

Beam Position Sensing Thermopile Sensors

10 mW to 45W



LM-3, LM-10 and LM-45

Features

- Spectrally flat from 0.19 μm to 11 μm
- 10 mW to 100 mW resolution
- 16 mm to 19 mm apertures
- FC and SMA fiber connectors available (see page 71)



Use with LabMax (see page 10 and 14)

These unique thermopiles incorporate a quadrant thermopile disk that enables them to sense the position of the beam on the detector surface. This information is displayed by meters such as LabMax. All Coherent products which incorporate this position sensing technology are identified with the logo shown on the right.

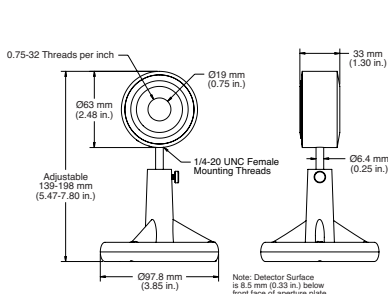
Device Specifications	Model	LM-3	LM-10	LM-45
Wavelength Range (μm)			0.25 to 10.6	
Power Range		10 mW to 3W	10 mW to 10W	100 mW to 25W
Max. Intermittent Power (W)(<5 min.)		10	12	45
Long-Pulse Joules Range (J)			0.5 to 10	
Resolution (mW)		1		10
Max. Power Density			6 kW/cm ²	
Max. Energy Density			0.5 J/cm ² , 1064 nm, 10 ns	
Detector Coating			HTD	
Detector Diameter (mm)		19	16	19
Calibration Uncertainty (%) (k=2)			± 2	
Calibration Wavelength (μm)			10.6	
Cooling Method			Air-cooled	
Cable Type			LM DB-25	
Cable Length (m)			1.8	
Part Number		1098328**	1098304**	1098320**

**C24 Quick Ship program: eligible for next business day shipment.

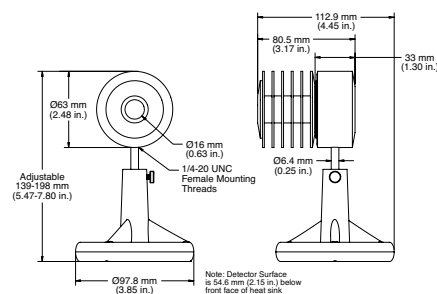
ISO/IEC 17025:2005



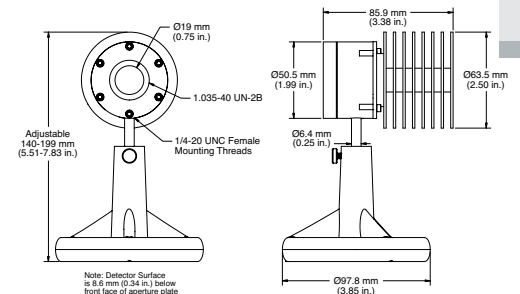
LM-3



LM-10



LM-45



Beam Position Sensing Thermopile Sensors

100 mW to 200W



LM-100 and LM-200

Features

- Spectrally flat from 0.19 μm to 11 μm
- 10 mW resolution
- 19 mm apertures
- FC and SMA fiber connectors available (see page 71)



Use with LabMax (see page 10 and 14)

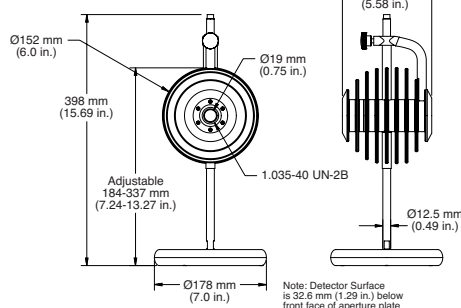
The LM-100 sensor is convectively-cooled for powers up to 100W. The LM-200 sensor is fan-cooled and is available in 110 VAC and 220 VAC configurations.

Device Specifications	Model	LM-100	LM-200
	Wavelength Range (μm)	0.25 to 10.6	
	Power Range	100 mW to 100W	100 mW to 200W
	Long-Pulse Joules Range (J)	0.5 to 10	
	Resolution (mW)	10	
	Max. Power Density	6 kW/cm ²	
	Max. Energy Density	0.5 J/cm ² , 1064 nm, 10 ns	
	Detector Coating	HTD	
	Detector Diameter (mm)	19	
	Calibration Uncertainty (%) (k=2)	± 2	± 5
	Calibration Wavelength (μm)	10.6	
	Cooling Method	Air-cooled	Fan-cooled
	Cable Type	LM DB-25	
	Cable Length (m)	1.8	
	Part Number	1098346	1098440 (110VAC) 1098450 (220 VAC)

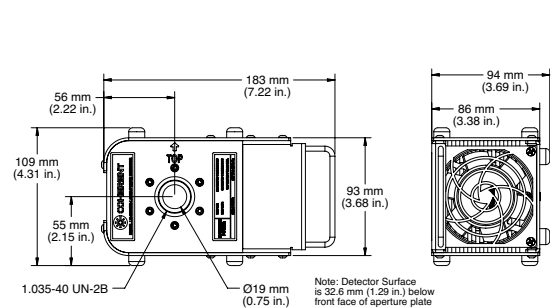
ISO/IEC 17025:2005



LM-100



LM-200



Beam Position Sensing Thermopile Sensors

100 mW to 150W



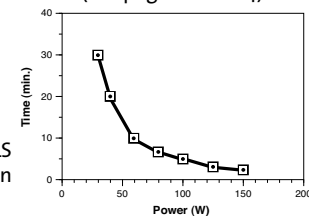
LM-150LS, LM-150FS and LM-20

Features

- Spectrally flat from 0.19 μm to 11 μm
- 10 mW to 100 mW resolution
- 19 mm apertures
- FC and SMA fiber connectors available (see page 71)



Use with LabMax (see page 10 and 14)



The LM-20 is designed for embedded use and must be mounted on a heat sink. The LM-150 FS and LS sensors are designed for intermittent operation.

