1.1.2.7 High Power Thermal Sensors

1.1.2.7.2 High Power Water Cooled Thermal Sensor

15W to 1500W

Features

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

L1500W-BB-50

L1500W-LP2-50

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/cm²	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/cm²		
<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	QBH-Fiber Adapter (see page 97)	QBH-Fiber Adapter (see page 97)
Accessories for High Power Sensors	See pages 97-101	See pages 97-101
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)	Water temperature range 18-30°C. Water temperature rate of change <1°C/min. Pressure drop across sensor 0.03MPa. The recommended flow rate can be lowered proportionately at lower than full power but should not be below the minimum. 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.	

L1500W-BB-50 / L1500W-LP2-50