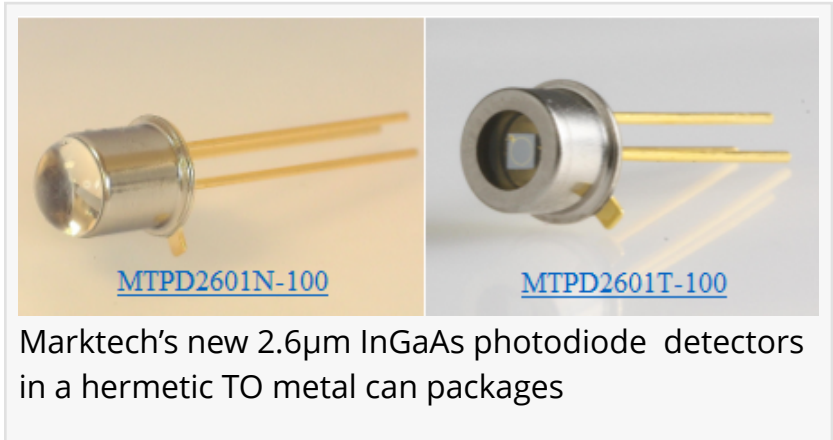


Marktech Optoelectronics Introduces New 2.6 μ m Extended InGaAs Photodiode Photodetectors

New 2.6 micron hermetically TO-46 can packaged InGaAs PIN photodiodes have sensitivity ranges of 600nm to 2600nm with active area diameters of 1.0mm.

LATHAM, NEW YORK, UNITED STATES,
December 20, 2022 /
EINPresswire.com/ -- Marktech
Optoelectronics, Inc.
(www.marktechopto.com)(Marktech), a

privately-held leading designer and manufacturer of standard and custom optoelectronics, including UV, visible, near-infrared (NIR), and short-wavelength infrared (SWIR) emitters, detectors, InP epi wafers, and other compound semiconductors, today announced the release of two new indium gallium arsenide (InGaAs)



Marktech's new 2.6 μ m InGaAs photodiode detectors in a hermetic TO metal can packages



The 900 to 2600nm spectral sensitivity range of our 2.6 μ m InGaAs photodiodes is ideal for medical diagnostic devices, infrared spectrometers, pyrometers, moisture detectors, and optical power meters."

*Gary Kardys, Business
Development Manager*

photodiode photodetectors with extended 2.6 μ m wavelength responsivity cutoffs.

The new High Speed 2.6 micron InGaAs PIN photodiodes have sensitivity wavelength ranges of 600nm to 2600nm with active area diameters of 1.0mm. Marktech's [MTPD2601T-100 InGaAs photodiode](#) is packaged in a TO-46 hermetic metal can with a flat lens. Our MTPD2601N-100 InGaAs component uses a TO-46 package with a domed lens. TO metal can packaging provides the highest protection against the ingress of vapor and moisture, which results in exceptionally reliable, high-lifetime InGaAs photodiode detectors.

Marktech's InGaAs photodiode manufacturing partner in Japan, Optrans Corporation, is recognized as producing some of the industry's highest integrity visible through SWIR detectors. These new products and many additional standard InGaAs photodiodes can be delivered in a few days from our distributors' inventories, Digikey Electronics and Mouser Electronics.

In addition to standard InGaAs detectors, we can provide many additional services often required to rapidly move a project from the design to the finished product stage, such as:

- Detector and emitter selection
- Application and specification development
- InGaAs photodiode customization
- Package type selection and custom packages
- Electro-optical testing and troubleshooting
- Circuit and assembly design and build

InGaAs Photodiodes (InGaAs PDs)

Marktech's lineup of advanced InGaAs photodiode detectors consists of several detector families or series based on their spectral sensitivity ranges:

