

Water-Cooled Thermopile Sensors

100W to 5 kW



Model PM1K

Features

- Water-cooled
- Spectrally flat from 0.19 μm to 11 μm
- 1W resolution
- 50 mm apertures

These water-cooled sensors are used to measure lasers over 300W average power output. They are excellent choices for measuring CO₂ and Nd:YAG lasers. Larger-area versions are available on the next page.

Tap or distilled cooling water is recommended with these sensors - DI water and most common additives will not have any adverse effects. A technical note is available with more details. Flow rates are power dependent and range from 0.5 to 4 gallons per minute; pressure depends upon flow rate and ranges from 3 to 40 PSI (visit product pages at www.Coherent.com/LMC for more technical details). Water fittings are included.

Device Specifications	Model	PM1K	PM3K	PM5K
	Wavelength Range (μm)		0.25 to 11	
	Power Range (W)	100 to 1000	100 to 3000	100 to 5000
	Maximum Intermittent Power (<5 min.)(W) ¹	3000	5000	10000
	Resolution (W)		1	
	Maximum Power Density ² (kW/cm ²)		1 to 2.5	
	Maximum Energy Density (mJ/cm ²)		600, 1064 nm, 10 ns	
	Response Time (sec.)		30	
	Detector Coating		Broadband	
	Active Area Diameter (mm)		50	
	Calibration Uncertainty (%) (k=2)		± 3	
	Calibration Wavelength (nm)		1070	
	Cooling Method		Water-cooled	
	Cable Type		PM DB-25	
	Cable Length (m)		2	
	Part Number	1098392**	1098462**	1098454**

¹ Intermittent power levels may be sustainable for longer than 5 minutes when used with lasers with large diameter, non-Gaussian beam profiles.

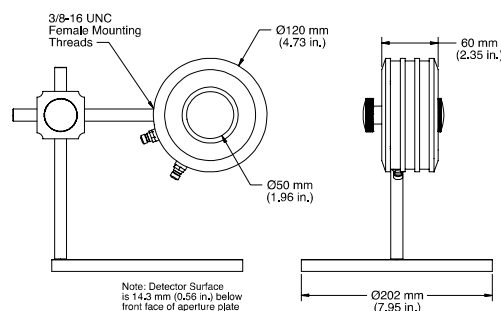
Monitor closely for coating damage if used longer than five minutes at higher powers.

² The damage resistance of the coating is dependent upon the beam size and profile, the average power level, and the water flow rate.

Contact Coherent or your local representative for details related to your application.

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

PM1K/PM3K/PM5K



- POWER & ENERGY
- Power & Energy Meters
- PowerMax-Pro Sensors
- USB/RS Power Sensors
- DB-25 Power Sensors
- USB/RS Energy Sensors
- DB-25 Energy Sensors
- Custom & OEM
- BEAM DIAGNOSTICS
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