



Laser Power Sensors

# Position Sensing Air-Cooled Thermopile 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 100 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  $\mu\text{m}$  spectral range
- Convective air-cooled

### APPLICATIONS

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

## Position Sensing Air-Cooled Thermopile Sensors to 200 W

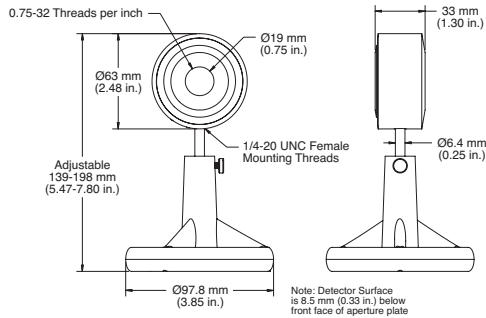
| Specifications                                     | LM-3                 | LM-10                | LM-45                |
|----------------------------------------------------|----------------------|----------------------|----------------------|
| Wavelength Range ( $\mu\text{m}$ )                 | 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 Range (J)                        | 0.5 to 10            |                      |                      |
| Resolution (mW)                                    | 1                    | 1                    | 10                   |
| Maximum Power Density ( $\text{kW}/\text{cm}^2$ )  | 6                    |                      |                      |
| Maximum Energy Density ( $\text{mJ}/\text{cm}^2$ ) | 600 (10 ns, 1064 nm) |                      |                      |
| Detector Coating                                   | Broadband            |                      |                      |
| Detector Diameter (mm)                             | 19                   | 16                   | 19                   |
| Calibration Uncertainty (%) ( $k=2$ )              | $\pm 2$              |                      |                      |
| Calibration Wavelength (nm)                        | 10,600               |                      |                      |
| Cooling Method                                     | Air                  |                      |                      |
| Cable Type                                         | LM DB-25             |                      |                      |
| Cable Length (m)                                   | 1.8                  |                      |                      |
| Part Number                                        | 1098328 <sup>1</sup> | 1098304 <sup>1</sup> | 1098320 <sup>1</sup> |

Notes:

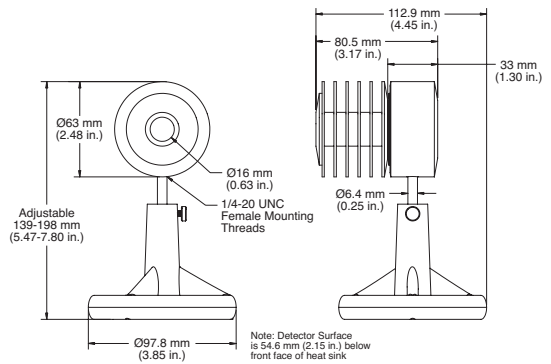
1. C24 Quick Ship program: eligible for next business day shipment.

