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TS520

Wide-Beam, Self-Cleaning, Bi-Directional Fixture Environmental Area Lighting Systems

General Description

The TS520 stainless steel fixture is designed to be used in conditions where a wide beam of light (60 degree wide beam) is required to flood a large area. The TS520's outstanding durability, superior brightness and low maintenance design make them ideal to be used in the most demanding environmental conditions, and in solar powered applications because of its energy efficient design. The TS520 comes standard as a bi-directional fixture, but may be configured to a uni-directional fixture (TS521).

The TS520 is typically used in applications requiring flood lighting of wide areas such as parking lots, park areas, beach areas and in applications where a "dark sky, turtle friendly" type of lighting is required.

Why Our TS520 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 Brightness and Energy Efficiency

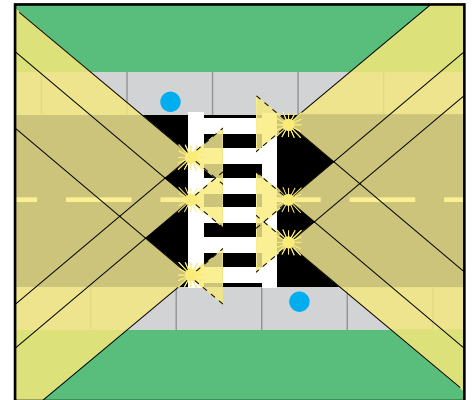
- Highbright LEDs produce a brightness level of over 600,000 candela per meter squared making them clearly visible in daytime and under the worst weather conditions.
- Highbright 12 Volt LEDs consume only 7 watts/fixture making them ideal for energy efficient solar power applications.

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	LED Color	Lamp
FI-TS520 Bi-directional Fixture	Y / Y Y = Yellow	L: 12V LED Array
FI-TS521 Uni-directional Fixture	Y / X X = Blank	L: 12V LED Array

- Notes: 1. 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.
 2. The self-cleaning feature will be effective only if fixture is installed on level ground.
 3. TSC supports legacy fixtures with Halogen LA-008084 (Special Order).
 4. 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 TS520 Fixture.
 5. Power consumption is 7 watts per fixture.
 6. Female Connector (CO-1051903021) is available for power source hook-up.
 7. 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 TS520 Wide-Beam, Self-Cleaning, Bi-Directional Fixture

The fixture shall be model FI-TS520 as marketed by Traffic Safety Corporation or approved equal. In order to be considered equal, the alternate fixture shall satisfy the following requirements:

Construction - Fixture shall be bi-directional and of 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 castings shall be sealed by means of a flat gasket. 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 lenses shall be molded high performance optical grade glass and formed to provide a sealed fit within the fixture and shall be gasketed by high density silicone rubber. There will be two lenses per fixture, one aimed at 0 degrees and the other aimed at 180 degrees. The fixture's optics shall be pre-focused to simplify maintenance. 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 after maintenance.

Photometric Performance - The fixture shall produce a brightness level of more than 600,000 candela per meter squared using a yellow 12 Volt, 7 watt LED array. The dominant wavelength of the yellow LED array shall be 600nm.

Finish - The top cover shall be matte finish stainless steel while the bottom cover shall be black powder coat.

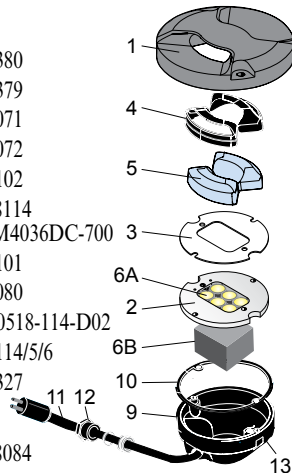
Mounting Base - Fixture shall be installed in mounting base (*TSC's # BA-700-10-2*) of high strength steel, hot dip galvanized after fabrication per ASTM-153 specifications, with a 7" diameter bolt circle, a 1" mud ring, and standard base depth of 10". The base shall be supplied with a plywood cover to protect the mounting flange during installation.

