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Press Release

Signal-to-Noise Ratio Significantly Increased

Pyroelectric Detectors with a Differential Amplifier

At Sensor+Test 2017, LASER COMPONENTS will introduce a new and improved pyroelectric detector, the LD2100 series with differential outputs.

Pyroelectric crystals simultaneously generate positive and negative charges on opposite faces, and our LD2100 detectors exploit this with a new amplification scheme.

The LD2100 series is based on our best-selling L2100 series CM current mode detector, and we plan to bring other differential versions of our detectors to market in due course.

The R&D team at LASER COMPONENTS Pyro Group reached deep into their bag of tricks to produce a pyroelectric detector that not only gives you double the signal compared to a single ended detector when used with a differential amplifier, but the noise only increases by √2. This produces an improvement in signal to noise ratio of around 1.4.

Pyroelectric detectors with a differential amplifier have two additional advantages: External interference signals are eliminated by signal subtraction. Thus, they can be used in critical environments with electric fields. Furthermore, the LD2100 series makes simple wiring possible, with which the signal outputs are connected directly to the inputs of the differential AD converter.

Pyroelectric detectors are used in NDIR and FTIR spectroscopy, IR laser-based measurement technology, pyrometry, and in flame and fire detection: The components are inexpensive, reliable, robust, and are highly sensitive from short to long IR wavelengths as thermal detectors.

More Information

http://www.lasercomponents.com/lc/product/differential-pyroelectric-detector/

Trade Shows

ANGACOM, May 30 - June 01, 2017, Cologne, Germany, **Booth 7-B09**
Sensor+Test, May 30 - June 01, 2017, Nürnberg, Germany, **Booth 1-256**
Photonex Scotland Roadshow, June 14, 2017, University of Strathclyde, UK, **Booth S2**
LASER World of Photonics, June 26 - 29 2017, Messe Munich, **Booth B3.303**
Sensors Expo & Conference, June 28 - 29, 2017, San Jose, CA, USA, **Booth 225**
enova Paris, September 19 - 21, 2017, Paris, Frankreich
Photonex Coventry, October 11 - 12, 2017, Ricoh Arena, Coventry, Großbritannien, **Booth D15**

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 200 employees worldwide.

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