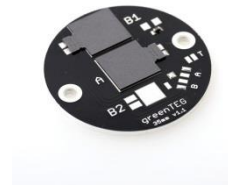


# gRAY B05-MC

## PCB-Mounted Laser Power Detector

### FEATURES

- gRAY Laser Detector on a metal-core PCB (acts as heat sink), no thermal integration needed
- 10  $\mu$ W to 5 W power range
- Sensitive to all wavelengths from UV to MIR
- Thermal background compensation
- Integrated NTC
- Simple, compact and robust mounting
- NIST/PTB traceable calibration



gRAY B05-MC

Product Name	gRAY B05-MC
Article Number	A-171341
Detector Type	Thermopile
Spectral Range [ $\mu$ m]	0.19 - 15
Board Diameter (d) [mm]	35
PCB Base Material	1.5 mm alu-core PCB
Product Thickness (t) [mm]	2.0
Sensing Area (a x b) [mm x mm]	10.0 x 10.0
Max. Power [W]	5 (additional cooling necessary by heat sink)
Power Resolution <sup>a</sup> [ $\mu$ W]	8
Min. Detectable Power [ $\mu$ W]	10
Max. Average Power Density [kW/cm <sup>2</sup> ]	1.5
Max. Energy Density <sup>b</sup> [J/cm <sup>2</sup> ]	0.125 (@ 1064 nm, 10 ns) 0.173 (@ 266 nm, 4.8 ns)
Min. Sensitivity <sup>c</sup> (Z) [mV/W]	100
Temperature Dependence of Z [%/°C]	0.125
Integrated Temperature Sensor	NTC 10 kOhm
Rise Time (0-95%) [s]	1.1
Linearity with Power [ $\pm$ %]	0.2
Operating Temperature Range Min / Max [°C]	-50 / 100
Cooling Method	Conduction, convection
Electrical Connection	Solder pads
Mounting Method	Screws (2 x M2) and/or thermal glue gSKIN <sup>®</sup> MOUNT-1213 (A-018884)

<sup>a</sup> Experimentally evaluated values under optimal steady state conditions. Limited by noise of measurement device.

<sup>b</sup> Carried out by certified LIDT laboratory.

<sup>c</sup> For applications with highest precision requirements, greenTEG recommends an optical calibration once the gRAY sensor is integrated into the final system.

