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TS500

Stainless-Steel, Self-Cleaning, Bi-Directional Fixture In-Roadway Warning Lighting Systems

General Description

The TS500 stainless steel fixture is designed to be used where the fixtures are exposed to salt and, or chemicals. Their outstanding durability, superior visibility and energy efficiency and low maintenance design make them ideal for use in the most demanding environmental applications, and in solar powered applications where power requirements must be minimized. The TS500 comes standard as a bi-directional fixture, but may be configured to a uni-directional fixture (TS501).

The TS500 is typically used in crosswalk applications, but is often used in school zone or rail-road crossing, lane control for bridges and tunnels, wrong way warning, and toll booth or toll way lead-on applications.

All In-Roadway Warning Lighting System components are available from TSC. A typical installation would include a set of fixtures, a control system, one or more activation devices such as a pedestrian push button station or pedestrian detection pad, and flashing LED crossing signs.

Why Our TS500 Is Better

Outstanding Durability

- Corrosion resistant stainless steel construction provides resistance to salt, chemicals, traffic wear and weathering.
- High static load rating (44,000 lb.) reduces likelihood of damage from heavy vehicles.

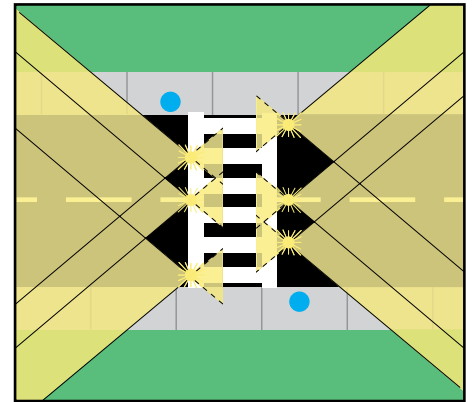
Superior Visibility and Energy Efficiency

- Bi-directional design improves visibility of pedestrians in crosswalk.
- Highbright LEDs produce a brightness level of over 600,000 candela per meter squared making them clearly visible in daytime and under the worst weather conditions.
- Highbright 12 Volt LEDs consume only 7 watts/fixture making them ideal for energy efficient solar power applications.



Low Maintenance

- Re-usable design reduces the cost, effort and time during resurfacing of the road.
- Self-cleaning lens design reduces build-up of dirt and need for frequent cleaning.
- Pressurized light cavity keeps moisture out and reduces the frequency of replacement.
- Pre-focused optics eliminates the requirement of field adjustments.
- Long life LEDs (Average rated life of 10 years) reduces the frequency of replacement.



*Application: Two Way,
 One Lane Each Way*

Ordering Codes

Fixture	Directional	Beam	LED Color	Lamp
FI-TS500	BI	Narrow/Narrow	___ / ___	L: 12V LED Array
FI-TS520	BI	Wide/Wide	___ / ___	L: 12V LED Array
FI-TS550	BI	Wide/Narrow	___ / ___	L: 12V LED Array
FI-TS501	UNI	Narrow	___	L: 12V LED Array
FI-TS521	UNI	Wide	___	L: 12V LED Array

- Notes:
1. LED Color: Y = Yellow, R = Red, X = Blank (Specify both lens).
 2. Standard fixture operating voltage is 12 VDC. Fixtures may also be operated from 24 VDC in certain applications. Operation at 24 VDC requires driver modification.
 3. The self-cleaning feature will be effective only if fixture is installed on level ground.
 4. TSC supports legacy fixtures with Halogen LA-008084 (Special Order).
 5. Base Cans (BA-700-10-2), Base Can Extensions (BA-700-EX-XX), Spacers (BA-700-SP-XX) and Gaskets (BA-700-GSK) are available for the TS500 Fixture.
 6. Power consumption is 7 watts per fixture.
 7. Female Connector (CO-1051903021) is available for power source hook-up.
 8. Fixture repair package available (LA-008114-KIT), includes LED Array, LED Driver, and Gaskets, plus factory installation, testing and burn-in.

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How to Specify the TS500 Family of Stainless Steel, Self-Cleaning, Bi-Directional Fixtures

The fixture shall be model FI-TSxx-YYL1/YXL1 as marketed by Traffic Safety Corporation or approved equal. In order to be considered equal, the alternate fixture shall satisfy the following requirements.

Construction – The fixture shall have bi-directional and uni-directional capability, have a modular design comprised of 6 major parts with the top casting of stainless steel and the bottom casting of high tensile strength aluminum alloy. The top and bottom casting shall be sealed by means of a flat gasket. The fixture shall have a smooth shaped face projecting not more than 0.50" when installed in the factory provided mounting base. The fixture shall incorporate a self-cleaning design with an outward sloping light channel to promote drainage and facilitate maintenance. Diameter shall not exceed 8" and all mounting hardware shall be stainless steel. Fixture will operate on 12 VDC and be furnished pre-wired with a waterproof 90P plug.

