Astral 100mm Aperture Calorimeters - Astral Series Calorimeters - Calorimeters

Scientech's 100 mm aperture, volume absorbing and surface absorbing calorimeters measure average power up to 50W. Calibration data is stored in detector.

The surface absorbing models are ideal for measuring CW lasers while the volume absorbing models are designed for pulsed lasers using either the watts mode or single pulse energy mode.

This calorimeter requires use of an Astral Power Meter.

Astral Series 100mm Calorimeters

Model	360401S	380401S	380402S	384UV5S
Detector Calibration Data	stored in detector	stored in detector	stored in detector	stored in detector
Type of Absorber	Surface	Volume	Volume	Volume
Aperture Diameter	100mm (4")	100mm (4")	100mm (4")	100mm (4")
Minimum Beam Diameter	5cm	5cm	5cm	5cm
Spectral Response	.25 - 35µm	.26 - 1.2µm	9 -11µm	.19 - .36µm
Maximum Average Power, with full illumination of absorber	50W	50W	50W	50W
Minimum Average Power	150mW	150mW	150mW	150mW
Maximum Power Density	200W/cm²	27W/cm^2 @1064nm 21W/cm^2 @532nm 7.7W/cm^2 @355nm 158mW/cm^2@266nm	4W/cm²	50W/cm^2 @355nm
Maximum Peak Power Density	1MW/cm²	90GW/cm^2@1064nm 71GW/cm^2 @532nm 27GW/cm^2 @355nm 530MW/cm^2@266nm	100MW/cm²	Repetitive pulses: 101MW/cm^2@355nm Single pulse: 3.5GW/cm2@355nm
Maximum Single Pulse Energy	150J	150J	150J	150J
Max Energy Density, Repetitive Pulses (pulse width in sec)	1000 x (pulse width)$^{1/2}$ to max of 200J/cm^2	3.7J/cm^2 @1064nm 2.9J/cm^2 @532nm 1J/cm^2 @355nm 20mJ/cm^2 @266nm	4J/cm2	1.1J/cm^2 @ 355nm
Max Energy Density, Single Pulse (pulse width in sec)	1000 x (pulse width)$^{1/2}$ to max of 200J/cm^2	7J/cm^2 @1064nm 5.6J/cm^2 @532nm 2.1J/cm^2 @355nm 41mJ/cm^2 @266nm	4J/cm2	40J/cm^2 @ 355nm
Accuracy	5%	5%	5%	5%
Response Time	5 sec	5 sec	5 sec	5 sec
Dimensions (D x L), cm	15.24 x 20.32	15.24 x 20.32	15.24 x 20.32	15.24 x 20.32
Compatible Meters	AI310, AI310D, AI310D-USBL	AI310, AI310D, AI310D-USBL	AI310, AI310D, AI310D-USBL	AI310, AI310D, AI310D-USBL

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