

# High-Sensitivity Thermopile Power Sensors

100  $\mu$ W to 2W



Models PS19Q, PS19, PS10, PM3

## Features

- Thermally stabilized designs
- Spectrally flat from 0.3  $\mu$ m to 11  $\mu$ m
- 10  $\mu$ W resolution
- Fiber-optic connectors (optional, see page 51)

The PS10 and PS19 model sensors are thermally stabilized, amplified thermopile power sensors with a broad spectral response, high sensitivity, and a large active area. These sensors are ideal for measuring laser diodes, HeNe and HeCd lasers, and small ion lasers. The PS10 model includes a light tube mounted to the front of the housing, which minimizes the effects of background radiation. The light tube can be removed and replaced by FC or SMA fiber connectors (see Accessories - page 51). Where optimum stability is required, specify the PS10Q or PS19Q, which include a wedged quartz window for applications from 0.3 to 2.0  $\mu$ m. The quartz window more effectively eliminates thermal background radiation and the effects of air currents.

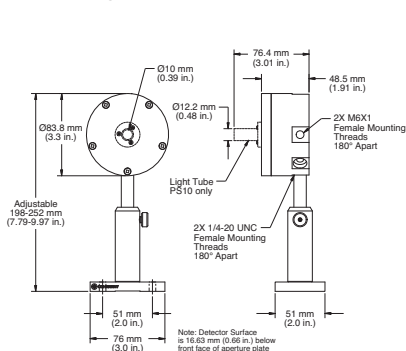
Device Specifications	Model	PS10 <sup>2</sup>	PS10Q	PS19	PS19Q	PM3 <sup>2</sup>	PM3Q
Wavelength Range ( $\mu$ m)		0.19 <sup>3</sup> to 11	0.3 to 2	0.19 <sup>3</sup> to 11	0.3 to 2	0.19 <sup>3</sup> to 11	0.3 to 2
Power Range		100 $\mu$ W to 1W				500 $\mu$ W to 2W	
Resolution ( $\mu$ W)		10				50	
Max. Thermal Drift <sup>1</sup>		$\pm$ 40 $\mu$ W	$\pm$ 20 $\mu$ W	$\pm$ 400 $\mu$ W	$\pm$ 20 $\mu$ W	$\pm$ 1 mW	$\pm$ 500 $\mu$ W
Max. Avg. Power Density		0.5 kW/cm <sup>2</sup>					
Max. Pulse Energy Density		50 mJ/cm <sup>2</sup> , 10 ns, 1064 nm					
Response Time (sec.)		2					
Detector Coating		Black					
Quartz Filter Window		No	Yes	No	Yes	No	Yes
Active Area Diameter (mm)		10		19		19	10
Calibration Uncertainty (%)		$\pm$ 1					
Calibration Wavelength (nm)		514					
Cooling Method		Air-cooled					
Cable Type		PM DB-25					
Cable Length (m)		2					
Part Number		1098350	1098400	1098413	1098341	1098336	1098419

<sup>1</sup> Power stability over 30 minutes in a typical lab environment.

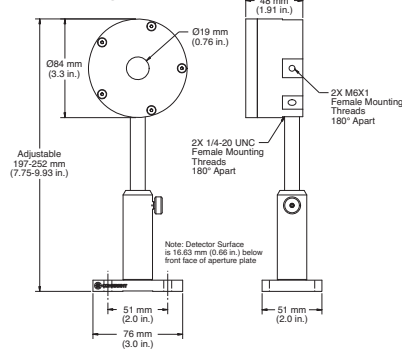
<sup>2</sup> Light tube supplied with PS10 and PM3 models only.

<sup>3</sup> 190nm to 300 nm operation restricted to <100 mW average power and <250W/cm<sup>2</sup> power density.

## PS10/PS10Q



## PS19/PS19Q



## PM3/PM3Q

