

# PowerMax-USB/RS Sensors

100  $\mu$ W to 1W



PS10 and PS19Q

## Features

- Thermally stabilized design for low power sensitivity
- Noise equivalent power down to 3  $\mu$ W
- Spectrally flat; good for broadband light sources

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 56). Where optimum stability is required, specify the PS19Q, which include a wedged quartz window for applications from 0.3 to 2.1  $\mu$ m. The quartz window more effectively eliminates thermal background radiation and the effects of air currents.

Device Specifications	Model	PS10	PS10Q	PS19Q	PS19
Wavelength Range (nm)		190 <sup>3</sup> to 11,000	300 to 2100	300 to 2100	190 <sup>3</sup> to 11,000
Power Range		100 $\mu$ W to 1W		100 $\mu$ W to 1W	100 $\mu$ W to 1W
Max. Intermittent Power (W)( $\leq$ 5 min.)		3			
Long-pulse Joules (J)		0.001 to 1			
Noise Equivalent Power ( $\mu$ W)		3	3	3	5
Maximum Thermal Drift <sup>1</sup> ( $\mu$ W)		$\pm$ 40	$\pm$ 25	$\pm$ 25	$\pm$ 400
Maximum Power Density (W/cm <sup>2</sup> )		500			
Maximum Energy Density (mJ/cm <sup>2</sup> )		50 (10 ns, 1064 nm)			
Response Time (sec.)(0% to 95%)					
Speed-up On		2			
Speed-up Off		3			
Detector Coating		Black			
Detector Element		Thermopile			
Optic		None	Quartz	Quartz	None
Detector Diameter (mm)		10	10	19	19
Calibration Uncertainty (%) (k=2)		$\pm$ 1			
Power Linearity (%)		$\pm$ 1			
Spectral Compensation Accuracy (%)		$\pm$ 1.5			
Long-pulse Joules Accuracy (%)		$\pm$ 3			
Calibration Wavelength (nm)		514			
Cooling Method		Air			
Cable Type		USB and RS			
Cable Length (m)		2.5 (USB)/0.3 (RS)			
Part Number <sup>2</sup>		1174260 (USB)**	1287077 (USB) 1288992 (RS)	1168343 (USB)** 1179504 (RS)	1174261 (USB)**

<sup>1</sup> Power stability over 30 minutes in typical lab environment. <sup>3</sup> 190 nm to 300 nm operation restricted to <100 mW average power and <250 W/cm<sup>2</sup> power density.  
<sup>2</sup> Software and post stand included. \*\*C24 Quick Ship program: eligible for next business day shipment.

