



Air-Cooled Thermopile Sensors to 150 W

Convection, Air-Cooled Thermopile Sensors for Measuring Laser Power to 150 W

These air-cooled, surface absorbing sensors are intended for measurement of low to medium power pulsed and CW lasers from the 10 mW to 150 W power range.

Convection cooling makes them simple to operate as well as mechanically compact. Product numbers ending in "X" are specifically optimized for use with excimer lasers operating in the ultraviolet (150 nm to 400 nm).

The DB-25 sensor models are compatible with LabMax-Pro, LabMax-TOP/TO, FieldMaxII-TOP/TO/P, and FieldMate meters.

FEATURES

- Maximum powers from 2 W to 150 W
- Minimum power down to 10 mW
- Broadband and Excimer coatings
- Convective air-cooled
- 0.15 μm to 11 μm spectral range
- 19 mm and 50 mm diameter active areas
- DB25 (meter required)
- RoHS Compliant

APPLICATIONS

- Medical
- Scientific
- Industrial
- General Laser Power Measurement from mW to 150 W

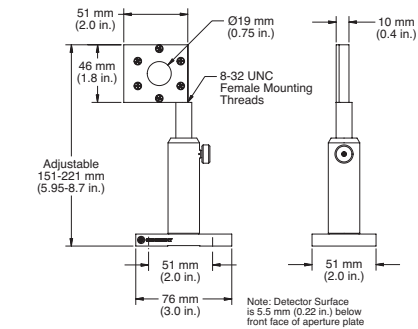


| SPECIFICATIONS | PM2 | PM10 | PM30 |
|--|----------------------|----------------------|----------------------|
| Wavelength Range (µm) | 0.25 to 11 | | |
| Power Range | 10 mW to 2 W | 10 mW to 10 W | 100 mW to 30 W |
| Long-Pulse Joules Range (J) | 0.5 to 2 | 0.5 to 10 | 0.5 to 50 |
| Maximum Intermittent Power (<5 min.) (W) | 5 | 30 | 50 |
| Resolution (mW) | 1 | 1 | 10 |
| Maximum Power Density (kW/cm ²) | 6 | | |
| Maximum Energy Density (mJ/cm ²) | 600, 1064 nm, 10 ns | | |
| Response Time (sec.) | 2 | | |
| Detector Coating | Broadband | | |
| Active Area Diameter (mm) | 19 | | |
| Calibration Uncertainty (%) (k=2) | ±1 | | |
| Calibration Wavelength (nm) | 514 | | |
| Cooling Method | Air-cooled | | |
| Cable Type | PM DB-25 | | |
| Cable Length (m) | 2 | | |
| Part Number | 1098329 ¹ | 1097901 ¹ | 1098314 ¹ |

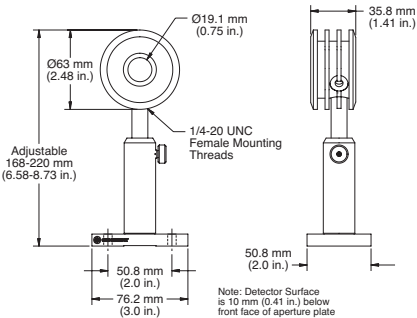
¹ C24 Quick Ship program: eligible for next business day shipment.

MECHANICAL SPECIFICATIONS

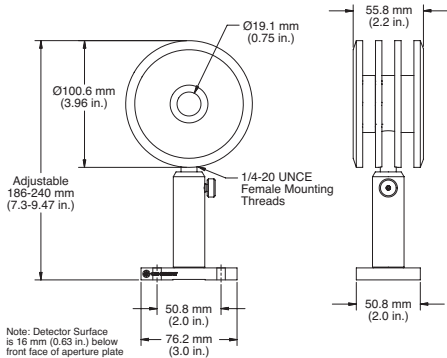
PM2



PM10



PM30

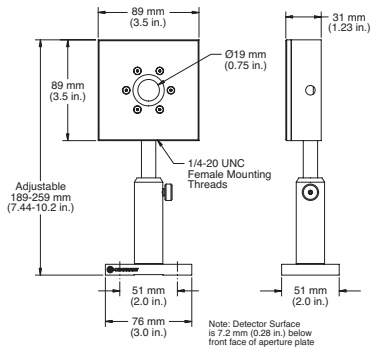


| SPECIFICATIONS | PM100-19C ¹ | PM150 | PM150-50 |
|--|------------------------|-----------------|-----------------|
| Wavelength Range (μm) | 0.25 to 11 | | |
| Power Range | 300 mW to 100 W | 300 mW to 150 W | 300 mW to 150 W |
| Long-Pulse Joules Range (J) | 1 to 100 | 1 to 150 | 1 to 150 |
| Maximum Intermittent Power (<5 min.) (W) | 100 | 300 | 300 |
| Resolution (mW) | 30 | | |
| Maximum Power Density (kW/cm ²) | 6 | | |
| Maximum Energy Density (mJ/cm ²) | 600, 1064 nm, 10 ns | | |
| Response Time (sec.) | 2 | 2 | 5 |
| Detector Coating | Broadband | | |
| Active Area Diameter (mm) | 19 | 19 | 50 |
| Calibration Uncertainty (%) (k=2) | ±1 | | |
| Calibration Wavelength (nm) | 514 | | |
| Cooling Method | Air-cooled | | |
| Cable Type | PM DB-25 | | |
| Cable Length (m) | 2 | | |
| Part Number | 1098483 | 1098407 | 109839 |

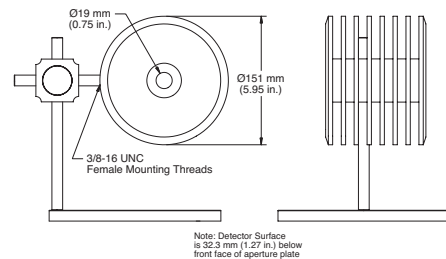
¹ This sensor is designed for intermittent use only.