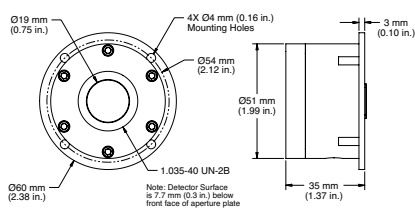
LM-150 FS and LS Power Duration

Device Specifications	Model	LM-20	LM-150 LS	LM-150 FS
	Wavelength Range (μm)		0.25 to 10.6	
	Power Range	100 mW to 20W	100 mW to 150W	100 mW to 150W
	Long-Pulse Joules Range (J)		0.5 to 10	
	Resolution (mW)		10	
	Max. Power Density		6 kW/cm ²	
	Max. Energy Density		0.5 J/cm ² , 1064 nm, 10 ns	
	Detector Coating		HTD	
	Detector Diameter (mm)		19	
	Calibration Uncertainty (%) (k=2)	± 2	± 5	± 5
	Calibration Wavelength (μm)		10.6	
	Cooling Method	Conductive-cooled		Air-cooled
	Cable Type		LM DB-25	
	Cable Length (m)		1.8	
	Part Number	1098456	1098452	1098394

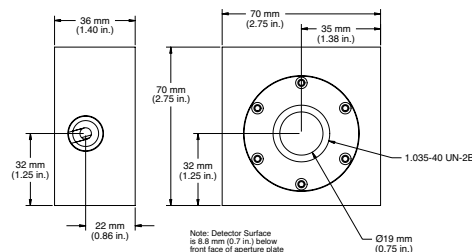
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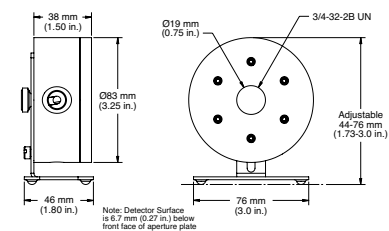
LM-20



LM-150 LS



LM-150 FS



Beam Position Sensing Thermopile Sensors

100W to 5 kW



LM5000 and BeamFinder

Features

- Water-cooled
- Spectrally flat from 0.19 μm to 11 μm
- 1W resolution
- 35 mm to 55 mm apertures



Use with LabMax (see page 10 and 14)

These kilowatt thermopile sensors are water-cooled for measuring output over 100W and are excellent for use with CO₂ and Nd:YAG lasers.

Tap or distilled cooling water is recommended with these sensors – DI water can not be used. Flow rates are power dependent and range from 0.5 to 4 gallons per minute; pressure depends upon flow rate and ranges from 3 to 40 PSI (visit product pages at www.Coherent.com/LMC for more technical details). Water fittings are included.

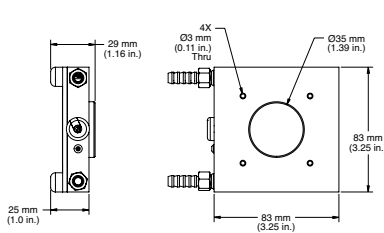
Device Specifications	Model	BeamFinder	LM-1000	LM-2500	LM-5000
Wavelength Range (μm)		0.3 to 10.6		0.25 to 10.6	
Power Range (W)		100 to 1000		100 to 2500	100 to 5000
Resolution (W)				1	
Max. Power Density ¹		1 to 2.5 kW/cm ²			
Max. Energy Density		0.5 J/cm ² , 1064 nm, 10 ns			
Detector Coating				H	
Active Area Diameter (mm)		35	38		56
Calibration Uncertainty (%) (k=2)				±5	
Calibration Wavelength (μm)				10.6	
Cooling Method				Water-cooled	
Cable Type				LM DB-25	
Cable Length (m)				6	
Part Number		1098427	1098409	1098437	1098421

ISO/IEC 17025:2005

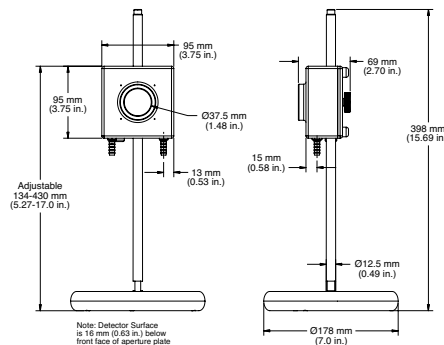


¹ The damage resistance of the coating is dependent upon the beam size and profile, the average power level, and the water flow rate. Contact Coherent or your local representative for details related to your application.

BeamFinder



LM-1000



LM-2500/LM-5000