Warranty - The TS520 shall be warranted against defects in workmanship and materials for one year from date of shipment and is eligible for TSC's 5-Year Limited System Warranty.

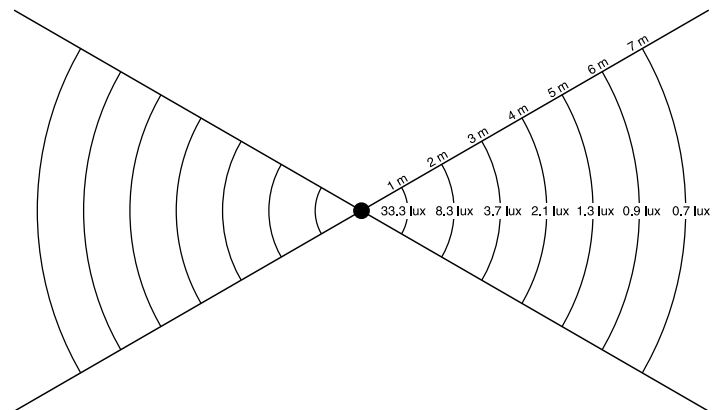
Replacement Parts

- | | |
|-----------------------------------|-------------------|
| 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 Wide), LED | 80-016072 |
| Blanking prism (Optional) | 80-040102 |
| 6A. LED High Bright 12V | 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 |
| Prism clamp gasket | 80-033072 |
| Lamp gasket | 80-033064 |
| Lamp retaining spring | 80-032039 |



60° Wide Beam Light Illumination Pattern



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TS520 Wide-Beam, Self-Cleaning, Bi-Directional Fixture Environmental Area Lighting Systems

Wildlife (Sea Turtle) Lighting Criteria

Our TS520 fixture meets all the conditions for Wildlife Lighting:

- Low profile fixture is mounted in pavement.
- Unidirectional configuration shields wildlife areas from light.
- LEDs have a wavelength of 595nm.
- Dimming option can reduce any unnecessary lumens at night.

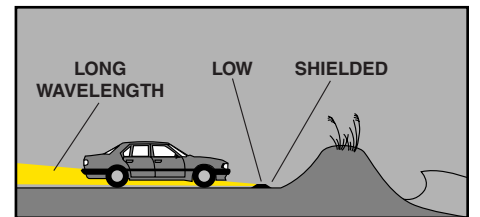
In order to meet the criteria for Wildlife Lighting, a fixture, lamp, or community lighting must be able to satisfy all three of the conditions below:

- **Keep it low:**
 - Fixtures must be able to be mounted as low as possible and still be appropriate for the needed purpose.
 - Fixtures must be able to accept lamps that produce only the lumens necessary for the needed purpose.
 - Bulb must produce the lowest lumens necessary for the needed purpose.
- **Keep it shielded:**
 - Fixture must meet or exceed full cut-off.
 - Fixture must be able to shield bulb, lamp, or glowing lens from the beach, wildlife corridor, or protected natural area when mounted appropriately.
 - Bulb must be able to be used in an approved fixture.
- **Keep it long:**
 - Fixture must accept long wavelength bulbs.
 - Bulb must produce only long wavelength light (560nm or longer).

(Source: Florida Fish and Wildlife Conservation Commission)



Artificial lighting on marine turtle nesting beaches disrupts the ability of hatchlings to find the sea from their nest, an effect termed "hatchling disorientation."



*Keep it **LOW** - mount the fixture as low as possible to minimize light trespass, and use the lowest amount of light needed for the task*

*Keep it **SHIELDED** - fully shield the light so bulbs and/or glowing lenses are not visible to minimize light trespass*

*Keep it **LONG** - use long wavelength light sources (ambers and reds) in the appropriate lighting fixtures*

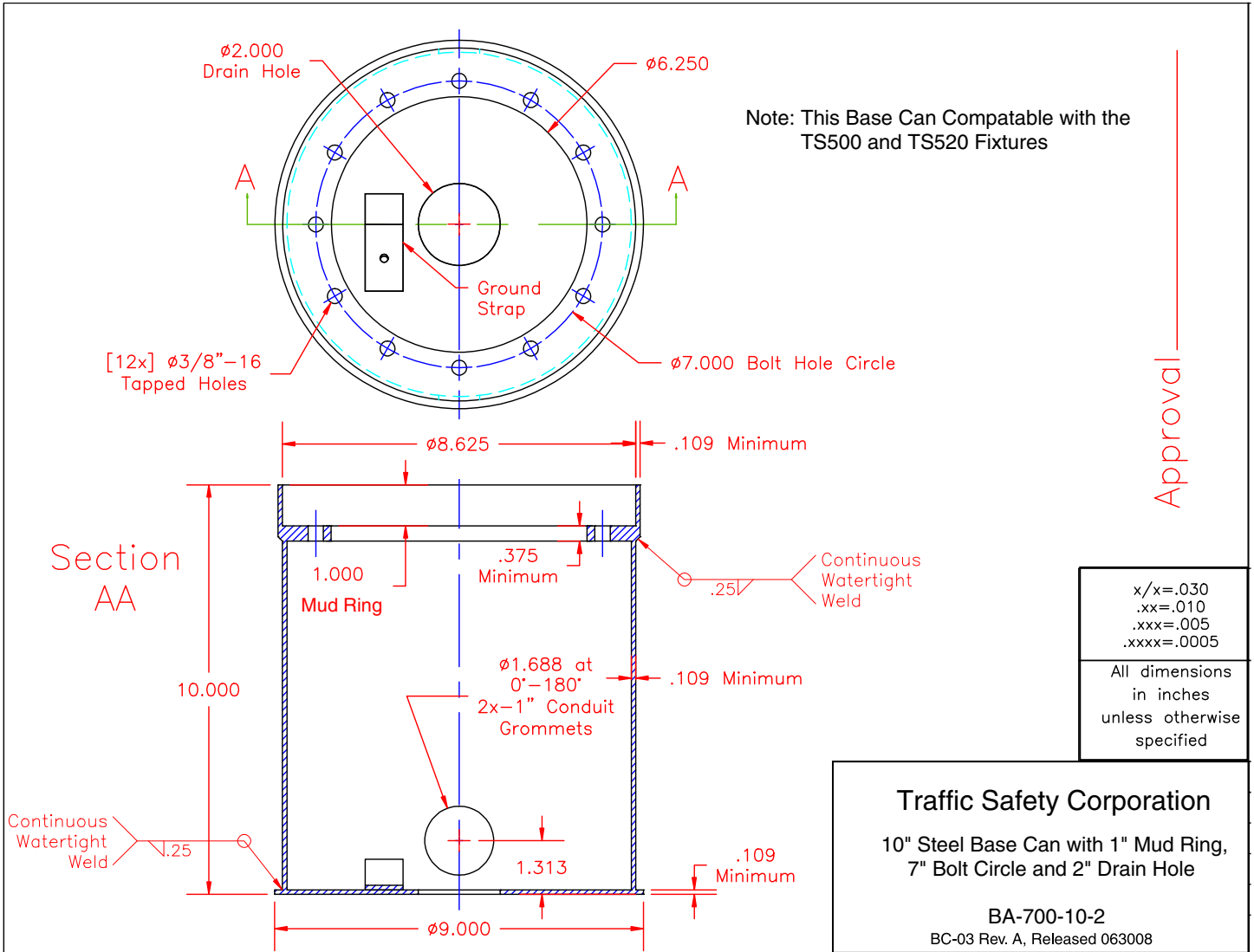
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