

# gRAY

## Laser Power Detector

### FEATURES

- Very compact thermal detector
- Sensitive to all wavelengths from UV to MIR
- Powers of up to 500 mW
- Linear power response
- Easy integration as SMD component
- Attractive OEM pricing



gRAY B0.5-SC

Product Name	gRAY B0.5-SC
Article Number	A-044816
Detector Type	Thermopile
Spectral Range [ $\mu\text{m}$ ]	0.19 - 15
Sensing Area (a x b) [mm x mm]	2x2
Sensor Thickness (d) [mm]	0.5
Max. Power [W]	0.5 (additional cooling necessary by heat sink)
Power Resolution <sup>a</sup> [ $\mu\text{W}$ ]	10
Min. Detectable Power [ $\mu\text{W}$ ]	100
Max. Average Power Density [ $\text{kW}/\text{cm}^2$ ]	1.5
Max. Energy Density <sup>b</sup> [ $\text{J}/\text{cm}^2$ ]	0.125 (@ 1064 nm, 10 ns) 0.173 (@ 266 nm, 4.8 ns)
Min. Sensitivity (Z) [mV/W]	100
Temperature Dependence of Z [%/°C]	0.125
Rise Time (0-95%) [s]	1.5
Linearity with Power [ $\pm\%$ ]	0.2
Operating Temperature Range Min / Max [°C]	-50 / 100
Cooling Method	Conduction, convection
Electrical Connection (Solder Pads)	Bottom side

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

<sup>b</sup> Carried out at certified LIDT test laboratory.