1.1.2.7 High Power Thermal Sensors

1.1.2.7.2 High Power Water Cooled Thermal Sensors

1W to 300W

Features

- High powers
- Water cooled
- Up to 300W
- Ø50mm aperture

L250W / L300W-LP1-50

Model	L250W	L300W-LP1-50
Use	**General purpose**	**High power densities and long pulses**
Absorber Type	Broadband	LP1
Spectral Range µm	0.19 - 20	0.35-2.2, 10.6
Aperture mm	Ø50mm	Ø50mm
Power Mode		
Power Range	1W - 250W	1W - 300W
Power Scales	250W / 30W	300W / 30W
Power Noise Level	50mW	50mW
Maximum Average Power Density kW/cm²	10 at 250W 14 at 100W	23 at 300W 38 at 150W
Response Time with Meter (0-95%) typ. s	2.5	2.5
Power Accuracy +/-%	3	3 (a)
Linearity with Power +/-%	2	2
Energy Mode		
Energy Range	120mJ - 200J	200mJ - 300J
Energy Scales	200J / 30J / 3J	300J / 30J / 3J
Minimum Energy mJ	120	200
Maximum Energy Density J/cm²		
<100ns	0.3	0.05
1µs	0.4	0.3
0.5ms	5	20
2ms	10	50
10ms	30	200
Cooling	water	water
Minimum Water Flow Rate at Full Power	1 liter/min (b)	1 liter/min (b)
Accessories for High Power Sensors	See pages 59, 60 & 61	See pages 59, 60 & 61
Weight kg	0.6	0.6
Version		
Part number	**7Z02688**	**7Z02748S**
Notes: (a)	Calibrated for 1.064µm and 10.6µm. LP1 sensors have relatively large spectral variation in absorption and have a calibrated spectral curve at all wavelengths in their spectral range to the above specified accuracy. Nova, Orion and LaserStar meters do not support this feature and when used with those meters, accuracy will be ±3% for 1.06µm and 10.6µm, and ±6% for other wavelengths in the spectral range 600-1100nm.	
Notes: (b)	Water temperature range 18-30°C. Water temperature rate of change <1°C/min.	

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