



**Unique Dual Viewing Axes**  
**Fast Gain Control Measures Changing Surfaces Accurately**

- Resolution down to 0.00025 mm (full bandwidth)
- Frequency response available up to 200 kHz (full bandwidth)
- Spot size down to 0.03 mm
- Extremely fast automatic light control for varying surfaces
- Rugged industrial packaging
- Eliminates "spikes" when surface color changes
- Ideal for thickness measurement and extremely small features
- Front IP65 with red filter glass

**Technical Specification**

Model Number	Measurement Range (MR)	Stand Off (SO)	Offset Distance (OD)	Resolution (Worst Case) <small>Note 1</small>	Resolution (Typical) <small>Note 2</small>	Linearity	Triangulation Angle at SO	Spot Size at SO	
LTS 15/1	mm	1	15	0.00025	0.000025	0.001	43 deg.	0.030	
	in.	0.04	0.59	0.00001	0.000001	0.00004		0.001	
LTS 15/2.5	mm	2.5	15	0.00025	0.000025	0.0025	43 deg.	0.030	
	in.	0.10	0.59	0.00001	0.000001	0.0001		0.001	
LTS 15/5	mm	5	15	0.0005	0.00005	0.005	43 deg.	0.030	
	in.	0.20	0.59	0.00002	0.000002	0.0002		0.001	
LTS 15/10	mm	10	15	0.0010	0.00010	0.010	43 deg.	0.030	
	in.	0.39	0.59	0.000039	0.0000039	0.0004		0.001	
LTS 30/5	mm	5	30 ± 0.75	27.5 ± 0.75	0.0005	0.00005	0.005	25 deg.	0.070
	in.	0.20	1.18 ± 0.03	1.08 ± 0.03	0.00002	0.000002	0.00020		0.003
LTS 30/10	mm	10	30 ± 1	25 ± 1	0.0010	0.00010	0.01	25 deg.	0.070
	in.	0.39	1.18 ± 0.04	0.98 ± 0.04	0.000039	0.0000039	0.0004		0.003
LTS 30/20	mm	20	30 ± 1.5	20 ± 1.5	0.002	0.00020	0.02	25 deg.	0.070
	in.	0.79	1.18 ± 0.06	0.78 ± 0.06	0.000079	0.0000079	0.008		0.003

Note 1: Resolution at full bandwidth.  
Note 2: Resolution at 128 sample averaging.

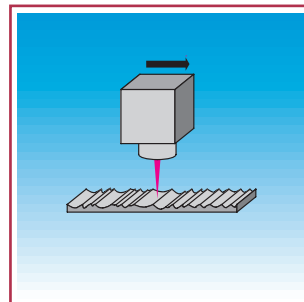
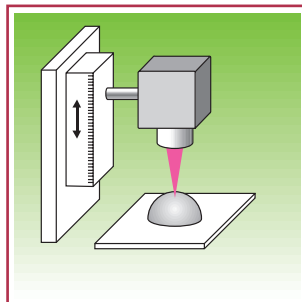
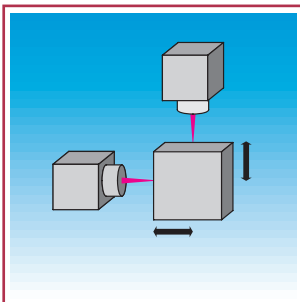
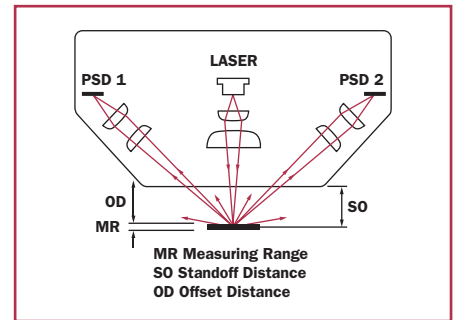
LTS sensors are single point optical triangulation sensors with two separate viewing angles, a unique design offering exceptional performance on surfaces of changing color or reflectivity, or surfaces with steps which would create shadows for single axis sensors.

