

## 1.1.2.6 Medium - High Power Fan Cooled Thermal Sensors

### 100mW to 250W

#### Features

- General purpose and high damage threshold
- Fan cooled
- Up to 250W
- Up to Ø35mm apertures

FL250A-BB-35



FL250A-LP2-35



FL250A-LP2-DIF-33



Model	FL250A-BB-35	FL250A-LP2-35	FL250A-LP2-DIF-33
<b>Use</b>	<b>General purpose</b>	<b>High power density and long pulse lasers</b>	<b>Diffuser for highest energy densities</b>
Absorber Type	Broadband	LP2	LP2 + diffuser
Spectral Range $\mu\text{m}$	0.19 - 20	0.25 - 2.2	0.4 - 3
Absorption	~88%	>94% from 0.25 to 1.1 $\mu\text{m}$	20%
Aperture mm	Ø35mm	Ø35mm	Ø33mm
<b>Power Mode</b>			
Power Range <sup>(c)</sup>	150mW - 250W	100mW - 250W	400mW - 250W
Power Scales	250W / 30W	250W / 30W	250W / 30W
Power Noise Level <sup>(c)</sup>	15mW	10mW	20mW <sup>(d)</sup>
Maximum Average Power Density kW/cm <sup>2</sup>	10 at 250W 12 at 150W	20 at 250W 33 at 150W	2
Response Time with Meter (0-95%) typ. s	2	2	2.5
Calibration Uncertainty $\pm\%$	1.9	1.9	1.9
Power Accuracy $\pm\%$	3	3 <sup>(b)</sup>	3 <sup>(a)</sup>
Linearity with Power $\pm\%$	1	1	1.5
<b>Energy Mode</b>			
Energy Range	50mJ - 300J	50mJ - 300J	400mJ - 600J
Energy Scales	300J / 30J / 3J	300J / 30J / 3J	600J / 60J
Minimum Energy mJ <sup>(c)</sup>	50	50	400
Maximum Energy Density J/cm <sup>2</sup>			
<100ns	0.3	0.1	0.5
0.5ms	5	50	200
2ms	10	130	400
10ms	30	400	1000
Cooling	fan	fan	fan
Fiber Adapters Available (see page 91)	ST, FC, SMA, SC	ST, FC, SMA, SC	NA
Weight kg	0.4	0.4	0.45
Compliance	CE, UKCA, China RoHS	CE, UKCA, China RoHS	CE, UKCA, China RoHS
Version			
<b>Part number</b>	<b>7Z02728</b>	<b>7Z02777</b>	<b>7Z02787</b>

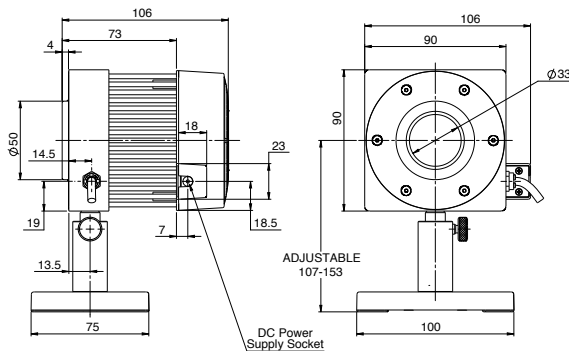
Notes: (a) Calibrated at specified wavelengths only: 532nm, 755nm, 1064nm and 2940nm

Notes: (b) Above 1.1  $\mu\text{m}$  there is an additional calibration uncertainty of up to 2%

Notes: (c) For lower powers up to 30W it is recommended to work with the fan off and then the noise level is ~5 times lower. It is also recommended to measure energy with the fan off

Notes: (d) When sensor is hot, there can be large zero offset up to 300mW

FL250A-LP2-DIF-33



FL250A-BB-35 / FL250A-LP2-35

