

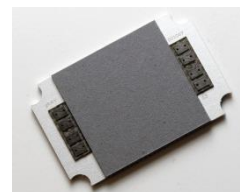
# gRAY Thermal PSD (Position Detector)

## PRELIMINARY 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 W
- Tolerant to beam angle
- Compact and robust design for system integration



gRAY - B05-PC



gRAY - C50-PC

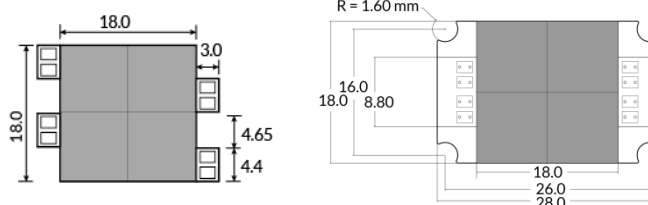
Product Name	gRAY - B05-PC	gRAY - C50-PC
Detector Type	thermoelectric	thermoelectric
Spectral Range [ $\mu\text{m}$ ]	0.19 - 15	0.19 - 15
Overall Detector Sensing Area (a x b) [mm x mm]	18 x 18	18 x 18
Sensor Thickness (d) [mm]	0.6	1.6
Spatial resolution [ $\mu\text{m}$ ]	< 100	< 100
Max. Power [W]	5	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]	70	0.6
Temperature Dependence of Z [%/°C]	0.125	0.175
Response Time (0-95%) [s]	0.8 <sup>c</sup> / 2.8	0.2
Operating Temperature Range Min/Max [°C]	10 / 80	10 / 80
Cooling Method	Conduction / Convection	Conduction / Convection (active)
Linearity with Power [ $\pm\%$ ]	0.5	0.5

<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.

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