Durability – Fixture shall withstand a static load of 44,000 lb. without sustaining permanent deformation or cracking of materials. Leads, gaskets, etc. shall be rated to withstand 300 degrees F.

LED/Light Cavity – The fixture's light beam shall be refractor controlled and pre-focused to simplify maintenance. The refractors shall be molded high performance optical grade glass and formed to provide a sealed fit within the fixture. High density silicone rubber gaskets shall be used to provide a proper seal. There will be two hardened glass refractors per fixture, one aimed at 0 degrees and the other aimed at 180 degrees, to be installed parallel to roadway center line. To prevent moisture intrusion, each fixture shall be installed with a Schrader valve to facilitate verification that the entire assembly is sealed at the time of installation and to allow for re-testing during maintenance. Two refractor beam spread options shall be provided – 60 degrees and 10 degrees, as well as the capability to operate in a uni-directional mode through the use of a blank plate. The glass refractor pointed towards the inside of the crosswalk shall normally have a beam angle of 60 degrees. To facilitate early onset of the driver's awareness of the crosswalk, the outboard facing refractors shall normally have beam angle of 10 degrees, except on curves were a 60 degree beam may be more desirable. In some cases it may be desirable to utilize the fixture in a uni-directional mode and a blank may be inserted in place of one of the refractors.

Photometric Performance – The fixture shall be clearly visible in any weather condition, daytime and at night, and shall produce a yellow light using a 12 Volt, 7 watt LED array with a brightness level of more than 600,000 candela per meter squared using the 10 degree refractor option.

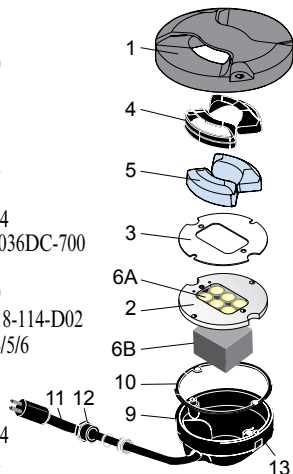
Finish – The top cover shall be matte finish stainless steel. The bottom cover shall have a black powder coat.

Mounting Base – Fixture shall be installed in mounting base (*TSC # BA-700-10-2*) of high strength steel, hot dip galvanized after fabrication per ASTM-153 specifications, with a 7.00" diameter bolt circle, a 1" mud ring, and standard base depth of 10". The base shall be supplied with a plywood cover to protect the mounting flange during installation.

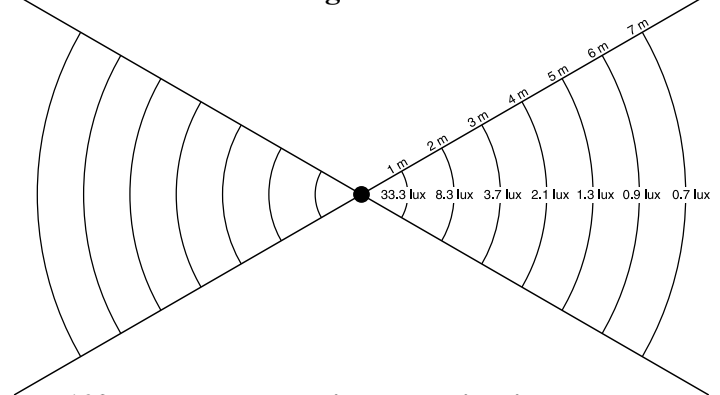
Warranty - Fixture shall be warranted by the manufacturer against defects in materials and workmanship for one year from date of shipment and is eligible for TSC's 5-Year Limited System Warranty.

Replacement Parts

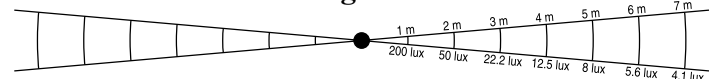
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|---|-------------------|
| 1. Body casting | |
| 2. Prism clamp | 80-021380 |
| 3. Prism clamp gasket | 80-021379 |
| 4. Prism gasket (2) | 80-033071 |
| 5. Glass prism (1 or 2 Narrow), LED | 80-016078 |
| Blanking prism (optional) | 80-040102 |
| Color filters (not shown): yellow | 80-019157 |
| 6A. 12V LED High Bright | LA-008114 |
| 6B. LED Driver | 27-TLM4036DC-700 |
| 9. Bottom cover | 80-040101 |
| 10. Bottom cover gasket | 80-033080 |
| 11. Fixture lead, male | TRC-10518-114-D02 |
| 12. Cable gland assembly | 80-021114/5/6 |
| 13. Schrader (bicycle) valve | 80-021327 |
| Legacy Halogen Parts (not shown) | |
| 50W 120V Halogen | LA-008084 |
| Glass prism (1 or 2 Wide), Halogen | 80-016072 |
| Prism clamp gasket | 80-033072 |
| Lamp gasket | 80-033064 |
| Lamp retaining spring | 80-032039 |



