

TLUM
LUMINANCE MEASUREMENT
Tunnel Lighting Control System



PROJECT	
LOCATION	

FEATURES

Luminance: (TLUM)

- Measuring range of 0 - 10,000 cd/m²
- Photometric filter accuracy of 1% total area, error with CIE function error of 2%
- Calibrated using NIST traceable reference photometer
- Factory calibrated analog zero and span
- Blue-Enhanced Photo Diode
- Provide linear response, repeatability and minimal temperature effects over the range of the sensor
- Components rated for 0° -60°C and housed in thermostatically controlled heated enclosure.
- UL508A , CAN/CSA C22.2 14-M91 listing
- 2 year warranty

DESCRIPTION

PLC-Multipoint TLUM sensor provide a linear analog input signal to controllers proportional to the light measured. Sensors shall be enclosed in heated weather- proof housings to prevent icing and condensation. Sensors signal the controller via 4-20mA current loops.

Luminance Measurement

TLUM Tunnel luminance sensors provide analog measurement in Candelas per square meter (cd/m²) that target reflected light at each traffic direction's entrance portal. Long distance signal transmission, up to 4,000 feet is accomplished through a 4-20mA current loop. TLUM Tunnel luminance sensors see a restricted field of view, e.g. 20° and are aimed at the tunnel portals composing the field of vision that a driver at a safe stopping distance before entering the portal. The TLUM sensor is capable of measuring outdoor ranges of 0 to 10,000 Candelas per

square meter (cd/m²). An amplifier in the sensor enclosure provides sensitivity adjustment for the sensor. Sensors located in severe weather environment are protected from accumulated snow and ice through the use of thermostatically heated housings. Sensors subject to corrosive gases are housed in a gasket enclosures.

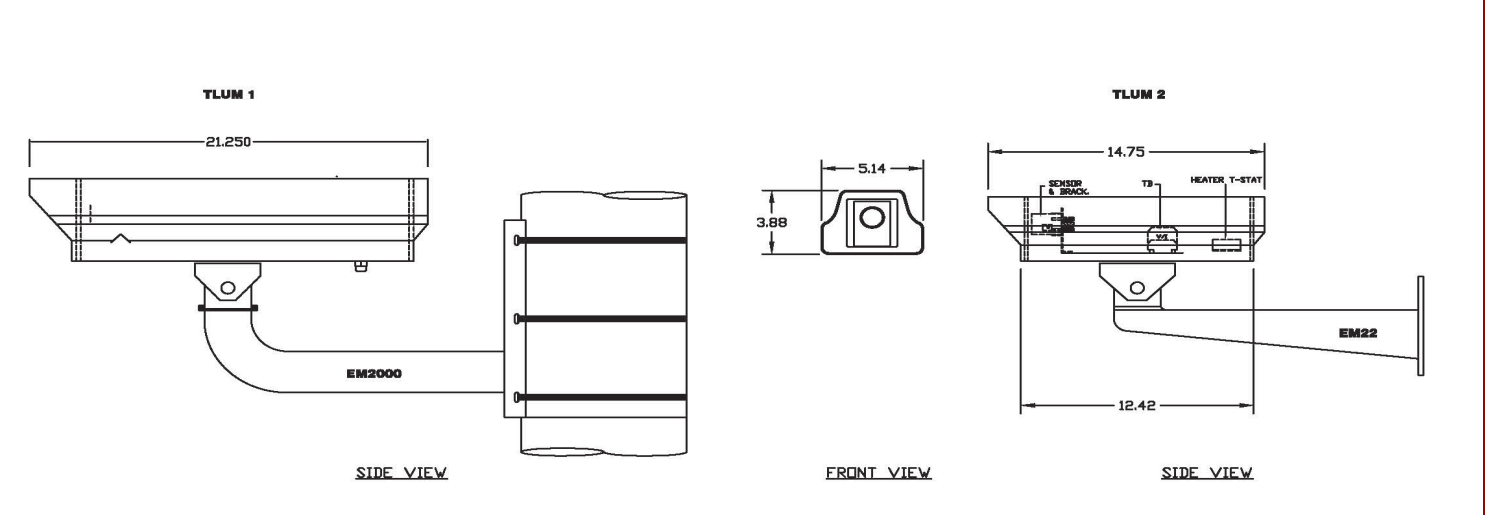
The TLUM sensor can be mounted using either an optional wall bracket or pole bracket. Power can be provided from either the receiving controller or using optional multitap transformer at the sensor.

The TU24 (480/277/208/120 to 24VAC 40VA Transformer) is only use for the TLUM2. The TU120 (480/277/208 to 120VAC 40VA Transformer) is only use for the TLUM1.

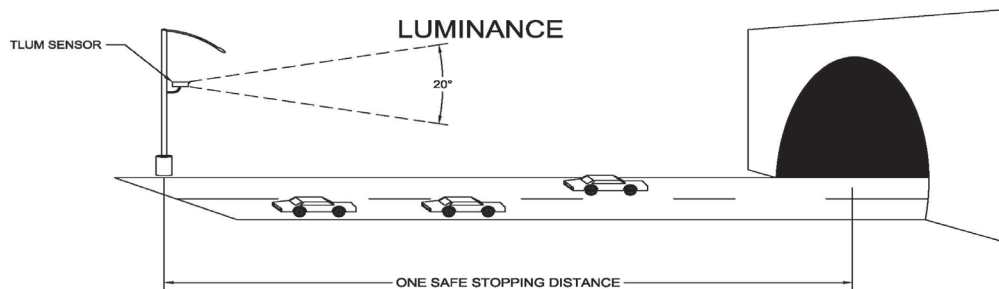
TECHNICAL DATA - TLUM SENSOR - LUMINANCE

Accuracy:	Repeatability +/- 1%
	Linearity +/- 2% at 70°F (21°C)
	Temperature +/- 10%
Overall Tolerance:	+/- 12% over the spec light & temp. range
Operating Temp:	-40°F to 140°F (-40°C to 60°C)
Internal Heating Element:	ON at 50°F (10°C) and OFF at 80°F (27°C)
Sensor Type:	Blue-enhanced Photo Diode
Distance:	2,000 ft.
Housing:	TLUM1 - NEMA3R TLUM2 - NEMA4
Power:	TLUM1 - 120VAC, TLUM2 - 24VAC
Compliance Voltage:	24VDC +/- 1VDC
Field of View:	20°
Protection:	Fused and MOV
Sensor Output:	4.0 - 20mA + .1I / -.1mA
Listing:	UL508A, CAN/CSA C22.2 14-M91
Notes:	Photometric filter accuracy of 1% total area error w/ a CIE function error of 2%
Options:	Pole Bracket or Wall Bracket TU24 - Multitap 24VAC Transformer (For TLUM2 only) TU120 - Multitap 120VAC Transformer (For TLUM1 only)

DIMENSIONS:



SENSOR LOCATION & VIEW:



ORDER INFORMATION:

Sensor
TLUM -

Model
1
2

Mount
W = Wall -
P = Pole -

Remote Power
blank = Controller
TU24 = TU24 Transformer
TU120 = TU120 Transformer

Example

TLUM - 2 - W - TU24

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