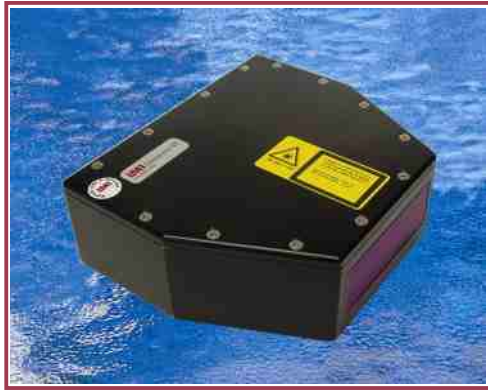


LTS Laser Twin Sensor



Unique Dual Viewing Axes

Fast Gain Control Measures Changing Surfaces Accurately

- Resolution Down to 0.00025mm
- Frequency Response Available up to 200kHz (Full Bandwidth)
- Spot Size Down to 0.03mm
- 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)	Resolution (Typical)	Linearity	Triangulation Angle at SO	Spot Size at SO
	mm	in			Note 1	Note 2			
LTS 15/1	mm	1	15	14.5	0.00025	0.000025	0.001	43 deg.	0.030
	in	0.04			0.00001	0.000001			
LTS 15/2.5	mm	2.5	15	13.9	0.00025	0.000025	0.0025	43 deg.	0.030
	in	0.10			0.00001	0.000001			
LTS 15/5	mm	5	15	12.8	0.0005	0.00005	0.005	43 deg.	0.030
	in	0.20			0.00002	0.000002			
LTS 15/10	mm	10	15	11.5	0.0010	0.00010	0.010	43 deg.	0.030
	in	0.39			0.000039	0.0000039			
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			
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			
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			

Note 1: Resolution at full bandwidth

Note 2: Resolution at 128 sample averaging

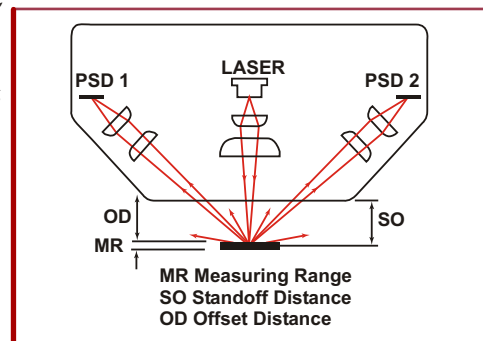
LTS sensors are single point optical triangulation sensors with two separate viewing angles, a unique design offering exceptional performance on surfaces of changing color or reflectivity, or surfaces with steps which would create shadows for single axis sensors..

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

The small laser spot size (down to 0.03mm) 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

Laser type	GaAlAs
Laser class	IIIb FDA
Laser source power	mW 7
Wavelength	nm 785
Lifetime expectancy	hr 100 000

ENVIRONMENTAL

Enclosure	NA
Temperature	°C 0 - 50
	°F 32 - 122
Temp. Fluctuation	% of MR / °C 0.01
Relative Humidity	% <95 non-condensing

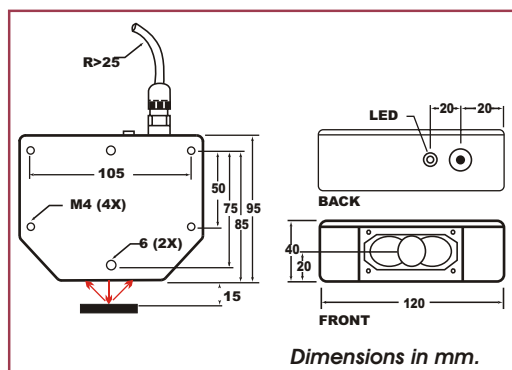
ELECTRICAL

Power supply voltage	VDC -15 and +15
Current draw	mA < 200
Analog voltage output	VDC 0-10 or -10 to +10
Analog current output	mA 0/4-20 (Optional)
Frequency response	Hz 100 000 (Optional 200 000)
Detector type	Dual PSD

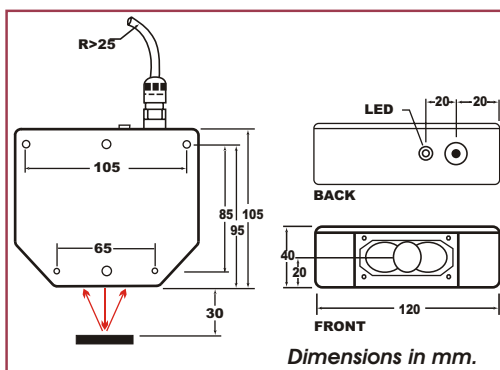
PHYSICAL

Dimensions	mm 120 x 95 x 40 *
	in 4.72 x 3.74 x 1.57
Weight	kg 0.7
	lbs 1.5
Cable Length	m 2.5
	ft 8.2

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



LTS 15/XX DIMENSIONS



LTS 30/XX DIMENSIONS

7 PIN CONNECTION WIRING

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

1- YEAR LIMITED WARRANTY

The company will replace or, at the company's option, repair any system or parts of a system which are found defective in material or workmanship within one year from the date of shipment. Our obligation with respect to such system or parts shall be limited to repair and replacement, F.O.B: our facilities, and in no event shall the company be liable for incidental, consequential or special damages, or for transportation, installation, adjustment or other expenses which may arise in connection with such system or parts. This warranty is expressly made in lieu of any and all other warranties, expressed or implied, including 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 or more of the following U.S. patents: 4,305,661; 4,373,804; 4,375,921; 4,394,683; 4,576,482; 4,667,231; 4,875,776; 5,056,922; 5,114,230; 5,164,579; 5,362,970; 5,510,625; 5,670,787; 5,684,292; 5,691,545; 5,734,172; 5,811,827; 5,854,491; 5,877,491; 5,880,459; 5,940,302; 5,981,965. Other US and foreign patents pending.

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