High-Sensitivity Thermopile Power Sensors

100 µW to 2W

Models PS19Q, PS19, PS10, PM3

Features

- **Thermally stabilized designs**
- **Spectrally flat from 0.3 µm to 11 µm**
- **10 µW resolution**
- **Fiber-optic connectors (optional, see page 55)**

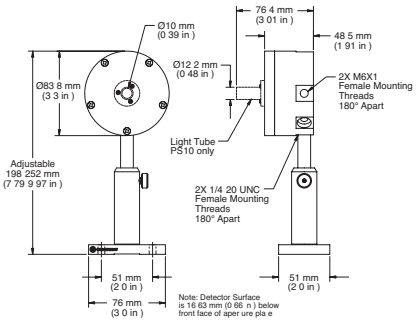
The PS10 and PS19 model sensors are thermally stabilized, amplified thermopile power sensors with a broad spectral response, high sensitivity, and a large active area. These sensors are ideal for measuring laser diodes, HeNe and HeCd lasers, and small ion lasers. The PS10 model includes a light tube 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 55). Where optimum stability is required, specify the PS10Q or PS19Q, which 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.

Device Specifications

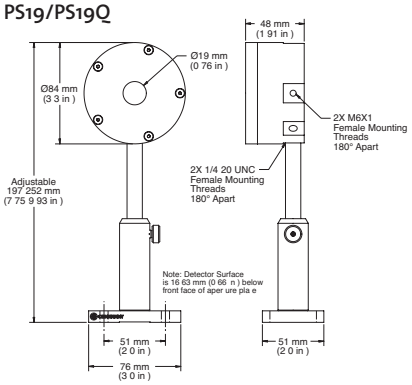
Model	PS10[2]	PS10Q	PS19	PS19Q	PM3[2]	PM3Q
Wavelength Range (µm)	0.19[3] to 11	0.3 to 2	0.19[3] to 11	0.3 to 2	0.19[3] to 11	0.3 to 2
Power Range	100 µW to 1W				500 µW to 2W	
Resolution (µW)	10				50	
Max. Thermal Drift[1]	±40 µW	±20 µW	±400 µW	±20 µW	±1 mW	±500 µW
Max. Avg. Power Density	0.5 kW/cm²					
Max. Pulse Energy Density	50 mJ/cm², 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 (%)(k=2)	±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

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

PS10/PS10Q



PS19/PS19Q



PM3/PM3Q