NEWS RELEASE

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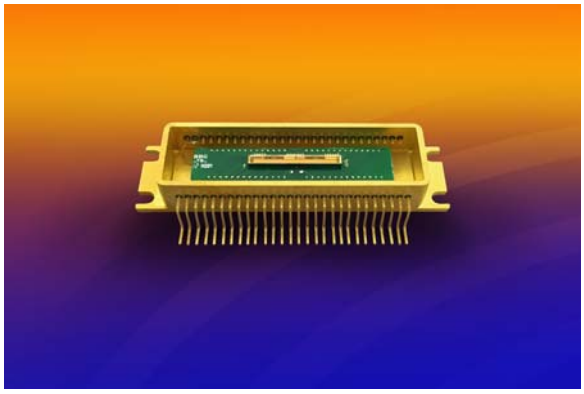
For Immediate Release

Princeton Infrared Introduces SWIR Linear Array with Lowest Read Noise Available at SPIE DCS 2016

• **PIRT1024L1-12.5-T Linear Array**, ideal for spectroscopic applications, will be showcased in booth #952 at SPIE Defense & Commercial Symposium (DCS), April 19-21, 2016, Baltimore Convention Center, Baltimore, MD.

Monmouth Junction, NJ – April 19, 2016 - Princeton Infrared Technologies, Inc. (PIRT), will premiere the revolutionary **1024L1-12.5-T Linear Array**, an indium gallium arsenide (InGaAs) sensor designed for both spectroscopy and machine vision in the shortwave infrared (SWIR) spectrum. The linear array provides 1024 x 1 resolution with a small 12.5 micron pitch and delivers the lowest read noise currently available at <550e- for a 250 µm tall pixel. For some spectroscopy applications, the advanced SWIR on-chip noise-suppression circuit will achieve read noise levels to an unprecedented low of <100e-. This is also the only SWIR linear array available that can image the visible and SWIR bands with response from 0.4 to 1.7 µm.



The 1024L1 uses a single digital ROIC chip to minimize variation from output to output, which is often an unwanted feature on linear arrays with multiple ROICs. The chips have built-in 14-bit analog-to-digital converters that maximize dynamic range (>6000:1) and minimize noise, while delivering 34klines/s at 1024 elements. It also has the largest selection of full wells, from 75ke- to 100Me-, in the industry.

Martin H. Ettenberg, Ph.D., president of Princeton Infrared Technologies, Inc., notes, “We are very excited to bring this linear array to market because it is designed for spectroscopy applications in the SWIR band. With our newer assembly methods and fabless manufacturing model, we can offer these advanced arrays at a fraction of the market price, while enhancing performance.”

The lattice-matched InGaAs array is backside illuminated to enable detection in the visible to the SWIR from 0.4 to 1.7 µm. A distinct advantage to backside illumination is that it minimizes stray reflections that plague competing front-side illuminated arrays; bond pads and the many wire bonds near the active imaging area of front-side illuminated arrays often create odd light apertures that adversely affect image quality. The new backside-illuminated1024L1 Linear Array can also be customized by depositing optical filters directly onto the active detector area; this is nearly impossible to do with a front-side illuminated device with its wire bonds.

For a demonstration, please visit Princeton Infrared Technologies’ booth #952 at SPIE Defense & Commercial Sensing Conference (DCS), Baltimore Convention Center, Baltimore, Maryland, April 19 - 21, 2016. To learn more about the new line of affordable SWIR linear arrays and cameras go to: www.princetonirtech.com or call 1-609-917-3380.

Princeton Infrared Technologies, Inc. (PIRT - www.princetonirtech.com) - Specialists in indium gallium arsenide (InGaAs) imaging technology, PIRT focuses on design and manufacture of both shortwave infrared cameras, and one- and two-dimensional imaging arrays. All products are created in the company’s fabless environment under strict testing and quality control guidelines, providing innovative and cost-effective detectors that image in the visible, near- and shortwave-infrared wavelengths. Application areas include spectroscopy for sorting materials, moisture detection, thermal imaging, night vision, and laser imaging for military, industrial, and commercial markets.

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