

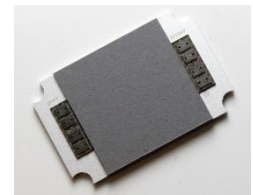
## Thermal PSD (Position Sensitive Devices)

### FEATURES

- Position and absolute power sensing of laser beams
- Highly sensitive thermopile sensor
- Sensitive to all wavelengths from UV to MIR
- Wide power range from  $\mu\text{W}$  to  $\text{W}$
- Tolerant to beam angle
- Compact and robust design for system integration



gRAY B05-PC



gRAY C50-PC

Product Name	gRAY - B05-PC	gRAY - C50-PC
Detector Type	Thermopile	Thermopile
Spectral Range [ $\mu\text{m}$ ]	0.19 - 15	0.19 - 15
Overall Detector Sensing Area (a x b) [mm x mm]	18 x 18	18 x 18
Sensor Thickness (d) [mm]	0.6	1.6
Spatial resolution [ $\mu\text{m}$ ]	30	50
Max. Power [W]	5	30
Noise Equivalent Power <sup>a</sup> [ $\mu\text{W}$ ]	10	800
Max. Average Power Density [ $\text{kW}/\text{cm}^2$ ]	1.5	1.5
Min. Sensitivity of each quadrant (Z) <sup>b</sup> [mV/W]	80	0.5
Temperature Dependence of Z [%/°C]	0.125	0.175
Rise Time (0-95%) [s]	0.8 <sup>c</sup> / 2.1	0.2
Linearity with Power [ $\pm\%$ ]	0.5	0.5
Operating Temperature Range Min/Max [°C]	10 / 80	10 / 80
Cooling Method	Conduction, convection	Conduction, convection (active)
Electrical Connection	Solder pads	Solder pads

<sup>a</sup> Experimentally evaluated values under optimal steady state conditions.

<sup>b</sup> Position sensors are delivered without calibration.

<sup>c</sup> Anticipated signal.

