1.1.2.7 High Power Thermal Sensors

1.1.2.7.2 High Power Water Cooled Thermal Sensors

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
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	0.6
0.5ms	5	30
2ms	10	80
10ms	30	300
Cooling	water	water
Minimum and Recommended water flow at full power (b)	3.5 liter/min 10 liter/min	3.5 liter/min 10 liter/min
Fiber Adapters	Consult Ophir representative	Consult Ophir representative
Accessories for High Power Sensors	See pages 67, 68 & 69	See pages 67, 68 & 69
Weight kg	1.2	1.2
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 and the response time may not be optimum.	

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