



# LED Traffic Signal Module

## Arrows

### IL, LD, MF Series



## The Leotek LED Advantage

Position horizontally, vertically, or in an angular orientation. "Fail-State Impedance" design to ensure controller and monitor compatibility in the event of loss of light output.



IL Series – Incandescent Look  
LD Series –Omni-Directional



MF Series

## Features and Benefits

- Environmentally friendly
- Significant energy and maintenance savings
- Intertek ETL verified
- 12" modules
- Tinted or clear lens options
- Multiple connections available for specific applications
- Exceptional color uniformity and readability
- Excellent moisture and dust resistance through complete O-ring sealing
- Robust hard-coated and UV-stabilized polycarbonate lens for increased longevity against the elements
- Engineered aluminum heat sink for optimum thermal management
- Built-in Constant Current Source (CCS) provides uniform light output from the first to the last modules
- Maintains 70% of the initial lumen intensity after 50,000 hours of operation
- 5-Year Limited Warranty

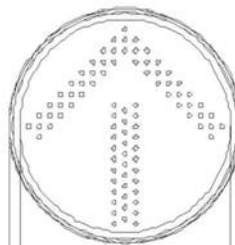
## Technical Data

Operating Temperature: : -40°F to 165°F (-40°C to 74°C)	Turn-On/Turn-Off Time: : <75msec
Operating Voltage: : 80 -135Vac	Turn-Off Voltage: : 35Vac
Power Factor: : >0.90	Total Harmonic Distortion (THD): : <20%

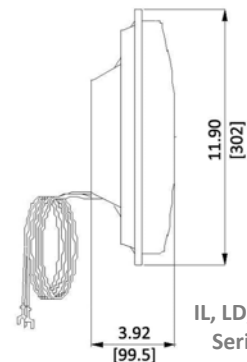
## Mechanical Dimensions [in(mm)]



IL and LD Series



MF Series













IL, LD, MF Series

# Model Specifications and Ordering Options

Example: TSL-12RA-IL3-A1

TSL-(SIZE/TYPE)(COLOR)(ARROW)-(SERIES)-(VOLTAGE)

Model Number and Color	Wattage Drawn	Voltage	Dominant Wavelength	Maintained Intensity (cd) Min.	Standard
<b>12 inch</b>					
TSL-12RA-IL3-A1 	6	80-135Vac	626	58	ITE 2006
TSL-12YA-IL3-A1 	14.5	80-135Vac	589	146	ITE 2006
TSL-12GA-IL3-A1 	6	80-135Vac	500	76	ITE 2006
TSL-12RA-LD-A1 <sup>2</sup> 	7	80-135Vac	626	58	ITE 2007/Caltrans/ETL <sup>1</sup>
TSL-12YA-LD-A1 <sup>2</sup> 	12	80-135Vac	589	146	ITE 2007/Caltrans/ETL <sup>1</sup>
TSL-12GA-LD-A1 <sup>2</sup> 	7	80-135Vac	500	76	ITE 2007/Caltrans/ETL <sup>1</sup>
TSL-12RA-MF-A1 	7	80-135Vac	626	58	ITE 2004/Caltrans
TSL-12YA-MF-A1 	8.5	80-135Vac	589	146	ITE 2004/Caltrans
TSL-12GA-MF-A1 	6.5	80-135Vac	500	76	ITE 2004/Caltrans
TSL-12BM-LD-A1 	6.5 7	80-135Vac	589 500	146 76	N/A

**Options:** Tinted lens standard, clear lens optional.

<sup>1</sup>Intertek ETL Verified

<sup>2</sup> When ordering clear lens: On LD ETL Verified models, please add “-CLR” to model number. For IL3 and MF models, please indicate “clear lens.”

## Standard Conformance



- FCC Compliant for Electrical Noise
- MIL-STD-810F Moisture Resistant
- MIL-STD-883 Mechanical Vibration
- NEMA TS2 Transient Voltage Protection over 2000V

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