Water-Cooled Thermopile Sensors to 5 kW

Compact, USB Water-Cooled Laser Power Sensors

These compact sensors are particularly useful when space is an issue. They must be water-cooled to achieve the full power rating, and they can also be used air-cooled (stand-alone or mounted to a heat sink) for stand-alone intermittent application of power.

FEATURES

- Compact designs
- Use water-cooled or air-cooled
- 19 mm and 50 mm apertures

APPLICATIONS

- Medical
- Scientific
- Industrial
- General Laser Power Measurement to 5 kW

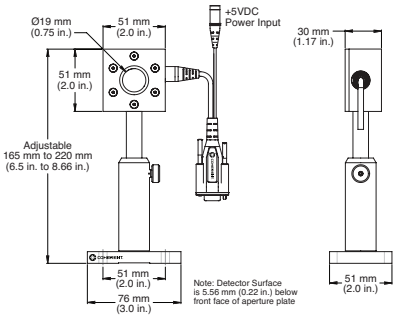
COHERENT®
Superior Reliability & Performance

SPECIFICATIONS	PM10-19C	PM100-19C	PM150-19C	PM150-50C
Wavelength Range (µm)	0.19 to 11			
Power Range (water-cooled)	10 mW to 10 W	300 mW to 100 W	300 mW to 150 W	300 mW to 150 W
Maximum Intermittent Power (W) (<5 min.)	5 (air-cooled)	100	20 (air-cooled)	80 (air-cooled)
Long-Pulse Joules (J)	0.5 to 10	1 to 100	1 to 150	1 to 150
Noise Equivalent Power (mW)	0.2	1	1	1
Maximum Power Density (kW/cm^2)	6			
Maximum Energy Density (mJ/cm^2)	600 (10 ns , 1064 nm)			
Response Time (sec.) (0% to 95%) Speed-up On Speed-up Off	 2 4	 2 4	 2 4	 3 12
Detector Coating	Broadband			
Detector Element	Thermopile			
Optic	None			
Detector Diameter (mm)	19	19	19	50
Calibration Uncertainty (%) (k=2)	±2			
Power Linearity (%)	±1			
Spectral Compensation Accuracy (%)	±1.5			
Long-Pulse Joules Accuracy (%)	±3			
Calibration Wavelength (nm)	10,600			
Cooling Method	Water/Air (intermittent)			
Cable Type	USB and RS			
Cable Length (m)	2.5 (USB)/0.3 (RS)			
Part Number USB RS-232	 1168344 1168345	 1288940	 1168346 1168347[1]	 1168348[1] 1168349[1]

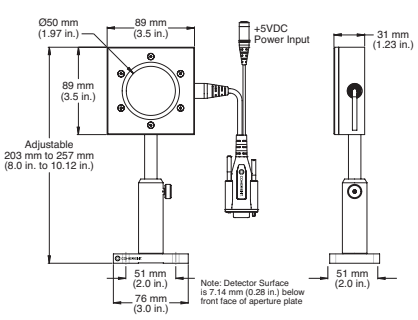
1 1 Day Ship program: eligible for next business day shipment.

MECHANICAL SPECIFICATIONS

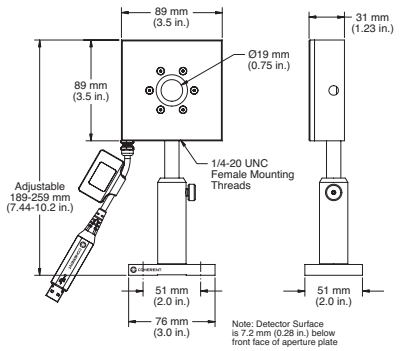
PM10-19C/PM150-19C
(shown with PowerMax-RS cable)



PM150-50C
(shown with PowerMax-RS cable)



PM100-19C

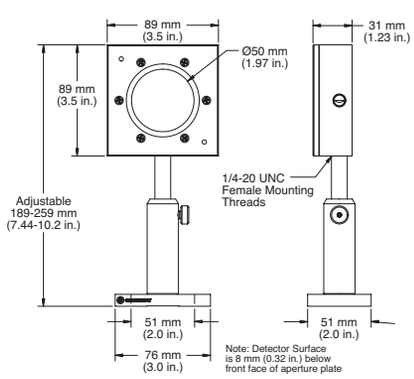


SPECIFICATIONS	PM150-50XC	PM1KX-100	PM5K-100
Wavelength Range (µm)	0.15 to 1	0.15 to 1	0.25 to 10.6
Power Range	300 mW to 150 W	50 W to 1000 W	100 W to 5000 W
Noise Equivalent Power (mW)	1	20	20
Maximum Power Density[1] (kW/cm^2)	6	1 to 2.5	1 to 2.5
Maximum Energy Density (mJ/cm^2)	600		
Response Time (sec.) (0% to 95%) Speed-up On Speed-up Off	 3 12	 4 6	 4 12
Detector Coating	UV	UV	Broadband
Detector Element	Thermopile		
Detector Diameter (mm)	50	100	100
Calibration Uncertainty (%) (k=2)	±2	±3	±5
Power Linearity (%)	±1		
Spectral Compensation Accuracy (%)	±1.5		
Calibration Wavelength (nm)	524	1070	1070
Cooling Method	Water		
Cable Type	USB and RS		
Cable Length (m)	2.5 (USB)/0.3 (RS)		
Part Number[2] USB RS-232	 – 1305568	 – 1214871	 1235755 –

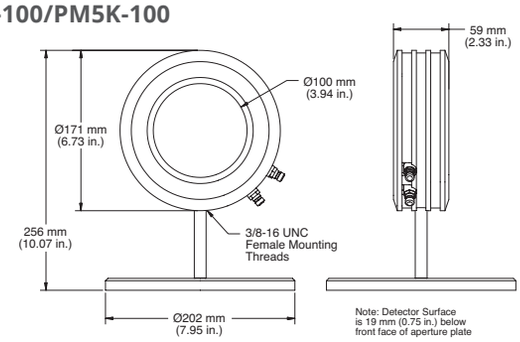
1 The damage resistance of the coating is dependent upon the beam size and profile, the average power level, and the water flow rate. Contact Coherent or you local representative for details related to your application.
2 Software, water fittings and post stand included.

MECHANICAL SPECIFICATIONS

PM150-50XC



PM1KX-100/PM5K-100



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