

1.1.2.6 Medium-High Power Fan Cooled Thermal Sensors

50mW to 250W

Features

- General purpose and high damage threshold
- Fan cooled
- Up to 250W
- Ø26mm to Ø35mm apertures

F100A-PF-DIF-33



F150A-BB-26



FL250A-BB-35 / FL250A-LP1-35



FL250A-LP1-DIF-33



Model	F100A-PF-DIF-33	F150A-BB-26	FL250A-BB-35	FL250A-LP1-35	FL250A-LP1-DIF-33
Use	Short pulse lasers	General purpose	General purpose	High power density and long pulse lasers	Diffuser for highest energy densities
Absorber Type	PF type + diffuser	Broadband	Broadband	LP1	LP1 + diffuser
Spectral Range µm	0.24-2.2	0.19 - 20	0.19 - 20	0.25 - 2.2	0.4 - 3
Aperture mm	Ø33mm	Ø26mm	Ø35mm	Ø35mm	Ø33mm
Power Mode					
Power Range ^(d)	50mW - 100W	50mW - 150W	150mW - 250W	150mW - 250W	400mW - 250W
Power Scales	100W / 30W / 3W	150W / 30W / 3W	250W / 30W	250W / 30W	250W / 30W
Power Noise Level ^(d)	6mW	3mW	15mW	15mW	20mW ^(e)
Maximum Average Power Density kW/cm ²	0.5	12 at 150W 17 at 50W	10 at 250W 12 at 150W	27 at 250W 39 at 150W	2
Response Time with Meter (0-95%) typ. s	2.5	1.5	2	2	2.5
Power Accuracy +/-%	5	3	3	3 ^(c)	3 ^(b)
Linearity with Power +/-%	1.5	1	1	1	1.5
Energy Mode					
Energy Range	60mJ - 200J	20mJ - 100J	50mJ - 300J	50mJ - 300J	400mJ - 600J
Energy Scales	200J / 30J / 3J	100J / 30J / 3J / 300mJ	300J / 30J / 3J	300J / 30J / 3J	600J / 60J
Minimum Energy mJ ^(d)	60	20	50	50	400
Maximum Energy Density J/cm ²					
< 100ns	4 ^(a)	0.3	0.3	0.05	0.5
0.5ms	15 ^(a)	5	5	20	200
2ms	35 ^(a)	10	10	50	400
10ms	50 ^(a)	30	30	250	1000
Cooling	fan	fan	fan	fan	fan
Fiber Adapters Available (see page 69)	NA	ST, FC, SMA, SC	ST, FC, SMA, SC	ST, FC, SMA, SC	NA
Weight kg	0.8	0.35	0.4	0.4	0.45
Version					
Part number: Standard Sensor	7Z02744	7Z02727	7Z02728	7Z02731S	7Z02733
BeamTrack Sensor: Beam Position & Size (p. 66)		7Z07901			

Notes: (a) For shorter wavelengths derate maximum energy density as follows:

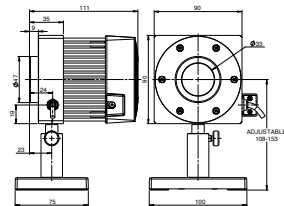
1064nm	not derated
532nm	80% of stated value
355nm	60% of stated value
266nm	40% of stated value
193nm	NA

Notes: (b) at calibrated wavelengths 532nm, 755nm, 1064nm and 2940nm only
 Notes: (e) When sensor is hot, there can be large zero offset up to 300mW

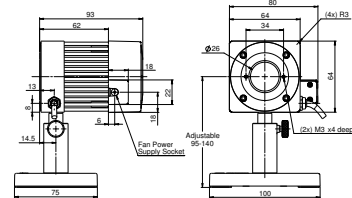
Notes: (c) LP1 sensors have relatively large spectral variation in absorption and have a calibrated spectral curve at all wavelengths in their spectral range to the above specified accuracy. Nova, Orion and LaserStar meters do not support this feature and when used with those meters, accuracy will be ±3% for 532nm, 808nm, 1064nm and 2100nm and ±6% for other wavelengths in the spectral range 400 - 1100nm.

Notes: (d) For lower powers up to 30W it is recommended to work with the fan off and then the noise level is ~3 times lower. It is also recommended to measure energy with the fan off.

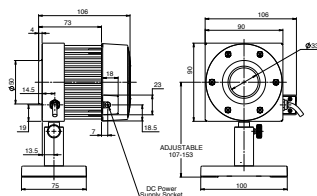
F100A-PF-DIF-33



F150A-BB-26



FL250A-LP1-DIF-33



FL250A-BB-35 / FL250A-LP1-35

