



Water-Cooled Thermopile Sensors to 5 kW

Compact, Water-Cooled Laser Power Sensors

These compact sensors are particularly useful when space is an issue. They must be water-cooled to achieve the full power rating, and they can also be used air-cooled (stand-alone or mounted to a heat sink) for stand-alone intermittent application of power.

FEATURES

- Compact designs
- Use water-cooled or air-cooled
- 19 mm and 50 mm apertures

APPLICATIONS

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



| SPECIFICATIONS | PM10-19C | PM150-19C | PM150-50C | PM300 |
|--|---------------------|-----------------|----------------------|------------------|
| Wavelength Range (µm) | 0.25 to 11 | | | |
| Power Range (water-cooled) | 10 mW to 10 W | 300 mW to 150 W | 300 mW to 150 W | 1 W to 300 W |
| Maximum Intermittent Power (W) (<5 min.) | 5 ¹ | 20 ¹ | 80 ¹ | 450 ² |
| Long-Pulse Joules Range (J) | 0.5 to 10 | 1 to 150 | 1 to 150 | - |
| Resolution (mW) | 1 | 30 | 30 | 100 |
| Maximum Power Density (kW/cm ²) | 6 | | | |
| Maximum Energy Density (mJ/cm ²) | 600, 1064 nm, 10 ns | | | |
| Response Time (sec.) | 2 | 2 | 5 | 5 |
| Detector Coating | Broadband | | | |
| Active Area Diameter (mm) | 19 | 19 | 50 | 19 |
| Calibration Uncertainty (%) (k=2) | ±1 | | | |
| Calibration Wavelength (µm) | 514 | | | |
| Cooling Method | Water-cooled | | | |
| Cable Type | PM DB-25 | | | |
| Cable Length (m) | 2 | | | |
| Part Number | 1098397 | 1098444 | 1098412 ³ | 1141474 |

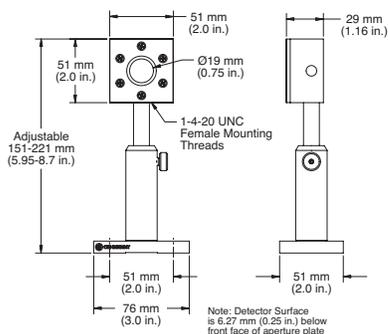
1 This intermittent power rating is for when the sensor is used without water-cooling.

2 This intermittent power rating is for when the sensor is used with water-cooling.

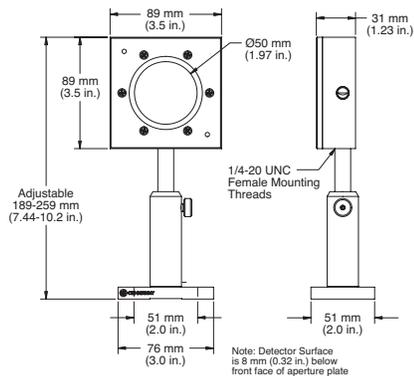
3 1 Day Ship program: eligible for next business day shipment.

MECHANICAL SPECIFICATIONS

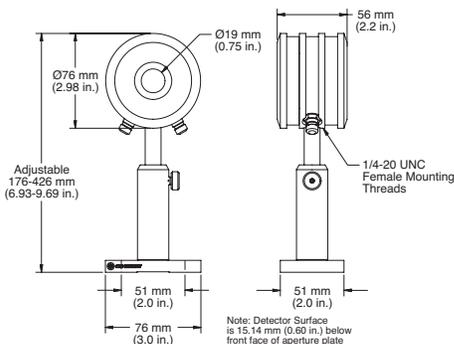
PM10-19C/PM150-19C



PM150-50C



PM300



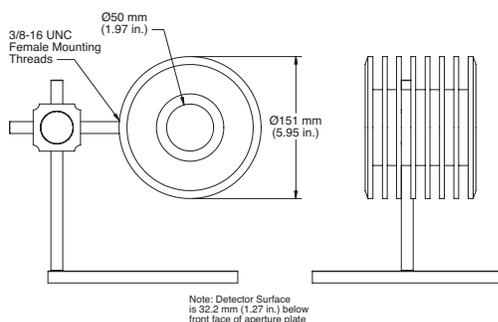
Water-Cooled Thermopile Sensors to 5 kW Datasheet

| SPECIFICATIONS | PM150X | PM150-50XC |
|--|---------------------|----------------------|
| Wavelength Range (μm) | 0.15 to 1.064 | |
| Power Range | 300 mW to 150 W | |
| Maximum Intermittent Power (W) (<5 min.) | 300 | 80 (air-cooled) |
| Long-Pulse Joules Range (J) | 1 to 150 | |
| Resolution (mW) | 30 | |
| Maximum Power Density (kW/cm ²) | 6 | |
| Maximum Energy Density (mJ/cm ²) | 600, 1064 nm, 10 ns | |
| Response Time (sec.) | 5 | |
| Detector Coating | UV | |
| Active Area Diameter (mm) | 50 | |
| Calibration Uncertainty (%) (k=2) | ±1 | |
| Calibration Wavelength (μm) | 514 | |
| Cooling Method | Air-cooled | Water-cooled |
| Cable Type | PM DB-25 | |
| Cable Length (m) | 2 | |
| Part Number | 1098455 | 1098443 ¹ |

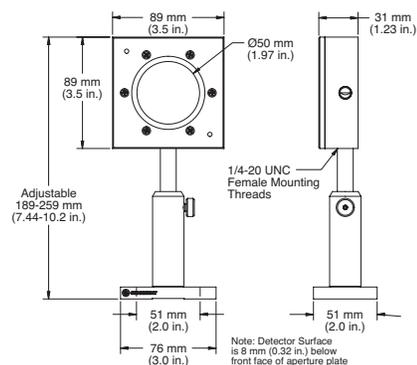
¹ Water fittings are included with PM150-50XC.

MECHANICAL SPECIFICATIONS

PM150X



PM150-50XC



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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 or contact your local Sales or Service Representative.
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