

## Press Release

### Discover the HO Series

#### New Low-Noise APD Receivers

LASER COMPONENTS presents its new avalanche photodiodes receivers: The HO series. Supplied in a very compact, modified TO5 housing with a diameter of approximately 5 mm, the HO series APD receivers can be integrated into small systems with which, for example, distances can be measured or the smallest light signals detected. The simplest way to use a detector is with an integrated receiver circuit. Here the quality is judged according to the amount of noise produced.

For the entire system, however, the amplifier noise is the dominant source of noise. To reduce the overall noise of the detector/amplifier module, the capacitance connected to the amplifier has to be as small as possible. This is achieved by making the connections as short as possible. With its HO series, LASER COMPONENTS has developed an APD receiver, with an inherent noise of nearly zero.

Depending on the integrated feedback resistor, a bandwidth from DC up to 80 MHz can be achieved. If the SAR500, a Si APD with a diameter of 500  $\mu\text{m}$ , is integrated, the module has a noise equivalent power (NEP) of only 4.86 fW/sqrt(Hz) at an amplification of  $3 \times 10^7$  V/W. With the 80  $\mu\text{m}$  or 200  $\mu\text{m}$  InGaAs APD of the IAG series, the following values can be achieved:  $1.1 \times 10^6$  V/W @ pW/sqrt(Hz).

#### More Information

<http://www.lasercomponents.com/de-en/product/apd-receivers/>

#### Trade Shows

Photonics West 2012, Jan. 24-26, 2012, Moscone Center, San Francisco South Hall – Booth 517  
 Analytica 2012, April, 17-20, 2012, Munich International Trade Fairs, Booth A2.400A  
 Optatec 2012, May, 22-25, 2012, Frankfurt Exhibition Centre, Booth E01  
 Sensor + Test 2012, May, 22-24, 2012, Nürnberg Exhibition Centre, Booth 12-426

#### The Company

LASER COMPONENTS is specialized in the development, manufacture, and sale of components and services for the laser and opto-electronics industries. With sales offices in four different countries, the company has served its customers since 1982. In-house production at six locations in Germany, Canada, and the USA began in 1986 and is meanwhile responsible for about half of its turnover. Currently, the family-run business employs more than 130 people worldwide.