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

L250W

L300W-LP2-50

Model	L250W	L300W-LP2-50
Use	**General purpose**	**High power densities and long pulses**
Absorber Type	Broadband	LP2
Spectral Range µm	0.19 - 20	0.35-2.2, 10.6 [a]
Absorption	~88%	>96% from 0.35 to 1.1µm, 75% for 10.6µm
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/cm²	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 ±%	1.9	1.9
Power Accuracy ±%	3	3 [a]
Linearity with Power ±%	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/cm²		
<100ns	0.3	0.07
1µs	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 77-81	See pages 77-81
Weight kg	0.6	0.6
Compliance	CE, UKCA, China RoHS	CE, UKCA, China RoHS
Version		
Part number	**7Z02688**	**7Z02776**
Notes: (a)	This LP2 sensor is calibrated for 0.35 - 1.1µm and 10.6µm. 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.	

L250W / L300W-LP2-50