

LED 12" Traffic Signal Module LD and MF Series Arrows

Leading the LED Industry Since 1992
With over 7,000,000 units installed globally





LD Series

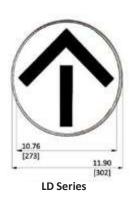
MF Series

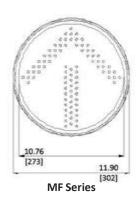
Superior Performance and Reliability

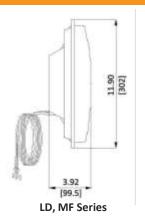
- Position horizontally, vertically, or in an angular orientation
- · "Fail-State Impedance" design
- Significant energy and maintenance savings
- · Intertek ETL verified
- · Tinted or clear lens options
- Multiple connections available for specific applications
- · Exceptional color uniformity and readability
- Excellent moisture and dust resistance through complete O-ring sealing

- Environmentally friendly
- 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 100,000 hours of operation
- · 5-Year Limited Warranty

Mechanical Dimensions [in(mm)]







Model Specifications and Ordering Options

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%

Model Number and Color	Wattage Drawn	Voltage	Dominant Wavelength	Maintained Intensity (cd) Min.	Standard
12 inch					
TSL-12RA-LD-A1 ²	7	80-135Vac	626	56.8	ITE 2007/Caltrans/ETL1
TSL-12YA-LD-A1 ²	12	80-135Vac	589	141.6	ITE 2007/Caltrans/ETL ¹
TSL-12GA-LD-A1 ²	7	80-135Vac	500	73.9	ITE 2007/Caltrans/ETL ¹
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

Please note:

Tinted lens standard, clear lens optional.

¹Intertek ETL Verified

Standard Conformance

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













² When ordering clear lens: On LD ETL Verified models, please add "-CLR" to model number. For MF models, please indicate "clear lens."