



High-Sensitivity Thermopile Sensors to 2 W

Amplified and Thermally Stabilized Thermopiles Sensors with a wide, flat Spectral Range for Low Power Laser Measurement

The PS10 and PS19 sensors are thermally stabilized, amplified thermopile thermopile sensors with a broad spectral response, high sensitivity, and a large active area. These sensors are ideal for measuring small laser diodes and HeNe lasers and small ion lasers. Unlike semiconductor detectors, these sensors have a flat broadband output and will not saturate above 1 mW/cm².

FEATURES & BENEFITS

- · Thermally stabilized designs
- Power measurement from 100 μ W to 1 W
- 10 μW resolution
- 10 mm and 19 mm apertures
- FC and SMA fiber adapters (optional for PS10, see accessories secton of datasheet)
- RoHS compliant





SPECIFICATIONS	PS10 ²	PS10Q	PS19	PS19Q
Wavelength Range (nm)	0.19 ³ to 11	0.3 to 2	0.19 ³ to 11	0.3 to 2
Power Range	100 μW to 1 W			
Resolution (µW)	10			
Max. Intermittent Power (<5 min.) (W)	3			
Maximum Thermal Drift¹ (μW)	±40	±20	±400	±20
Maximum Avg. Power Density (kW/cm ²)	0.5			
Maximum Pulse Energy Density (mJ/cm ²)	50 (10 ns, 1064 nm)			
Response Time (sec.)	2			
Detector Coating	Black			
Quartz Filter Window	No	Yes	No	Yes
Active Area Diameter (mm)	10	10	19	19
Calibration Uncertainty (%) (k=2)	±1			
Calibration Wavelength (nm)	514			
Cooling Method	Air			
Cable Type	PM DB-25			
Cable Length (m)	2			
Part Number	1098350	1098400	1098413**	1098341**

¹ Power stability over 30 minutes in typical lab environment.

The PS10 model includes a light tube mounted to the front of the housing, which minimizes the effects of background radiation and narrows the field of view. Alternatively, the light tube can be removed and replaced by a fiber adapter accessory.

Where optimum stability is required, the PS10Q or PS19Q include a wedged quartz window, for applications from 0.3 to 2.0 µm. The quartz window more effectively eliminates thermal background radiation and the effects of air currents.



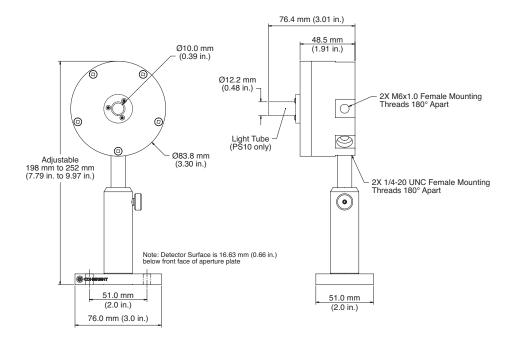
² Light tube supplied with PS10 and PM3 models only.

^{3 190} nm to 300 nm operation restricted to <100 mW average power and <250 W/cm² power density.

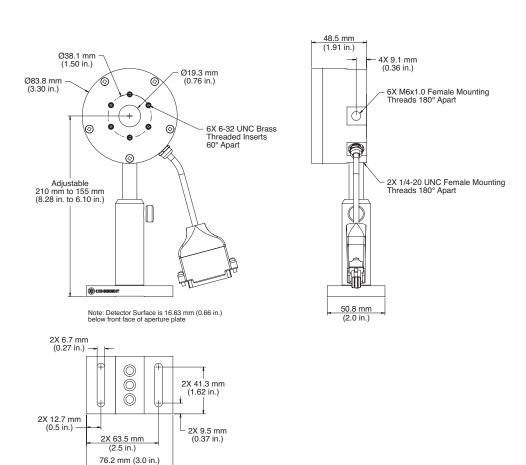
** C24 Quick Ship program: eligible for next business day shipment.

MECHANICAL SPECIFICATIONS

PS10/PS10Q



PS19/PS19Q





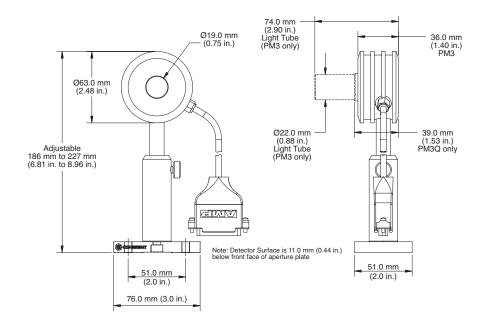
SPECIFICATIONS	PM3 ²	PM3Q	
Wavelength Range (nm)	0.19³ to 11	0.3 to 2	
Power Range	500 μW to 2 W		
Resolution (µW)	50		
Max. Intermittent Power (<5 min.) (W)	3		
Maximum Thermal Drift ¹	±1 mW	±500 μW	
Maximum Avg. Power Density (kW/cm ²)	0.5		
Maximum Pulse Energy Density (mJ/cm ²)	50 (10 ns, 1064 nm)		
Response Time (sec.)	2		
Detector Coating	Black		
Quartz Filter Window	No	Yes	
Active Area Diameter (mm)	19	10	
Calibration Uncertainty (%) (k=2)	±1		
Calibration Wavelength (nm)	514		
Cooling Method	Air		
Cable Type	PM DB-25		
Cable Length (m)	2		
Part Number	1098336	1098419	

- 1 Power stability over 30 minutes in typical lab environment.
- 2 Light tube supplied with PS10 and PM3 models only.
- 3 $\,$ 190 nm to 300 nm operation restricted to <100 mW average power and <250 W/cm² power density.

The PM3 sensors are amplified low-power thermopiles, but they do not contain the temperature-stabilization features of the PS series. The PM3 comes with a 10 mm inner diameter light tube to eliminate stray light; however, this can be removed to make use of the entire 19 mm diameter absorbing surface. The PM3Q replaces the light tube with a wedged quartz window to block spurious ambient thermal emissions from reaching the detector.

MECHANICAL SPECIFICATIONS

PM3/PM3Q







High-Sensitivity Thermopile Sensors to 2 W Datasheet

POWER SENSOR ACCESSORIES

Fiber-Optic Connector Adapters

Part Number: 0012-3860 (PS-SMA-Type Connector) 0012-3863 (PS-FC-Type Connector)

The following fiber adapters can be mounted onto the front of the PS10 sensor in place of the removable light tube.







High-Sensitivity Thermopile Sensors to 2 W Datasheet

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