

1.1.2.7 High Power Thermal Sensors

1.1.2.7.3 High Power Water Cooled Thermal Sensors

1W to 2000W

Features

- Very large aperture
- Broadband or Pulsed absorber
- Up to 2000W
- Ø120mm aperture

L2000W-BB-120 / L2000W-PF-120



Model	L2000W-BB-120	L2000W-PF-120
Use	Very large beams	Very large beams, short pulses, high average power
Absorber Type	Broadband	PF volume absorber
Spectral Range μm	0.19 – 20	0.3 – 2.2
Aperture mm	Ø120mm	Ø120mm
Power Mode		
Power Range	1W – 2000W	1W – 2000W
Maximum Intermittent Power	NA	NA
Power Scales	2000W / 200W	2000W / 200W
Power Noise Level	50mW	50mW
Maximum Average Power Density W/cm^2	700 at 1000W, 150 at 1500W, 60 at 2000W	600
Response Time with Meter (0-95%) typ. s	7	7
Calibration Uncertainty $\pm\%$	1.9	1.9
Power Accuracy $\pm\%$	3 ^(a)	3 ^(a)
Linearity with Power $\pm\%$	2	2
Energy Mode		
Energy Range	6J – 6000J	6J – 6000J
Energy Scales	6kJ / 600J / 60J	6kJ / 600J / 60J
Minimum Energy	6J	6J
Maximum Energy Density J/cm^2		Single 10 – 50Hz ^(c)
<100ns	0.3	3 ^(d) 1.5
1 μs	0.4	3 ^(d) 1.5
0.5ms	5	7 7
2ms	10	15 15
10ms	30	40 40
1s	4000	3000 NA
Cooling	Water	Water
Minimum and Recommended Water Flow Rate at Full Power	3.5 liter/min 6 liter/min ^(b)	3.5 liter/min 6 liter/min ^(b)
Fiber Adapters	Consult Ophir representative	Consult Ophir representative
Accessories for High Power Sensors	See pages 113-116	See pages 113-116
Weight kg	4.5	4.5
Compliance	CE, UKCA, China RoHS	CE, UKCA, China RoHS
Version		
Part number	7Z02751	7Z02792
Notes: (a)	Calibrated for ~0.8 μm , 1.064 μm and 10.6 μm	Calibrated for 1.07 μm . Max additional error at other wavelengths not specified above: $\pm 1\%$
Notes: (b)	Water temperature range 18-30°C. Water temperature rate of change <1°C/min. Pressure drop across sensor 0.06MPa.	Water temperature range 18-30°C. Water temperature rate of change <1°C/min. Pressure drop across sensor 0.06MPa.
Notes: (c)		For 10-50Hz derate as follows: 1064nm not derated 532nm not derated 355nm 70% of stated value 266nm 15% of stated value 193nm 10% of stated value
Notes: (d)		Damage threshold 1.5J/cm ² for wavelengths <500nm

* For drawings please see page 88

