

New Development

Extended InGaAs Detector Now Available as Line Array



For SWIR spectroscopy a new xInGaAs detector has been developed: The line sensor IG22 is manufactured by LASER COMPONENTS and has 256 pixels @ 30 μm x 250 μm each with a pitch of 50 μm . In cooled operation, the spectral range is covered up to 2.1 μm (20% point).

The sophisticated extended InGaAs has interesting advantages: The dark current in photodiodes depends on the bias voltage applied. Thus, voltage-free operation is ideal; realistically, however, the input offset of the amplifier acts as bias voltage. In the IG22 array, this undesired voltage is reset to zero after each readout.

The amplification can be finely adjusted at eight levels, individually per pixel. This is practical because the middle of the line is often illuminated more strongly than its edges. Thus, the optimal dynamic range per pixel can be utilized.

The array is designed with a high linearity - the aim is a value of 99.9%. The optimized thermal design consists of a two-stage Peltier element - so the array achieves a ΔT of 65 K (i.e., it can be cooled from room temperature to -40°C). In addition an anti-alias low-pass filter is integrated before the sample-and-hold circuit.

This array is equipped with all commercial standard features, such as correlated double sampling (CDS). Complete evaluation electronics are available with a USB interface.

More Information

<http://www.lasercomponents.com/de-en/ir-components/ir-detectors/ir-arrays/>

Trade Shows

LASER. World of Photonics 2015, Jun, 22 - 25, 2015, Messe München, Germany, Booth B3.303

The Company

LASER COMPONENTS specializes in the development, manufacture, and sale of components and services in the laser and optoelectronics industry. At LASER COMPONENTS, we have been serving customers since 1982 with sales branches in five different countries. We have been producing in house since 1986 with production facilities in Germany, Canada, and the United States. In-house production makes up approximately half of our sales revenue. A family-run business, we have more than 170 employees worldwide.