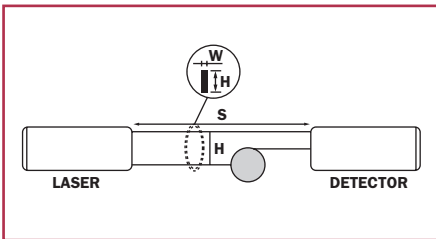


**Shadow Measurement Sensor**

- Fast frequency response
- Noncontact measurement
- Simple analog output
- Rugged industrial packaging
- Ideal for diameter and height measurements



**Options & Accessories**

- High speed analog out (up to 10 kHz)
- Analog current out (0/4 - 20 mA) instead of voltage out

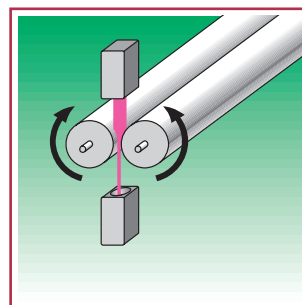
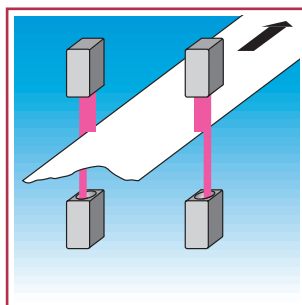
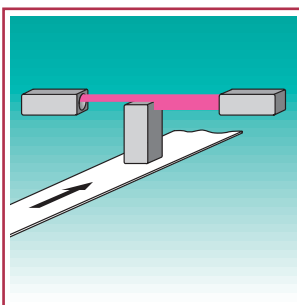
**Technical Specification**

Model Number	Beam Height (H)	Beam Width (W)	Resolution (Worst Case) <small>Note 1</small>	Resolution (Typical) <small>Note 2</small>	Linearity	Separation Distance (S)
LBS 2x1	mm 2	1	0.002	0.0002	0.010	<1000
	in. 0.079	0.039	0.00008	0.000008	0.0004	<39.4
LBS 5x1	mm 5	1	0.005	0.0005	0.025	<1000
	in. 0.197	0.039	0.0002	0.00002	0.001	<39.4
LBS 10x1	mm 10	1	0.015	0.0015	0.075	<1000
	in. 0.394	0.039	0.00059	0.000059	0.003	<39.4
LBS 20x1	mm 20	1	0.040	0.004	0.200	<1000
	in. 0.787	0.039	0.00157	0.000157	0.0079	<39.4
LBS 24x1	mm 24	1	0.05	0.005	0.250	<1000
	in. 0.945	0.039	0.0020	0.0002	0.0098	<39.4

LBS Sensor Models: LBS 5x1, LBS 10x1 and LBS 20x1 also available with 2 mm beam width.

Note 1: Worst Case Resolution - at full bandwidth.

Note 2: Typical Resolution - at 128 sample averaging.



# LBS - Laser Beam Sensor

## LASER SOURCE

Laser Class	2 (IEC)	Enclosure	NA	
	II FDA	Temperature	°C	0-50
			°F	32-122
Wavelength	nm	655	Temp. Stability	% of MR / °C
Modulation frequency	Hz	50 000	Relative Humidity	%
Lifetime expectancy	hr	100 000		<95 non-condensing

## ENVIRONMENTAL

## ELECTRICAL

Power supply voltage	VDC	+15 to +30 linear	Dimensions	mm	99 x 40 x 40
Current draw	mA	<200	(Each, Laser & Detector)	in.	3.90 x 1.57 x 1.57
			Weight	kg	0.3
Frequency response	Hz	3 000 (Optional 10 000) modulated	(Each, Laser & Detector)	lbs.	0.66
Detector type		Photodiode	Cable Length	m	2.5
			(Each, Laser & Detector)	ft.	8.2

## PHYSICAL

## OUTPUT INTERFACES

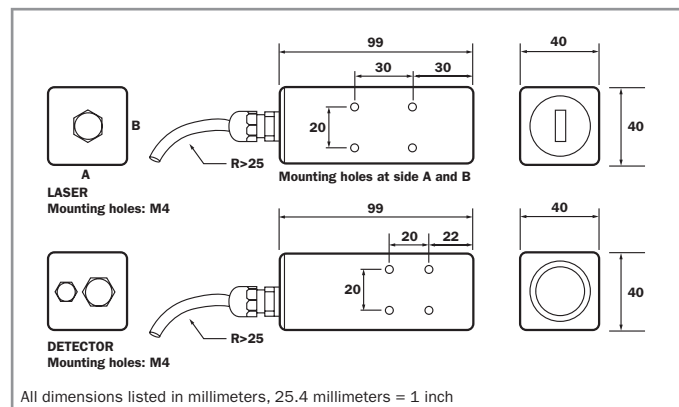
Analog voltage output	0-10 VDC
Analog current output (optional)	0/4-20 mA

(Voltage out standard, current out option replaces voltage out)

## CONNECTION WIRING

Emitter	Brown Green/Black	Power +15 to +30 VDC Ground
Receiver	Brown Green/Black Yellow Pink (option)*	Power +15 to +30 VDC Ground Analog voltage out (0 to 10 V) Analog current out (0/4 to 20 mA)

\* Must specify with factory order  
(Voltage out standard, current out option replaces voltage out)



## 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.

[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.



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