

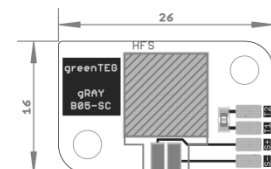
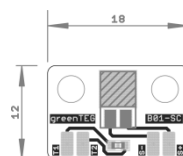
PCB-Mounted Laser Power Detectors

FEATURES

- gRAY Laser Detector on a metal-core PCB (acts as heat sink), no thermal integration needed
- 100 μ W to 5 W power range
- Sensitive to all wavelengths from UV to MIR
- Integrated NTC thermistor
- Simple, compact and robust mounting
- Optional: NIST/PTB traceable calibration



Product Name	gRAY B01-SMC	gRAY B05-SMC
Article Number	A-071355/A-071356 (calibrated)	A-071350/A-071351 (calibrated)
Detector Type	thermal absorber	thermal absorber
Spectral Range [μ m]	0.19 - 15	0.19 - 15
Board Dimensions (w x l) [mm]	18 x 12	26 x 16
PCB Base Material	1.5mm alu-core PCB	1.5mm alu-core PCB
Product Thickness (t) [mm]	2.0	2.0
Sensing Area (a x b) [mm x mm]	4.4 x 4.4	10.0 x 10.0
Max. Power [W]	1 (additional cooling necessary e.g. heat sink)	5 (additional cooling necessary e.g. heat sink)
Noise Equivalent Power ^a [μ W]	100	100
Max. Average Power Density [kW/cm ²]	1.5	1.5
Min. Sensitivity ^b (Z) [mV/W]	40	70
Temperature Dependence of Z [%/°C]	0.125	0.125
Integrated Temperature Sensor	NTC 10kOhm	NTC 10kOhm
Response Time (0-95%) [s]	0.5 ^c / 1.5	0.5 ^c / 1.5
Operating Temperature Range Min / Max [°C]	-50 / 100	-50 / 100
Cooling Method	conduction / convection	conduction / convection
Homogeneity ^d [\pm %]	1	1
Linearity with Power [\pm %]	0.5	0.5
Electrical Connection	solder pads	solder pads
Mounting Method	screws (2 x M3) and/or thermal glue gSKIN [®] MOUNT-1213 (A-018884)	screws (2 x M3) and/or thermal glue gSKIN [®] MOUNT-1213 (A-018884)



^a Experimentally evaluated values under optimal steady state conditions.

^b For applications with highest precision requirements, greenTEG recommends an optical calibration once the gRAY sensor is integrated into the final system.

^c Anticipated.

^d Position dependent signal for beam diameters smaller than 1.5 mm not specified.