

Laser Power Heads

FEATURES

- Absolute power sensing of laser beams up to 100 W
- Highly sensitive thermopile sensor
- Sensitive to all wavelengths from UV to MIR
- 300 ms rise time
- Compact and robust design for system integration



Product Name	gRAY C05-HC	gRAY C10-HC	gRAY C50-HW	gRAY C100-HW
Article Number	A-072305	A-072310	A-072350	A-072400
Detector Type	Thermopile	Thermopile	Thermopile	Thermopile
Spectral Range [μm]	0.19 - 15	0.19 - 15	0.19 - 15	0.19 - 15
Aperture [mm]	25	25	25	25
Max. Power [W]	5	10	50	100
Power Resolution ^a [μW]	35	35	35	35
Min. Detectable Power [mW]	5	10	50	100
Max. Average Power Density [kW/cm^2]	1.5	1.5	1.5	1.5
Max. Energy Density ^b [J/cm^2]	0.125 (1064 nm, 10 ns) 0.173 (266 nm, 4.8 ns)	0.125 (1064 nm, 10 ns) 0.173 (266 nm, 4.8 ns)	0.125 (1064 nm, 10 ns) 0.173 (266 nm, 4.8 ns)	0.125 (1064 nm, 10 ns) 0.173 (266 nm, 4.8 ns)
Sensitivity (Z) [V/W]	2	1	0.2	0.1
Sensitivity Uncertainty [%]	± 5	± 5	± 5	± 5
Temperature Dependence of Z [%/ $^{\circ}\text{C}$]	0.175	0.175	0.175	0.175
Rise Time (0-95%) [ms]	300	300	300	300
Linearity with Power [$\pm\%$]	0.2	0.2	0.2	0.2
Operating Temperature Range Min/Max [$^{\circ}\text{C}$]	-40 / 85	-40 / 85	-40 / 85	-40 / 85
Cooling Method	Convection/ Conduction	Convection/ Conduction (heat sink)	Water cooling (1.5 l/min, 20-25 $^{\circ}\text{C}$)	Water cooling (1.5 l/min, 20-25 $^{\circ}\text{C}$)
Water Fitting Thread	-	-	G 1/8 thread, 8.2 mm deep	G 1/8 thread, 8.2 mm deep
Voltage Input [V]	12-27	12-27	12-27	12-27
Voltage Output [V]	0 - 10	0 - 10	0 - 10	0 - 10
Electrical Connection	3 wired cable	3 wired cable	3 wired cable	3 wired cable
Outer Dimensions Housing [mm x mm x mm]	62.4 x 62.4 x 33.0	62.4 x 62.4 x 33.0	62.4 x 62.4 x 33.0	62.4 x 62.4 x 33.0
Fixture	4x M4 screws	4x M4 screws	4x M4 screws	4x M4 screws

^a Experimentally evaluated values under optimal steady state conditions. Limited by noise of measurement device.

^b Carried out by certified LIDT laboratory.