### Mechanical Specifications

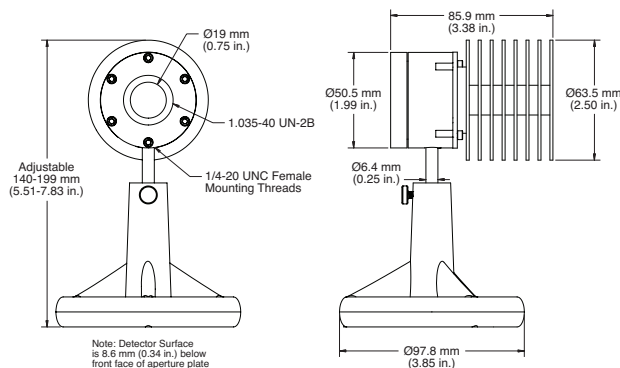
LM-3



LM-10



LM-45



## Position Sensing Air-Cooled Thermopile Sensors to 200 W

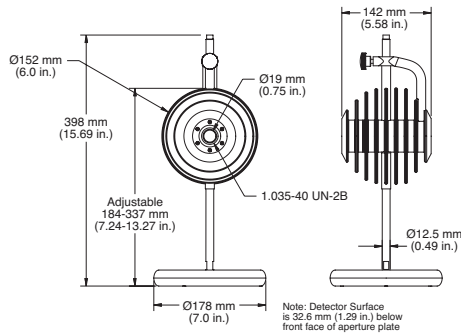
| Specifications                                     | LM-100               | LM-200                        |
|----------------------------------------------------|----------------------|-------------------------------|
| Wavelength Range ( $\mu\text{m}$ )                 | 0.25 to 10.6         |                               |
| Power Range                                        | 100 mW to 100 W      | 100 mW to 200 W               |
| Long-Pulse Joules Range (J)                        | 0.5 to 10            |                               |
| Resolution (mW)                                    | 10                   |                               |
| Maximum Power Density ( $\text{kW}/\text{cm}^2$ )  | 6                    |                               |
| Maximum Energy Density ( $\text{mJ}/\text{cm}^2$ ) | 600 (10 ns, 1064 nm) |                               |
| Detector Coating                                   | Broadband            |                               |
| Detector Diameter (mm)                             | 19                   |                               |
| Calibration Uncertainty (%) (k=2)                  | $\pm 2$              | $\pm 5$                       |
| Calibration Wavelength (nm)                        | 10,600               |                               |
| Cooling Method                                     | Air                  | Fan                           |
| Cable Type                                         | LM DB-25             |                               |
| Cable Length (m)                                   | 1.8                  |                               |
| Part Number                                        | 1098346              | 2290159 (12V DC) <sup>1</sup> |

Notes:

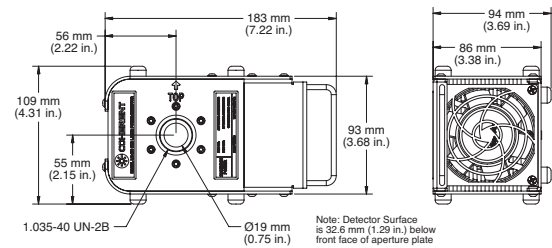
1. 12 VDC power supply and cord included.

### Mechanical Specifications

LM-100



LM-200



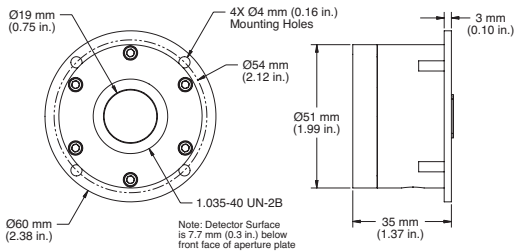
Position Sensing Air-Cooled Thermopile Sensors to 200 W

| Specifications                    | LM-20                |  | LM-150 LS       | LM-150 FS       |
|-----------------------------------|----------------------|--|-----------------|-----------------|
| Wavelength Range (μm)             | 0.25 to 10.6         |  |                 |                 |
| Power Range                       | 100 mW to 20 W       |  | 100 mW to 150 W | 100 mW to 150 W |
| Long-Pulse Joules Range (J)       | 0.5 to 10            |  |                 |                 |
| Resolution (mW)                   | 10                   |  |                 |                 |
| Maximum Power Density (kW/cm²)    | 6                    |  |                 |                 |
| Maximum Energy Density (mJ/cm²)   | 600 (10 ns, 1064 nm) |  |                 |                 |
| Detector Coating                  | Broadband            |  |                 |                 |
| Detector Diameter (mm)            | 19                   |  |                 |                 |
| Calibration Uncertainty (%) (k=2) | ±2                   |  | ±5              | ±5              |
| Calibration Wavelength (nm)       | 10,600               |  |                 |                 |
| Cooling Method                    | Conductive           |  | Air             | Air             |
| Cable Type                        | LM DB-25             |  |                 |                 |
| Cable Length (m)                  | 1.8                  |  |                 |                 |
| Part Number                       | 1098456              |  | 1098452         | 1098394         |

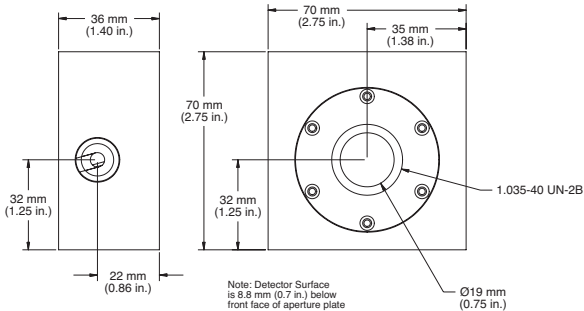
- Notes:
- C24 Quick Ship program: eligible for next business day shipment.

Mechanical Specifications

LM-20



LM-150 LS



LM-150 FS

