

## 1.1.2.5 Medium Power Large Aperture Thermal Sensors - Apertures 65mm

### 400mW to 300W

#### Features

- Thin profile, very large aperture
- CW to 50W, intermittent to 300W
- Ø65mm aperture
- IPL version for IPL medical light sources

L50(300)A / L50(300)A-LP1 / L50(300)A-PF-65

L50(300)A-IPL



Model	L50(300)A	L50(300)A-LP1	L50(300)A-PF-65	L50(300)A-IPL
Use	General purpose	Long pulse lasers	Large beam short pulsed lasers	Intense pulsed light sources
Absorber Type	Broadband	LP1	PF type	LP1 + coated window <sup>(b)</sup>
Spectral Range $\mu\text{m}$	0.19 - 20	0.25 - 2.2	0.15 - 20	0.5 - 1.1
Aperture mm	Ø65mm	Ø65mm	Ø65mm	Ø65mm
Power Mode				
Power Range	400mW - 300W	400mW - 300W	400mW - 300W	400mW - 300W
Maximum Intermittent Power		300W for 2min, 150W for 4.5min, 50W continuous		
Power Scales	300W / 30W	300W / 30W	300W / 30W	300W / 30W
Power Noise Level	20mW	20mW	20mW	20mW
Maximum Average Power Density kW/cm <sup>2</sup>	9.5 at 300W 17 at 50W	23 at 300W 75 at 50W	3	20
Response Time with Meter (0-95%) typ. s	3	3	3	3
Power Accuracy +/-%	3	3 <sup>(a)</sup>	4 <sup>(c)</sup>	6 for most gel or air coupled IPL sources
Linearity with Power +/-%	1	1	1	1
Energy Mode				
Energy Range	200mJ - 300J	200mJ - 300J	200mJ - 300J	120mJ - 300J
Energy Scales	300J / 60J / 6J	300J / 60J / 6J	300J / 60J / 6J	300J / 60J / 6J
Minimum Energy mJ	200	200	200	120
Maximum Energy Density J/cm <sup>2</sup>			Single <sup>(d)</sup> 10-50Hz <sup>(d)</sup>	
<100ns	0.3	0.05	3 <sup>(e)</sup> 1.5	0.05
1 $\mu\text{s}$	0.4	0.3	3 <sup>(e)</sup> 1.5	0.3
0.5ms	5	20	7 7	20
2ms	10	40	15 15	40
10ms	30	100	40 40	100
Cooling	convection / ballistic	convection / ballistic	convection / ballistic	convection / ballistic
Weight kg	0.9	0.9	0.9	1.0
Version		V1		
<b>Part number</b>	<b>7Z02658</b>	<b>7Z026415</b>	<b>7Z02743</b>	<b>7Z02651</b>

Notes:

(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.

(c) Calibrated for 0.25 - 2 $\mu\text{m}$ , 10.6 $\mu\text{m}$

(d) For 10-50Hz, derate as follows:

Wavelength	Derate to value
1064nm	Not derated
532nm	Not derated
355nm	70% of stated value
266nm	15% of stated value
193nm	10% of stated value

(e) Damage threshold 1.5J/cm<sup>2</sup> for wavelengths <500nm

(b) Sensor has a window for gel coupled IPL sources where IPL source is coupled to window with gel or water for measurement. Can also measure air coupled IPLs

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