## **1.1.2.8 Calorimetric Power Meters**

## 1.1.2.8.2 Ultra-High Power Water Cooled Calorimetric Sensors

## 2kW to 70kW

## Features

- Ultra-high powers
- Calorimetric
- Up to 70kW
- Ø130mm aperture



Model	70K-W
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Use	High power up to 70kW
Interfaces	24v power: M12 male RS232: M12 female Ethernet (48V PoE capable <sup>(a)</sup> ): M12 female Interlock: M8 male Analog output: BNC
Measurement Type	Calorimetric
Spectral Range µm	0.8-10.6
Aperture mm Reflector Usable Clear Aperture mm	Ø130 Ø150
Power Range for Calibrated Reading	2kW – 70kW
Typical Power Noise Level	20W
Backscattered Power	<0.5%
Maximum CW/QCW Power Density at Max Power kW/cm <sup>2</sup>	2 kW/cm <sup>2</sup> for Flat top beam 4 kW/cm <sup>2</sup> for Gaussian beam (Equivalent to 65 mm diameter beam at 70 kW)
Beam Divergence and Centering Requirements <sup>(b)</sup>	Collimated beams: Max decenter 5mm, max tilt 5° Diverging beams: Up to 0.22NA
Response Time 0-99% (typical)	45s at flow rate of 35 L/min
Power Accuracy ±%	Calibration uncertainty 1.9 Accuracy 3
Linearity with Power ±%	2
Photodiode Spectral Range µm	0.8-1.6
Photodiode Monitor Responsivity	70mV at 70kW, 1070nm (typical, uncalibrated)
Cooling Requirements	35 liter/min at max power proportionally lower down to 10 L/min. Absolute minimum flowrate 7.5 LPM with additional measurement error >5%
Cooling Water	Tap water, DI water
Water Pressure Drop Across Sensor Beam Absorber	0.3 MPa (3 Bar) at 35 LPM
Water Connections	16mm, 5/8"
Dimensions	460X360x420 LxWxH mm
Weight kg	43kg (with 4 liters of water)
Compliance	CE, China RoHS, UKCA
Version	
Part number	7Z07141
Note: (a) Compliant with IEEE803.2af	

Note: (b) Divergent sources (fibers) must be positioned correctly such that the beam does not exceed the usable reflector diameter. Consult Ophir for more information

\* For drawings please see page 90B





70K-W



• This | Ophir 21.01.2025 | 90B