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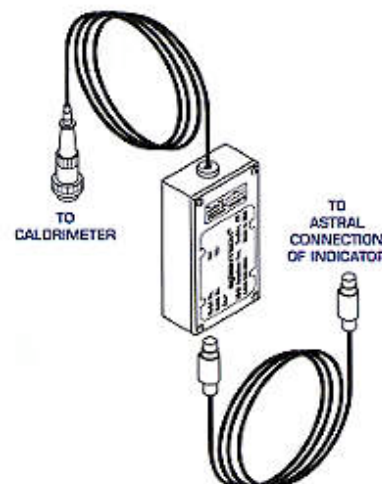
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Large Aperture Calorimeters

For large area (diameter) or diverging laser beams, Scientech 100 mm and 200 mm diameter disc calorimeters are ideal. Available in both surface and volume absorbing models, these calorimeters can handle both cw and pulsed lasers with average power levels to 100 watts and peak pulse power fluence levels to 100 GW/cm². These calorimeters have found extensive service in scientific research, measuring single pulse energy levels to 1 joule, in measuring laser range finders and Lidar systems, and measuring laser diode arrays and metal vapor lasers. These calorimeters will operate with the Vector indicators with an interface module (see below).



INTERFACE MODULE



100 mm AND 200 MM DISC CALORIMETER INTERFACE MODULES FOR INDICATORS	
Part Number	Description
10735	Interface Module for 100 mm Calorimeter Hookup to Vector Indicators for power and energy readings up to 30 W, 30 J
10747	Interface Module for 200 mm Calorimeter Hookup to Vector Indicators for power and energy readings up to 30 W, 30 J
10748	Interface Module for 100 mm Calorimeter Hookup to Vector Indicators with 10X electrical attenuator. The indicator will display 1/10 the actual value thereby allowing readings up to the calorimeters maximum power and energy capacities. For readings up to 50 W, 150 J
10769	Interface Module for 200 mm Calorimeter Hookup to Vector Indicators with 10X electrical attenuator. The indicator will display 1/10 the actual value thereby allowing readings up to the calorimeters maximum power and energy capacities. For readings up to 100 W, 300 J.

ASTRAL™ LARGE APERTURE CALORIMETER SPECIFICATIONS

Model	360401	380401	380402	384UV5	360801	380801	380802	388UV5
Type of Absorber	Surface	Volume	Volume	Volume	Surface	Volume*	Volume	Volume
Aperture Dia.	100mm	100mm	100mm	100mm	200mm	200mm	200mm	200mm
Min Beam Dia.	5cm	5cm	5cm	5cm	7.5cm	7.5cm	7.5cm	7.5cm
Spectral Response	.25 - 35µm	.266 - 1.2µm	9 - 11µm	.193 - .36µm	.25 - 35µm	.266 - 1.2µm	9 - 11µm	.193 - .36µm
Max Avg. Power	50W**				100W**			
Min Avg. Power	150mW				700mW			
Noise Level	1.5mW or mJ				7mW or mJ			
Max P.D.	200W/cm ²	Note 17	4W/cm ²	Note 3	200W/cm ²	Note 18	4W/cm ²	Note 3
Max P.P.D.	1MW/cm ²	Note 19	100MW/cm ²	Note 6	1MW/cm ²	Note 20	100MW/cm ²	Note 6
Max Single Pulse	150J				300J			
Max E.D.	Note 8	Note 21	4J/cm ²	Note 13	Note 8	Note 22	4J/cm ²	Note 13
Precision	<1%				<1%			
Accuracy	±5%				±5%			
Response Time	5 seconds when connected to a Scientech indicator in watts mode				5 seconds when connected to a Scientech indicator in watts mode			
Dims DxD - in/cm	6.0 x 8.0 / 15.2 x 20.3				9.0 x 10.0 x / 22.9 x 25.4			
Weight - lbs/kg	6 / 2.7				16.3 / 7.3			

