

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