PSD-based sensing provides sensor frequency response up to 200 kHz, while also providing excellent measurement accuracy to microns and resolution at the sub-micron level.

The smaller laser spot size (down to 0.03 mm) makes LTS ideal for measurement of small features, including surface texture.

LTS sensors are available with standoff of 15 or 30 mm, and a selection of measuring ranges.

Small spot size, high speed and accurate data make the LTS series of sensors ideal for measuring thickness of moving materials and for contouring of small parts, such as electronic components.



# LTS - Laser Twin Sensor

## LASER SOURCE

## ENVIRONMENTAL

Laser Type	GaAIAs		Enclosure	NA	
Laser Class	3B (IEC)	IIIb (FDA)	Temperature	°C	0-50
Laser source power	mW	7		°F	32-122
Wavelength	nm	785	Temp. Stability	% of MR / °C	0.01
Lifetime expectancy	hr	100 000	Relative Humidity	%	<95 non-condensing

## ELECTRICAL

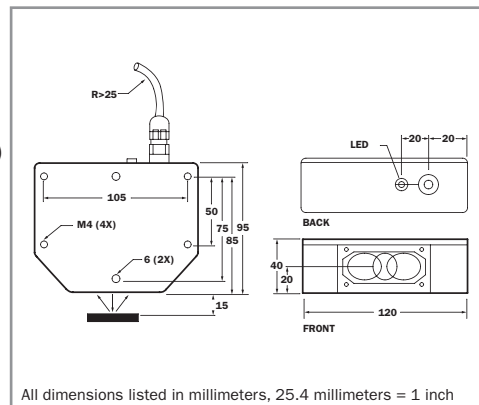
## PHYSICAL

Power supply voltage	VDC	-15 and +15	Dimensions	mm	120 x 95 x 40 *
Current draw	mA	<200		in.	4.72 x 3.74 x 1.57
Analog voltage output	VDC	0-10 or -10 to +10	Weight	kg	0.7
Analog current output	mA	0/4-20 (Optional)		lbs.	1.5
Frequency response	Hz	100 000 (Optional 200 000)	Cable Length	m	2.5
Detector type		Dual PSD		ft.	8.2

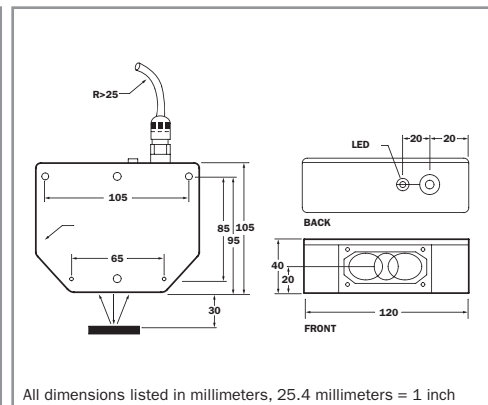
\* LTS 30/XX Dimensions 120 x 105 x 40 mm

## CONNECTION WIRING

- 1 Green Ground
- 2 Brown Power (+15 VDC)
- 3 White Power (-15 VDC)
- 4 Red Laser On (2..15 VDC)
- 5 Yellow Analog out
- 6 Gray Intensity out (0 to 6 VDC)
- 7 Pink Invalid out (TTL)
- Blue Not connected



LTS 15/XX DIMENSIONS



LTS 30/XX DIMENSIONS

### 1- YEAR LIMITED WARRANTY

The company will replace or, at the company's option, repair any system or p with respect to such system or parts shall be limited to repair and replacement, F.O.B: tion, installation, adjustment or other expenses which may arise in connection with warranties of merchantability and fitness. No waiver, alteration, or modification of the foregoing warranty shall be valid unless made in writing and signed by an executive of the company.

LMI vision sensors are manufactured under one 5,114,230; 5,164,579; 5,362,970; 5,51 foreign patents pending.

[www.lmint.com](http://www.lmint.com)

Complies with FDA performance standards for laser products except for deviations pursuant to Laser Notice No. 50, dated July 26, 2001.

