

• Description

SemeaTech's 3cc Cesium Iodine Gamma Sensor consists of a cesium iodide crystal, a photodiode, and a high-gain preamplifier that can be used to measure X and γ radiation from 50keV to 3MeV. It features high sensitivity and an instant response time (of about a second) to a very minor change of X and γ (0.01 μ Sv/h).

The sensor is housed in a 45x24x18 \pm 0.5mm metal housing with a cable of approx. 55mm as the connection interface. The connector is a 4-pin MOLEX PicoBlade 1.25mm (.049") connector (reference Molex connector, part No.51021-0400). Pin assignment are shown below:

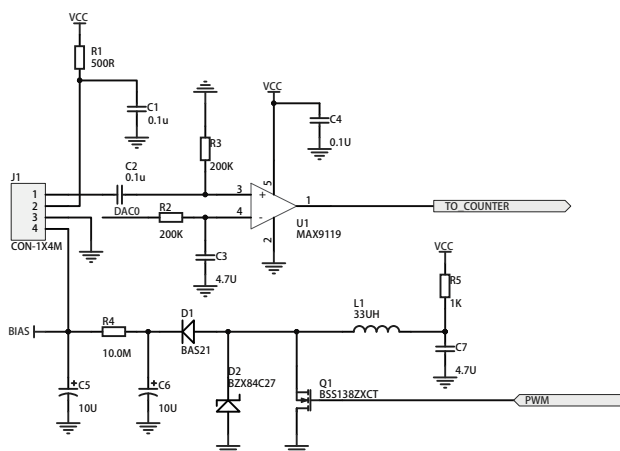
• Electrical Characteristics

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|--------------|---|
| Output: | A full width at half maximum of appr. 60 μ s quasi-Gaussian pulse |
| Power: | 2.7 V ~ 3.3 V |
| Bias: | 30 V recommended, maximum 50 V |
| Noise Level: | 80 mV \pm 15 mV at room temperature |

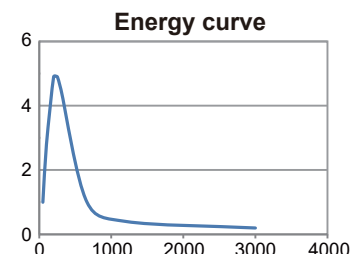
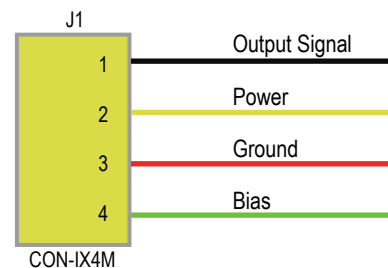
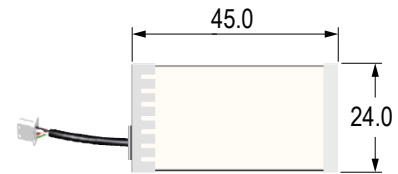
• Detection Performance

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|--------------------------------------|---|
| Energy Detection Range: | 50 keV ~ 3 MeV |
| Response Time: | 1 s |
| Signal Amplitude: | 0.9 V \pm 0.1 V @ 662 keV |
| Detection Efficiency: | 25,000 \pm 20%count/ μ Sv @ 662 keV |
| Noise Temperature Effect: | Refer to PIN diode characteristics |
| Working Temperature: | -20°C ~ 50°C |
| Life Span: | 5 years |
| Upper Limit of Measurable Dose Rate: | 20 mRem/h |

• Application Circuit Reference



• Product Dimensions



All dimensions in mm

All tolerances \pm 0.20mm unless otherwise stated