

1.1.2.7 High Power Thermal Sensors

1.1.2.7.3 High Power Water Cooled Thermal Sensors

15W to 1500W

Features

- High powers
- Water cooled
- Up to 1500W
- Ø50mm aperture



Model	L1500W-BB-50	L1500W-LP2-50
Use	General purpose and CO ₂ laser	High power densities and long pulses
Absorber Type	Broadband	LP2
Spectral Range μm	0.19 - 20	0.35 – 2.2
Absorption	~88%	>94% from 0.35 to 1.1μm
Aperture mm	Ø50mm	Ø50mm
Power Mode		
Power Range	15W - 1500W	15W - 1500W
Power Scales	1500W / 300W	1500W / 300W
Power Noise Level	700mW	700mW
Maximum Average Power Density kW/cm ²	7 at 1000W 4 at 1500W	10 at 1000W 5.5 at 1500W
Response Time with Meter (0-95%) typ. s	2.7	2.7
Calibration Uncertainty ±%	1.9	1.9
Power Accuracy ±%	4 ^(a)	4 ^(a)
Linearity with Power ±%	2	2
Energy Mode		
Energy Range	500mJ - 200J	500mJ - 200J
Energy Scales	200J / 20J	200J / 20J
Minimum Energy mJ	500mJ	500mJ
Maximum Energy Density J/cm ²		
<100ns	0.3	0.1
1μs	0.4	0.9
0.5ms	5	50
2ms	10	130
10ms	30	400
Cooling	water	water
Minimum and Recommended water flow at full power ^(b)	3.5 liter/min 6 liter/min	3.5 liter/min 6 liter/min
Fiber Adapters	Fiber adapter QBH mount compatible (see page 99)	Fiber adapter QBH mount compatible (see page 99)
Accessories for High Power Sensors	See pages 99-102	See pages 99-102
Weight kg	1.2	1.2
Compliance	CE, UKCA, China RoHS	CE, UKCA, China RoHS
Version	V2	
Part number	7Z02752	7Z02772

Notes: (a)	Calibrated for ~0.8µm, 1.064µm and 10.6µm	For spectral range 0.35 to 1.1µm
Notes: (b)	<p>Water temperature range 18-30°C. Water temperature rate of change <1°C/min. Pressure drop across sensor 0.03MPa.</p> <p>The recommended flow rate can be lowered proportionately at lower than full power but should not be below the minimum.</p> <p>When used at full power with substantially below the recommended flow rate, the damage threshold may be as much as 20% lower. The response time will be optimum with the recommended flow rate.</p>	

L1500W-BB-50 / L1500W-LP2-50