* This is a segmented absorber **full illumination of absorbing surface

Notes	
Note 1	AC2501, AC5001 30W/cm ² @1064nm, 23W/cm ² @532nm, 8.5W/cm ² @355nm, 175mW/cm ² @266nm
Note 2	ACX2501, ACX5001 Note 1 specs x 8 for 400nm to 1.2µm
Note 3	AC25UV, AC50UV, 384UV5, 388UV5, UC150UV 50W/cm ² @355nm
Note 4	AC2504, AC5004 35W/cm ² @1064nm
Note 5	AC2501, AC5001 100GW/cm ² @1064nm, 78GW/cm ² @532nm, 29GW/cm ² @355nm, 580MW/cm ² @266nm
Note 6	AC25UV, AC50UV, 384UV5, 388UV5, UC150UV Repetitive pulses: 101MW/cm ² @355nm; Single pulses: 3.5GW/cm ² @355nm
Note 7	AC2504, AC5004 125GW/cm ² @1064nm
Note 8	AC2500, AC5000, 360401, 360801, UC150 Max J/cm ² = 1,000 x (pulse width) ^{1/2} to a max of 200J/cm ²
Note 9	AC250FX, AC50FX Max J/cm ² = 4,950 x (pulse width) ^{1/2} to a max of 12.3J/cm ²
Note 10	ACX25FX, ACX50FX Max J/cm ² = 39,600 x (pulse width) ^{1/2} to a max of 36.9J/cm ²
Note 11	AC2501, AC5001 Repetitive pulses: 4.1J/cm ² @1064nm, 3.2J/cm ² @532nm, 1.2J/cm ² @355nm, 24mJ/cm ² @266nm Single pulses: 8J/cm ² @1064nm, 6.2J/cm ² @532nm, 2.3J/cm ² @355nm, 46mJ/cm ² @266nm
Note 12	ACX2501, ACX5001 Note 11 specs x 8 for 400nm to 1.2µm
Note 13	AC25UV, AC50UV, 384UV5, 388UV5, UC150UV Repetitive pulses: 1.1J/cm ² @355nm; Single pulses: 40J/cm ² @355nm
Note 14	AC25004, AC5004 Repetitive pulses: 4.8J/cm ² @1064nm; Single pulses: 10J/cm ² @1064nm
Note 15	AC25FX, AC50FX Max p.p.d.: 70MW/cm ² @1064nm pulse
Note 16	ACX25FX, ACX50FX Max p.p.d.: 560MW/cm ² @1064nm pulse
Note 17	380401 27W/cm ² @1064nm, 21W/cm ² @532nm, 7.7W/cm ² @355nm, 158mW/cm ² @266nm
Note 18	380801 13.5W/cm ² @1064nm, 10.5W/cm ² @532nm, 3.85W/cm ² @355nm, 79mW/cm ² @266nm
Note 19	380401 90GW/cm ² @1064nm, 71GW/cm ² @532nm, 27GW/cm ² @355nm, 530MW/cm ² @266nm
Note 20	380801 45GW/cm ² @1064nm, 35.5GW/cm ² @532nm, 13.5GW/cm ² @355nm, 265MW/cm ² @266nm
Note 21	380401 Repetitive pulses: 3.7J/cm ² @1064nm, 2.9J/cm ² @532nm, 1J/cm ² @355nm, 20mJ/cm ² @266nm Single pulses: 7J/cm ² @1064nm, 5.6J/cm ² @532nm, 2.1J/cm ² @355nm, 41mJ/cm ² @266nm
Note 22	380801 Repetitive pulses: 1.85J/cm ² @1064nm, 1.45J/cm ² @532nm, 0.5J/cm ² @355nm, 10mJ/cm ² @266nm Single pulses: 3.5J/cm ² @1064nm, 2.8J/cm ² @532nm, 1.05J/cm ² @355nm, 20.5mJ/cm ² @266nm

Note 23	AC25HD, AC50HD, UC150HD, UC150HD40 Max J/cm ₂ = 4,500 x (pulse width) ^{1/2} to a max of 14J/cm ₂
Note 24	ACX25HD, ACX50HD Max J/cm ₂ = 36,000 x (pulse width) ^{1/2} to a max of 42.5J/cm ₂
Note 25	SP25, SPHF25, SP50, SPHF50, P25, PHF25, P50, PHF50, PHF02, PHF05, PHF09, P05, P09 Max J/cm ₂ = 316 x (pulse width) ^{1/2}
Note 26	SPHD25, SPHD50, PHD25, PHD50 Max J/cm ₂ = 4,500 x (pulse width) ^{1/2} to a max of 1.4J/cm ₂
Note 27	PHDX25, PHDX50 Max J/cm ₂ = 36,000 x (pulse width) ^{1/2} to a max of 12.6J/cm ₂
Note 28	PHDX25UV, PHDX50UV Max J/cm ₂ = 18,000 x (pulse width) ^{1/2} to a max of 5.6J/cm ₂