 Aluminum Housings a. Two-way housings shall be constructed of a .063" aluminum body and a .063" aluminum channel framework structure inside. Housing body and inside framework shall be permanently attached to form a single unit. b. One-way housings shall be constructed of .080" or .125" extruded aluminum 8" deep with a .063" flat aluminum back welded into the housing. c. All corners and seams of the one-way or two-way housings are heli-arc welded to provide a weatherproof seal around the entire case. d. Continuous stainless steel hinges, .040" x 1 1/4" open, shall connect the housing and doors. e. Extruded aluminum doors shall have one side removable to gain access to sign face (not required for routine maintenance). f. Door gaskets shall be neoprene to provide a weatherproof seal. g. Sign face shall be flat aluminum and shall have the fiber optics assembly mounted to it. h. Sign shall have one or more stainless steel, 1/4-turn link-locks per door to tightly secure the door onto the gasket. i. Mounting hubs shall be of cast aluminum alloy with 1 1/21' standard pipe thread. The hub is mounted on its gasket to sign housing by three 5/16" x 1" stainless steel hex head bolts and nuts. Other mounting methods available upon request. j. Drainage shall be provided by four drain holes located at the four corners of the housing bottom.

## 5.0 Fiber Optic Modules

5.1 The fiber optic modules and associated components shall be assembled directly to the sign face and shall have an inside back cover to provide protection to the module. The fiber shall consist of step-indexed fiber optic glass bundles arranged to define the required message. The fiber optic bundles shall be ground smooth and optically polished at the input and output ends for maximum light transmission. 5.2 The glass bundles shall be mounted through the sign face from the inside. Number of bundles varies according to message. 5.3 Door panels and bundle termination holders shall be colored flat black to minimize legibility when deactivated and maximize legibility when activated. No color shall appear when deactivated regardless of ambient light conditions. 5.4 Message color is provided by a tempered, optically correct glass color filter in conformance with ITE specifications. 5.5 Electrical connection of field wires shall be made via barrier-type terminal strip. 5.6 All fasteners and hardware shall be corrosion-resistant stainless steel. All components shall be readily accessible for maintenance when the door is open. 5.7 With standard hardware and locks, no tools are needed for lamp replacement.