MECHANICAL SPECIFICATIONS

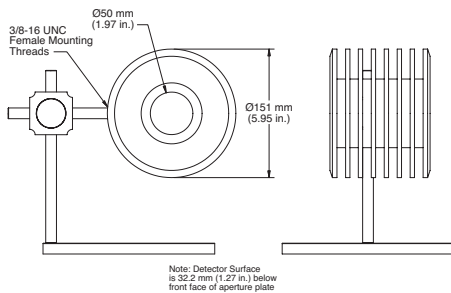
PM100-19C



PM150



PM150-50

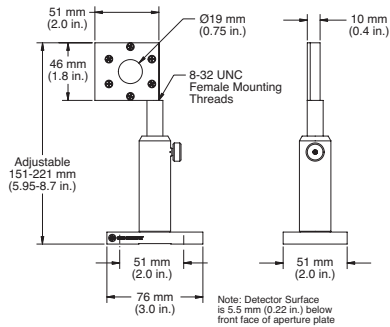


| SPECIFICATIONS | PM2X | PM10X | PM30X |
|--|---------------------|---------------|----------------------|
| Wavelength Range (μm) | 0.15 to 1 | | |
| Power Range | 10 mW to 2 W | 10 mW to 10 W | 100 mW to 30 W |
| Long-Pulse Joules Range (J) | 0.5 to 2 | 0.5 to 10 | 0.5 to 50 |
| Maximum Intermittent Power (<5 min.) (W) | 5 | 30 | 50 |
| Resolution (mW) | 1 | 1 | 10 |
| Maximum Power Density (kW/cm ²) | 6 | | |
| Maximum Energy Density (mJ/cm ²) | 600, 1064 nm, 10 ns | | |
| Response Time (sec.) | 2 | | |
| Detector Coating | UV | | |
| Active Area Diameter (mm) | 19 | | |
| Calibration Uncertainty (%) (k=2) | ±1 | | |
| Calibration Wavelength (nm) | 514 | | |
| Cooling Method | Air-cooled | | |
| Cable Type | PM DB-25 | | |
| Cable Length (m) | 2 | | |
| Part Number | 1098457 | 1098423 | 1098498 ¹ |

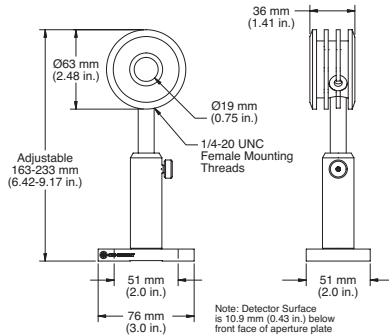
¹ C24 Quick Ship program: eligible for next business day shipment.

MECHANICAL SPECIFICATIONS

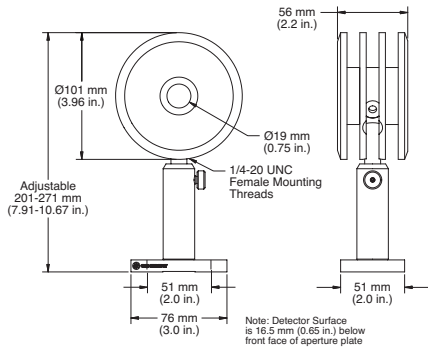
PM2X



PM10X



PM30X

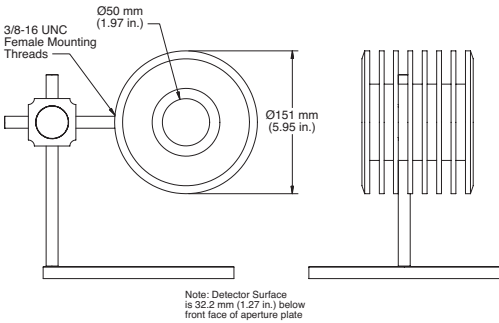


Air-Cooled Thermopile Sensors to 150 W Datasheet

| SPECIFICATIONS | PM150X |
|--|---------------------|
| Wavelength Range (µm) | 0.15 to 1 |
| Power Range | 300 mW to 150 W |
| Long-Pulse Joules Range (J) | 1 to 150 |
| Maximum Intermittent Power (<5 min.) (W) | 300 |
| 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 (nm) | 514 |
| Cooling Method | Air-cooled |
| Cable Type | PM DB-25 |
| Cable Length (m) | 2 |
| Part Number | 1098455 |

MECHANICAL SPECIFICATIONS

PM150X



Coherent, Inc.,
5100 Patrick Henry Drive Santa Clara, CA 95054
p. (800) 527-3786 | (408) 764-4983
f. (408) 764-4646

tech.sales@coherent.com www.coherent.com

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.

MC-045-19-0M1119 Copyright ©2019 Coherent, Inc.