

## 1.1.2.5 Medium Power Large Aperture Thermal Sensors – Apertures to 50mm

300mW to 250W up to 4kJ

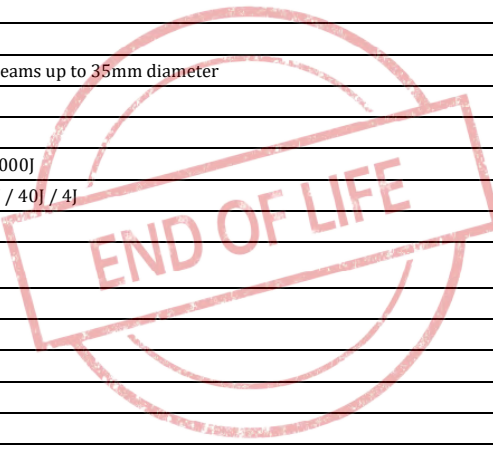
### Features

- Thin profile
- CW to 40W, intermittent to 250W
- Pulse energies up to 4,000 Joules
- Measure high power lasers by 0.5-4s exposures

L40(250)A-BB-50



Model	L40(250)A-BB-50
Use	General purpose
Absorber Type	Broadband
Spectral Range $\mu\text{m}$	0.19 - 20
Absorption	~88%
Aperture mm	$\varnothing$ 50mm
Power Mode	
Power Range	300mW - 250 <sup>(a)</sup>
Maximum Intermittent Power	250W for 1.5min, 150W for 3min, 80W for 6min, 35 continuous <sup>(a)</sup>
Power Scales	250W / 30W
Power Noise Level	15mW
Maximum Average Power Density kW/cm <sup>2</sup>	10 at 250W 20 at 35W
Response Time with Display (0-95%) typ s	2.5
Calibration Uncertainty $\pm\%$	1.9
Power Accuracy $\pm\%$	3
Linearity with Power $\pm\%$	1
Beam Size Dependence	<1% for beams up to 35mm diameter
Max Beam Diameter for Gaussian beam	$\varnothing$ 35mm
Energy Mode	
Energy Range	100mJ - 4000J
Energy Scales	4kJ / 400J / 40J / 4J
Energy Accuracy	$\pm$ 5%
Maximum Exposure Before Cooling Down is Necessary	NA
Minimum Energy mJ	100
Maximum Energy Density J/cm <sup>2</sup>	
<100ns	0.3
1 $\mu$ s	0.4
0.5ms	5
2ms	10
10ms	30
>300ms	See below <sup>(a, b)</sup>
Cooling	Convection
Fiber Adapters Available (see page 93)	ST, FC, SMA, SC
Weight Kg	0.6
Compliance	CE, UKCA, China RoHS
<b>Part Number</b>	<b>7Z02793</b>



Notes: (a) Long pulses (0.5 – 4s) can be used to measure power of high power lasers by measuring the energy of a short exposure. The StarBright, Juno, Juno+, Juno-RS and Centauri meters have a Pulsed Power mode where the user may specify the pulse width and get a reading directly in units of power for this short exposure energy measurement. See also page 85

Laser power W	Recommended Exposure s		Number of shots before cooling down	Min 1/e <sup>2</sup> beam dia. mm
	Non- Diffuser	Diffuser		
100	4	4	20	14
500	2	1	20	14
1000	1	1	20	14
2000	1	1	10	21
4000	1	0.4	5	32
5000	1	NA	4	NA
10000	0.3	NA	4	NA

Notes: (b) Recommended exposure times and 1/e<sup>2</sup> Gaussian beam diameters for very long pulses. Total energy for a series of measurements should not exceed 20kJ. Cooling down time before another 20kJ series, 10min. Recommended time between shots 12s.

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