



Laser Power Sensors

Position Sensing Air-Cooled Thermopile USB/RS Sensors to 200 W

Low- to Medium-Power Pulsed and CW Lasers from 10 mW to 200 W

These unique position sensing thermopiles display the position of the incident beam on the sensor disk, in addition to measuring power when used with the LabMax and LabMax-Pro meters. 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.

These air-cooled, surface absorbing sensors are intended for measurement of low to medium power pulsed and CW lasers from the 10 mW to 200 W power range. Convection cooling makes them simple to operate as well as mechanically compact.



FEATURES

- 10 mW to 200 W range
- Broadband coatings
- 0.25 to 10.6 μm spectral range
- Convective air-cooled

APPLICATIONS

- Medical
- Scientific
- Industrial
- General Laser Power
- Measurement to 200 W

Position Sensing Air-Cooled Thermopile USB/RS Sensors to 200 W

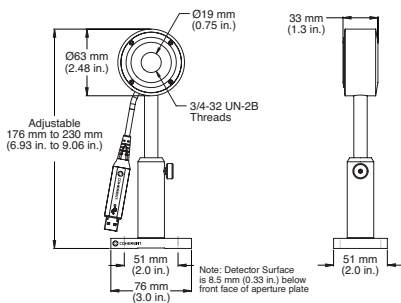
Specifications	LM-3	LM-10	LM-45
Wavelength Range (μm)	0.25 to 10.6		
Power Range	10 mW to 3 W	10 mW to 10 W	100 mW to 25 W
Maximum Intermittent Power (W) (<5 min.)	10	12	45
Long-Pulse Joules (J)	0.5 to 10	0.5 to 10	0.5 to 50
Noise Equivalent Power (mW)	0.4	0.4	2
Maximum Power Density (kW/cm^2)	6		
Maximum Energy Density (mJ/cm^2)	600, 1064 nm, 10 ns		
Response Time (sec.) (0% to 95%)			
Speed-up On	2	2	3
Speed-up Off	4	4	4
Detector Coating	Broadband		
Detector Element	Thermopile		
Optic	None		
Detector Diameter (mm)	19	16	19
Calibration Uncertainty (%) ($k=2$)	± 2		
Power Linearity (%)	± 1		
Spectral Compensation Accuracy (%)	± 1.5		
Long-Pulse Joules Accuracy (%)	± 3		
Calibration Wavelength (nm)	10,600		
Cooling Method	Air		
Cable Type	USB and RS		
Cable Length (m)	2.5 (USB)/0.3 (RS)		
Part Number ¹			
USB	1168339	1168340 ²	1168342 ²
RS-232	1363752	1168341 ²	1211474

Notes:

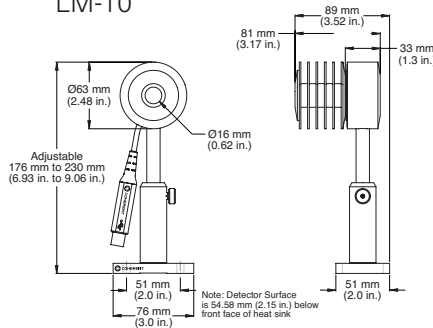
1. Software and post stand included.
2. 1 Day Ship program: eligible for next business day shipment.

Mechanical Specifications

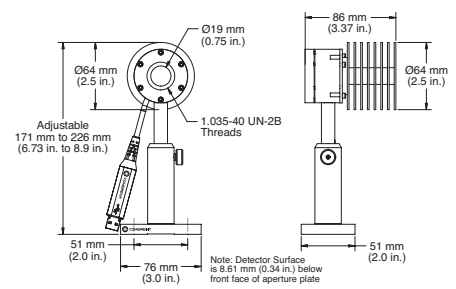
LM-3



LM-10



LM-45



Position Sensing Air-Cooled Thermopile USB/RS Sensors to 200 W

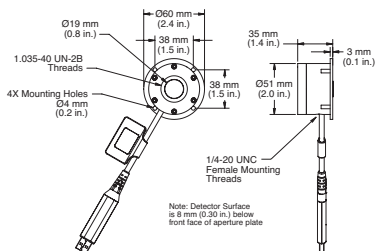
Specifications	LM-20	LM-100	LM-150 LS
Wavelength Range (μm)	0.25 to 10.6		
Power Range	100 mW to 20 W	100 mW to 100 W	100 mW to 150 W
Long-Pulse Joules (J)	0.5 to 10		
Noise Equivalent Power (mW)	3	5	3
Maximum Power Density (kW/cm^2)	6		
Maximum Energy Density (mJ/cm^2)	600 (10 ns, 1064 nm)		
Detector Coating	Broadband		
Detector Element	Thermopile		
Optic	None		
Detector Diameter (mm)	19		
Calibration Uncertainty (%) ($k=2$)	± 2	± 2	± 5
Power Linearity (%)	± 1		
Spectral Compensation Accuracy (%)	± 1.5		
Long-Pulse Joules Accuracy (%)	± 3		
Calibration Wavelength (nm)	10,600		
Cooling Method	Air		
Cable Type	USB and RS		
Cable Length (m)	2.5 (USB)/0.3 (RS)		
Part Number ¹			
USB	1174270	1193300	1275678
RS-232	1344001		1212246

Notes:

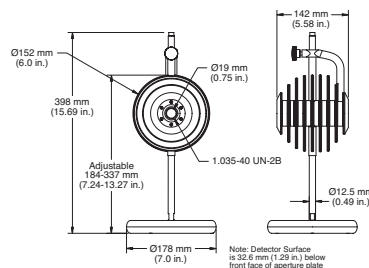
1. Software and post stand included.

Mechanical Specifications

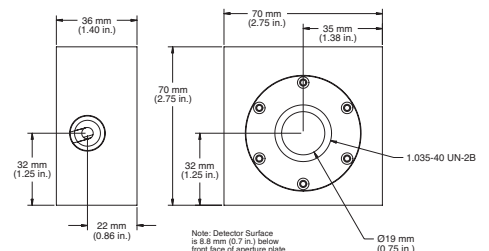
LM-20



LM-100



LM-150 LS



Position Sensing Air-Cooled Thermopile USB/RS Sensors to 200 W

Specifications	LM-200
Wavelength Range (μm)	0.25 to 10.6
Power Range without fan with fan	100 mW to 50 W 1 W to 200 W
Noise Equivalent Power (mW) without fan with fan	5 100
Maximum Power Density (kW/cm²)	6
Maximum Energy Density (mJ/cm²)	600 (10 ns, 1064 nm)
Detector Coating	Broadband
Detector Element	Thermopile
Optic	None
Detector Diameter (mm)	19
Calibration Uncertainty (%) (k=2)	±5
Power Linearity (%)	±1
Spectral Compensation Accuracy (%)	±1.5
Long-Pulse Joules Accuracy (%)	±3
Calibration Wavelength (nm)	10,600
Cooling Method	Fan
Cable Type	USB/RS
Cable Length (m) USB RS-232	2.5 3.0
Part Number¹ USB RS-232	2290746 (12 VDC)² 2290747 (12 VDC)²

- Notes:
1.

Software and post stand included.
2.

12 VDC power supply and cord included.

Mechanical Specifications

LM-200