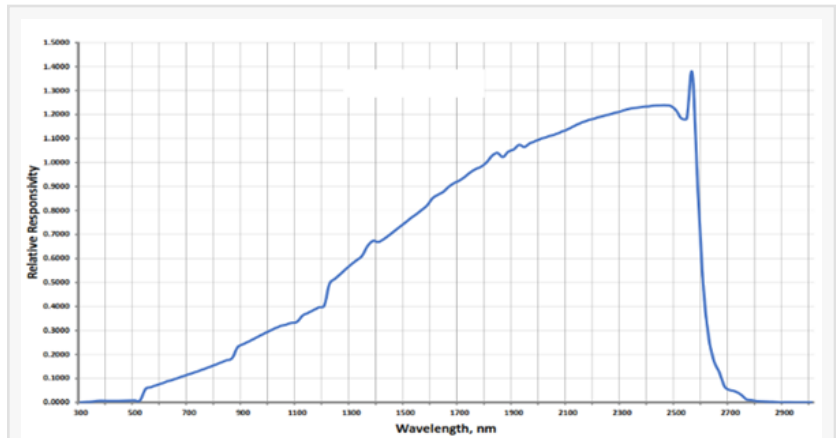
- Vis-NIR-SWIR – 600nm to 1700nm spectral sensitivity
- NIR-SWIR-Extended SWIR – 800nm to 2600nm spectral sensitivity

While 1.7 μm and 2.6 μm are our standard offerings, Optrans can tailor the peak responsivity to wavelengths lower than 2.6 μm for applications with sufficiently high annual volumes. InGaAs PIN photodiodes are available in various package types such as hermetically sealed metal cans (TO-5, TO-18, and TO-39), ceramic SAW packages, pigtail cans, 3mm molded plastic through-hole (flat lens or dome ceramic), and Marktech's latest enhanced SMD packaging system, the hermetic ATLAS package. In addition, custom-engineered packaging to OEM specifications is available as well.

Extended InGaAs Advantages

Our InGaAs photodiodes provide high sensitivity, high speed, low noise, excellent linearity, high quantum efficiency, low-temperature coefficient of responsivity, low dark current, better shunt resistance, improved low operating temperature performance, and durability combined with an extended lifetime at a reasonable cost.

The high sensitivity of InGaAs detectors combined with low noise characteristics (high signal/noise ratio) in the NIR and SWIR wavelengths make InGaAs highly desirable for:



The spectral responsivity of Marktech's new 2.6 μm InGaAs photodiodes



Marktech Optoelectronics a Leading Manufacturer of Photodiode Photodetectors and LED Emitters in UV, Visible, NIR, SWIR Wavelengths

- Medical devices and wearables (glucose monitoring, urinalysis, blood alcohol)
- Infrared spectroscopy (FTIR, Raman, TDLS, NDIR, dispersive NIR)
- Non-contact temperature meters (IR pyrometer), flame monitors, and spark detectors
- Moisture detection and compositional sorting
- Photonics test instrumentation (LED and laser monitors, optical power meters)
- Communication receivers in the O, L, and C bands
- Optical coherence tomography (OCT)
- Gas sensing
- LIDAR

In addition, InGaAs photodiodes have more thermal stability or a lower temperature coefficient of sensitivity ($< 0.1\% / K$) over a broader range of wavelengths than silicon. As a result, our InGaAs photodiodes are ideal as the primary detector elements in non-dispersive spectrometers (Vis-NIR-SWIR), pyrometers, and medical diagnostic devices.

Furthermore, Marktech's infrared monitoring photodiodes can measure the optical power output of NIR and SWIR lasers and light sources, a critical element in the feedback and control of laser or illuminator output.

Consult with Us Today About Your Design Project

Marktech Optoelectronics and Optrans Corporation have vertically integrated capabilities to custom design and fabricate photodiode devices on wafers and then dice and package these photodiode chips with any required emitters, amplifiers, filters, and components for specific applications. This vertical integration allows Marktech to precisely control the performance and quality of the photodetectors and assemblies designed and manufactured for our customers.

Utilizing our advanced $2.6\mu\text{m}$ InGaAs photodetectors in new products under development will likely lead to breakthrough designs in many analytical instruments, medical diagnostics, and industrial sensing applications.

If you have specific technical or application questions regarding your optoelectronics design project or are just interested in learning more about Marktech's InGaAs photodiodes, then please reach out to us through the following:

Request for information (RFI) or request for quote (RFQ) form: [Contact Us](#)

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