



# Position Sensing Water-Cooled Thermopile USB/RS Sensors to 5 kW

## Sensors Useful for Non-Visible Beams

These unique position sensing thermopiles display the position of the incident beam on the sensor disk. This information allows the user to safely and precisely align the sensor and the beam being measured. This is particularly useful for non-visible beams.

Water-cooling and careful thermal management within these sensors enable them to deliver the ultimate in high power handling capacity. They can capably measure industrial CO<sub>2</sub> and Nd:YAG lasers at power levels up to 5 kW.

### FEATURES

- 100 W to 5000 W range
- Broadband coatings
- 0.25 to 10.6  $\mu\text{m}$  spectral range
- Compact water-cooled design
- Large 38 mm or 55 mm diameter aperture
- Excellent for high-power CO<sub>2</sub> and Nd:YAG lasers

### APPLICATIONS

- Medical
- Scientific
- Industrial
- General Laser Power Measurement to 5kW





## Position Sensing Water-Cooled Thermopile USB/RS Sensors to 5 kW Datasheet

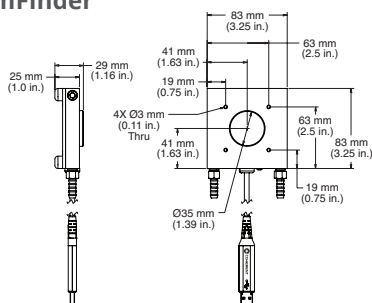
SPECIFICATIONS	BeamFinder	LM-1000	LM-5000
Wavelength Range (µm)	0.25 to 10.6		
Power Range (W)	50 to 1000	50 to 1000	50 to 5000
Noise Equivalent Power (mW)	20		
Maximum Power Density <sup>1</sup> (kW/cm <sup>2</sup> )	1 to 2.5		
Maximum Energy Density (mj/cm <sup>2</sup> )	500		
Response Time (sec.) (0% to 95%)			
Speed-up On	4		
Speed-up Off	6		
Detector Coating	Broadband		
Detector Element	Thermopile		
Detector Diameter (mm)	35	38	56
Calibration Uncertainty (%) (k=2)	±5		
Power Linearity (%)	±1		
Spectral Compensation Accuracy (%)	±1.5		
Calibration Wavelength (nm)	10,600		
Cooling Method	Water		
Cable Type	USB and RS		
Cable Length (m)	2.5 (USB)/0.3 (RS)		
Part Number <sup>2</sup>			
USB	1233118	1174268	1174269
RS-232		1180872	1181653

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 you local representative for details related to your application.

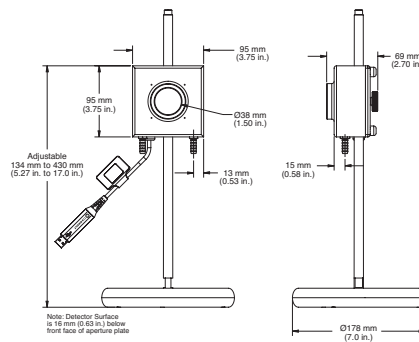
2 Software, water fittings and post stand included.

## MECHANICAL SPECIFICATIONS

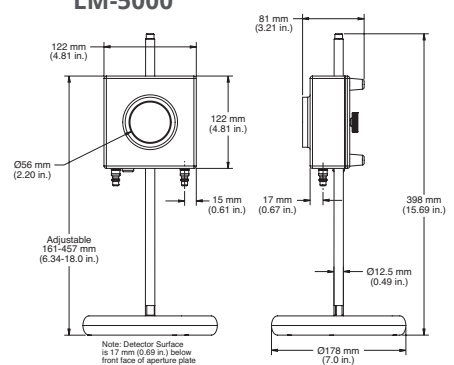
### BeamFinder



### LM-1000



### LM-5000



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Coherent follows a policy of continuous product improvement. Specifications are subject to change without notice. Coherent's scientific and industrial lasers are certified to comply with the Federal Regulations (21 CFR Subchapter J) as administered by the Center for Devices and Radiological Health on all systems ordered for shipment after August 2, 1976.

Coherent offers a limited warranty for all Thermopile Sensors. For full details of this warranty coverage, please refer to the Service section at [www.coherent.com](http://www.coherent.com) or contact your local Sales or Service Representative.  
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