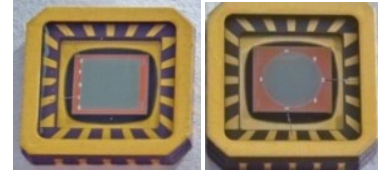


## SILICON PHOTOMULTIPLIER



SCL Part No.

SD31XX-0TX

### PRODUCT DESCRIPTION:

Silicon Photomultiplier is a novel, high gain, single photon sensitive sensor. It consists of parallel array of identical and independent avalanche photodiodes pixels, with each pixel diode connected to bias voltage supply through a series resistor (~few hundred kilo Ohms).

Device are available in:

- 1.5 x 1.5 sq. mm (pixel size 50um x 50um & 10um x 10um)
- 3 x 3 sq. mm (pixel size 50um x 50um & 10um x 10um)
- 3mm circular diameter

### FEATURES:

- Breakdown Voltage (BV): 22 V
- Over-Bias voltage: 2V (max)
- Temperature coefficient of BV: 22mV/°C (Temperature Range :-243to 323 K)
- Total leakage current :<5nA/cm<sup>2</sup> (at 20 V)
- Dark count rate: 350 to700kHz (3\*3 sq mm) & 370 to 500 kHz (1.5\*1.5 sq mm)
- Recovery time: 100ns
- Geometrical Fill factor: 70% for 50 um pixel size & 15% for 10 um pixel size SiPMs

### DEVICE BLOCK DIAGRAM:

