

1.1.2.4 Low - Medium Power Thermal Sensors - Apertures to 35mm

30mW to 150W

Features

- Convection air cooled
- CW to 30W or 50W, intermittent to 150W
- Ø17.5mm and Ø35mm apertures



Model	30(150)A-BB-18	30(150)A-LP1-18	L50(150)A-BB-35	L50(150)A-LP1-35	L50(150)A-PF-35
Use	General purpose	High power density and long pulse lasers	General purpose	High power density and long pulse lasers	Short pulse lasers
Absorber Type	Broadband	LP1	Broadband	LP1	PF
Spectral Range μm	0.19 - 20	0.25 - 2.2	0.19 - 20	0.25 - 2.2	0.15 - 20
Aperture mm	Ø17.5mm	Ø17.5mm	Ø35mm	Ø35mm	Ø35mm
Power Mode					
Power Range	30mW - 150W	30mW - 150W	100mW - 150W	100mW - 150W	100mW - 150W
Maximum Intermittent Power W	150W for 1.5min, 100W for 2.2min, 30W continuous		150W for 1.5min, 100W for 2.5min, 50W continuous		
Power Scales	150W / 30W / 3W	150W / 30W / 3W	150W / 50W / 5W	150W / 50W / 5W	150W / 50W / 5W
Power Noise Level	2mW	2mW	4mW	4mW	4mW
Maximum Average Power Density kW/cm ²	12 at 150W 20 at 30W	38 at 150W 97 at 30W	12 at 150W 17 at 50W	38 at 150W 75 at 50W	3
Response Time with Meter (0-95%) typ. s	1.2	1.2	2	2	2
Power Accuracy +/-%	3	3 ^(a)	3	3 ^(a)	4 ^(b)
Linearity with Power +/-%	1	1	1	1	1
Energy Mode					
Energy Range	20mJ - 100J	20mJ - 300J	40mJ - 300J	40mJ - 300J	50mJ - 300J
Energy Scales	100J / 30J / 3J	300J / 30J / 3J	300J / 30J / 3J	300J / 30J / 3J	300J / 30J / 3J
Minimum Energy mJ	20	20	40	40	50
Maximum Energy Density J/cm ²					Single ^(c) 10-50Hz ^(d)
<100ns	0.3	0.05	0.3	0.05	3 ^(d) 1.5
0.5ms	5	20	5	5	7 7
2ms	10	50	10	50	15 15
10ms	30	250	30	250	40 40
Cooling	convection / ballistic	convection / ballistic	convection / ballistic	convection / ballistic	convection / ballistic
Fiber Adapters Available (see page 83)	ST, FC, SMA, SC	ST, FC, SMA, SC	ST, FC, SMA, SC	ST, FC, SMA, SC	ST, FC, SMA, SC
Weight kg	0.3	0.3	0.35	0.35	0.35
Version					
Part number	7Z02699	7Z02715	7Z02730	7Z02726S	7Z02737

Note:

(a) 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 $\pm 3\%$ for 532nm, 808nm, 1064nm and 2100nm and $\pm 6\%$ for other wavelengths in the spectral range 400 - 1100nm.

(b) Calibrated for 0.25 - 2 μm , 10.6 μm
 (c) For 10-50Hz, derate as follows:
 Wavelength Derate to value
 1064nm Not derated
 532n Not derated
 355n 70% of stated value
 266nm 15% of stated value
 193nm 10% of stated value
 (d) Damage threshold 1.5J/cm² for wavelengths <500nm

30(150)A-BB-18 / 30(150)A-LP1-18

L50(150)A-BB-35 / L50(150)A-LP1-35 / L50(150)A-PF-35

