

1.1.2.7 High Power Thermal Sensors

1.1.2.7.2 High Power Water Cooled Thermal Sensors

0.5W to 300W

Features

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



Model	L250W-BB-50	L300W-LP2-50
Use	General purpose	High power densities and long pulses
Absorber Type	Broadband	LP2
Spectral Range μm	0.19 - 11	0.35-2.2, 10.6 ^(a)
Absorption	~88%	>96% from 0.35 to 1.1 μm , 75% for 10.6 μm
Aperture mm	Ø50mm	Ø50mm
Power Mode		
Power Range	1W - 250W	0.5W - 300W
Power Scales	250W / 30W	300W / 30W
Power Noise Level	50mW	20mW
Maximum Average Power Density kW/cm ²	10 at 250W 14 at 100W	12 at 300W 20 at 150W
Response Time with Meter (0-95%) typ. s	2.5	2.5
Calibration Uncertainty $\pm\%$	1.9	1.9
Power Accuracy $\pm\%$	3 ^(c)	3 ^(a)
Linearity with Power $\pm\%$	2	1.5
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/cm ²		
<100ns	0.3	0.07
1 μs	0.4	0.6
0.5ms	5	35
2ms	10	90
10ms	30	270
Cooling	water	water
Recommended water flow at full power ^(b)	3 liter/min	3 liter/min
Accessories for High Power Sensors	See pages 97-101	See pages 97-101
Weight kg	0.6	0.6
Compliance	CE, UKCA, China RoHS	CE, UKCA, China RoHS
Version	V1	
Part number	7Z07125	7Z02776
Notes: (a)	This LP2 sensor is calibrated for 0.35 - 1.1 μm and 10.6 μm . For other wavelengths in the spectral range 1100 – 2200nm there is an additional calibration uncertainty of up to 1%.	
Notes: (b)	Water temperature range 18-30°C. Water temperature rate of change <1°C/min. Pressure drop across sensor 0.03MPa.	
Notes: (c)	$\pm 4\%$. For wavelengths <240nm	

L250W-BB-50 / L300W-LP2-50

