



### Smart Crosswalk™

#### LightStar™ 9X LED IRWL Light Fixture

**Part Number:** LGS-9X

**Description:** In-Roadway Warning Light (IRWL)  
with 16 sealed LEDs per light fixture

#### Application Notes:

The LightStar™ 9X LED light fixture is designed to fit tightly into the protective base plate. It easily connects to the electrical cable system wires with snap-together water tight connectors. The interior of the light fixture unit is designed with double redundancy, isolating the solid state electronics and sealed LED modules from environmental moisture and corrosive intrusion. The light fixture is fastened to the base plate with stainless steel socket head 1/4"-20 screws with thread locks and factory applied anti-seize compound to the screws.

The LightStar™ 9X features a clear metal-clad acrylic dove prism lens and the Debris-Free Self Clearing™ design of the base plate helps to protect against blockage of the light fixture.

Each individual IRWL faces away from the crosswalk and points in the direction of oncoming motorists' line of sight (NOT straight forward). The result is a slightly different, uniquely pointed angle for each IRWL. A typical IRWL system employs several light fixtures on both sides of the crosswalk, using a MUTCD approved flash rate. The flashing LED light beams are highly visible both day and night. Refer to our published IRWL crosswalk layout diagrams for additional visual placement details. Our recommended layout patterns comply with the US Federal Highway Administration Manual and the Uniform Traffic Control Devices (MUTCD).

The LightStar™ 9X activates via automatic activation pedestrian detection bollards, manual push button, or RAD devices.

#### Features/Benefits:

- 16 High-intensity LEDs per light fixture
- Visible up to 1,000 feet
- Easily mounts to in-roadway base plate
- 12 VDC operation
- Rugged with minimal maintenance
- Snap-together waterproof electrical connections
- LED-AlInGaP technology, ultra bright 100,000 hrs
- Enlighten1 flash rate
- MUTCD Chapter 4, Section N



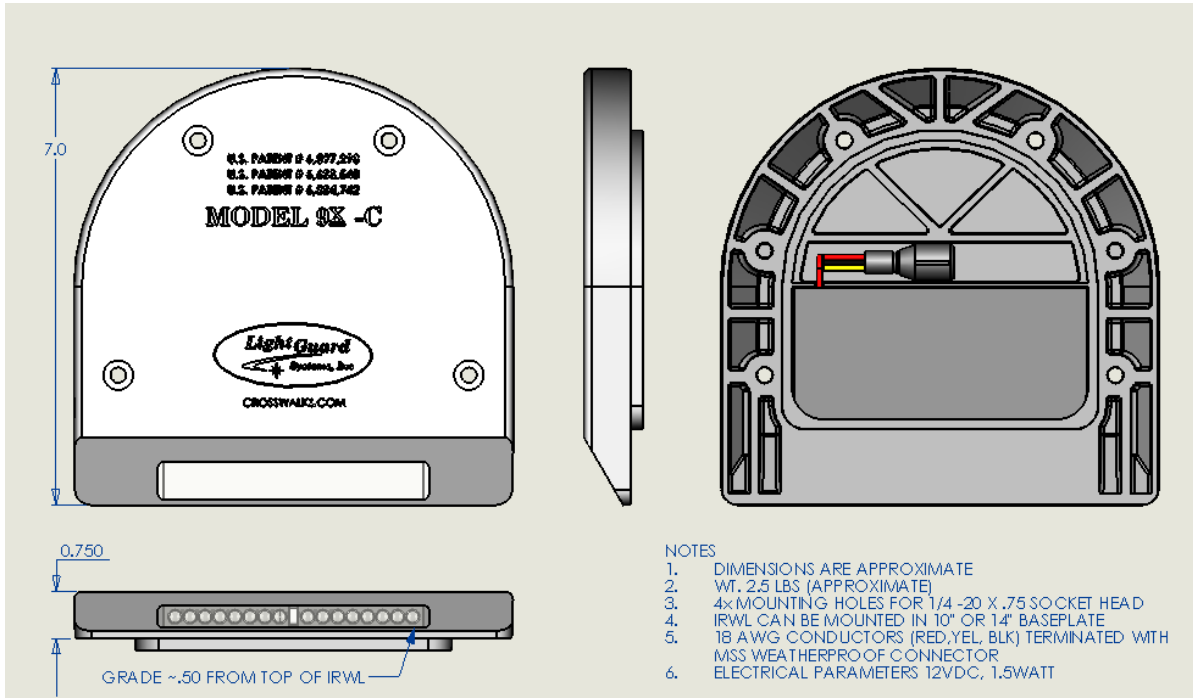
General Performance Specifications		Typical Mounting
Parameter	Value	
Visibility	30° viewing angle ± 15°	
Operating Temp	-20° to 50°C	
Operating Voltage	12VDC to 14VDC	
DC Current @ 12 VDC	Less than 0.2 Amps	
Avg Power Dissipation	2.5 Watts max	
Luminous Intensity	252,000 mcd	
Material	Polyurethane/Nylon	
Color	Black	

Model # Reference Table Reference Table		
LGS P/N	Description	Voltage
LGS-9X-1	In-Roadway Warning Light: Red	Min 9 VDC; Max 10 VDC
LGS-9X-2	In-Roadway Warning Light: Bi-color: Red/Amber	
LGS-9X-3	In-Roadway Warning Light: Amber—wavelength 590 nm—600	Min 10 VDC; Max 11 VDC
LGS-9X-4	In-Roadway Warning Light: White	Min 11 VDC; Max 11.5 VDC

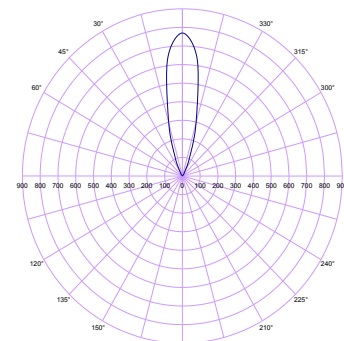
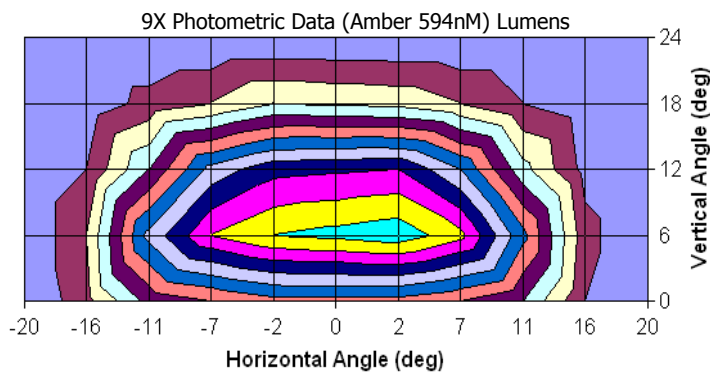
### Usage Notes & Limitations

LightGuard Systems In Roadway Warning Lights (IRWL) Model 9X light fixtures are designed to be operated in a pulsed manner for compliance with MUTCD Chapter 4N. MUTCD states that steadily illuminated lights installed in the roadway surface are considered to be Internally Illuminated Raised Pavement Markers (IIRPM). When any LightGuard Systems Model 9X light fixtures are used as IIRPM instead of IRWL, the manufacturer warranty will not apply. Additionally, if customers choose to operate Model 9X as IIRPM, the drive voltage should be controlled/reduced so as to limit the current/power consumed (with commensurate reduced brightness) in order to mitigate the risk of higher thermally induced failure rates.

### Drawing Details



### Photometric Plot Intensity Profile



Maximum value @ center 815