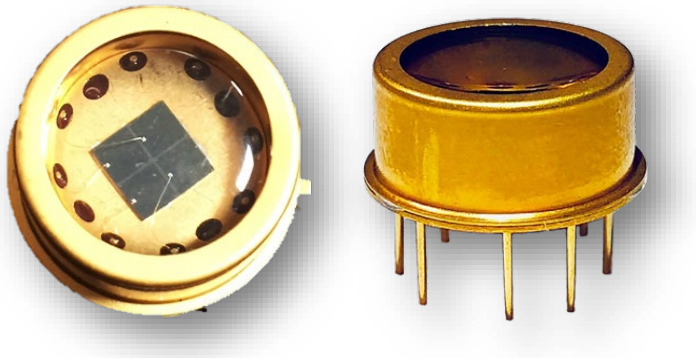
Quadrant Photodiode Detector

ISOCOM's New Radiation Tolerant Quadrant Photodiode Detector



Quadrant photodiodes are used as critical components in - optical detection; tracking; sun-sensing and displacement measurement systems. They are used for high precision measuring systems, beam centring of laser devices and laser tracking devices for long distance optical free space of satellite communications.

They are simple and have a very robust design with high sensitivity. The use of these detectors in applications require a very good design of analogue circuit. ISOCOM Limited can offer this circuit with radiation hard amplifiers.

In space sun sensor applications of position measurement with the quadrant photodiode requires accuracy, precision, linear output, frequency bandwidth with very good dynamic range between the sun sensing and quadrant detector.

The sun position will be detected based on the determination of the satellites sun sensor position subject to coupling optical arrangements. Each quadrant photodiode consists of four matched photodiodes deposited on as a single chip as shown.

Each photodiode of quadrant detector will generate the electric current that is linearly depends on the amount of the light captured. The four photodiode currents are the same if the light is centred symmetrically in the axis of the quadrant photodiode centre. The variation of current of the photodiode is dependence on the spot positioning and assembly of the quadrant detector centre position.

ISOCOM Limited offers a wide range of electronic components, including optocouplers. MOSFETs, solid state relays and more; available in a variety of circuits configurations, package styles & finishes. Their products are suitable for space, defence, aerospace, medical & industrial applications.

All ISOCOM products are designed, manufactured, and tested at their 18,000 sq ft purpose-built manufacturing and office facility located in Peterlee, County Durham, UK. The building is specifically designed to accommodate their advanced manufacturing and testing processes and allows them to develop custom solutions based on individual requirements and complex specifications.

Regular audits ensure that they continue to produce products to the highest standards. ISOCOM and their facilities are accredited to AS9100D and ISO9001, meaning that customers can remain confident in their level of ability and service. ISOCOM space and defence level products are screened in accordance with MIL-STD. MIL-PRF-19500 for single-chip, and MIL-PRF-38534 for multi-chip products.

To learn more about ISOCOM and their products, please visit www.isocom.uk.com. For any other information, please email sales@isocom.uk.com.

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