60° Wide Beam Light Illumination Pattern



10° Narrow Beam Light Illumination Pattern

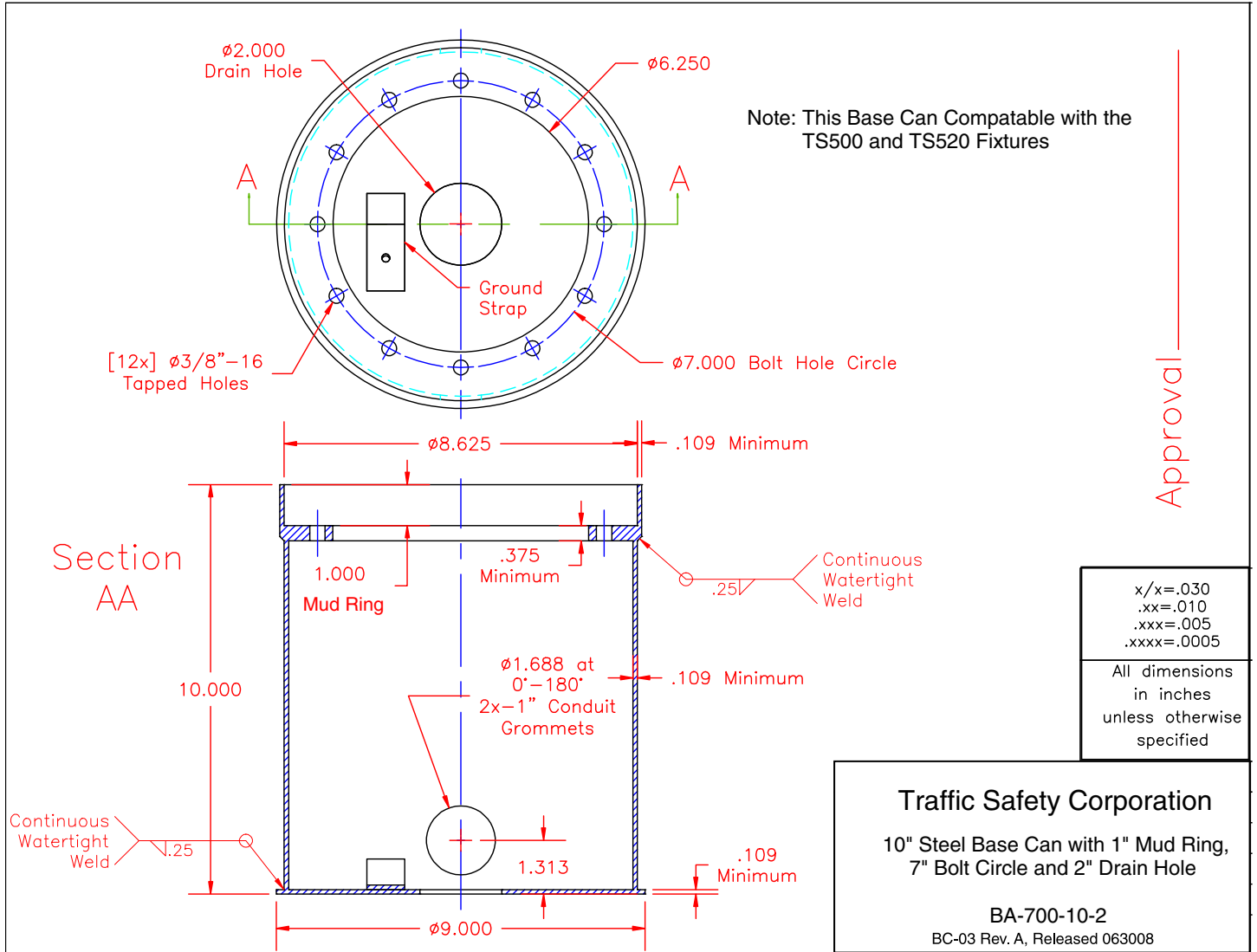


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