

# **Press Release**

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## **New InGaAs Detector for NIR Spectroscopy Extends Sensitivity to 2.2 Microns**

Trenton, NJ —Princeton Instruments is pleased to announce the expansion of its popular, high-performance OMA V™ series of InGaAs detection systems. The newest OMA V system utilizes a 1024-element linear photodiode array (PDA) designed to offer excellent near-infrared (NIR) sensitivity from 1.0 to 2.2  $\mu\text{m}$ . This 16-bit detection system has been engineered specifically for use in demanding NIR spectroscopy applications, including Raman, absorbance, and emission.

The InGaAs utilized in the new OMA V system has much less intrinsic dark noise than earlier generations of extended InGaAs. In many cases, the OMA V 2.2- $\mu\text{m}$  detector can provide ten times the sensitivity of previous extended-InGaAs detectors!

The new OMA V model features 25 x 250- $\mu\text{m}$  pixels for high resolution, good well capacity, and a spectral data rate of 900 spectra/second. Cryogenic cooling (as low as -140°C) optimizes NIR response and minimizes dark noise.

In addition, OMA V systems that have been tailored to provide high sensitivity from 0.8 to 1.7  $\mu\text{m}$  are offered. These 1.7- $\mu\text{m}$  detectors, which feature linear InGaAs sensors comprising 1024 elements (25 x 500- $\mu\text{m}$  pixels) or 512 elements (50 x 500- $\mu\text{m}$  pixels), are available with either thermoelectric or cryogenic cooling. The thermoelectric platform cools to -50°C; the cryogenic platform can be locked as low as -120°C. These systems deliver the industry's best cooling performance, lowest readout noise, and highest spectral data rates (1800 or 900 spectra/second).

All Princeton Instruments OMA V systems are offered with USB 2.0 communications for simple connection to desktop, laptop, and notebook PCs. The detectors are configured to mount directly to Acton Research spectrographs; adapters are also available for other popular spectrometers. The resultant spectroscopy solutions are easily controlled and monitored via the Princeton Instruments WinSpec software package, the SITK™ plug-in for National Instruments' LabVIEW™, and the Roper Scientific® PVCAM® application programming interface.

**[www.princetoninstruments.com](http://www.princetoninstruments.com)**

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