

### Efficient Process Monitoring with Thermal Imaging Cameras

#### Notch Filters for Industrial CO<sub>2</sub> Lasers

For the first time, customers can now obtain notch filters that are exactly tuned for a wavelength of 10.6µm. This will allow the use of thermal imaging cameras for process monitoring of industrial CO<sub>2</sub> lasers. The filters are designed to provide selective attenuation by a factor of 1000 along a 1.5µm wide band. At the same time, the entire thermal image is only darkened by approximately 25% over a transmission range of 3.5 - 14µm. Notch filters by Alluxa are now available at LASER COMPONENTS.

Notch filters "hide" specific wavelengths. To date, such filters have mainly been used for visible and near infrared wavelengths for applications such as Raman laser spectroscopy or confocal microscopy. There were only few options available for wavelengths in the medium and long infrared spectrum.

Thermal imaging cameras are increasingly used to monitor welding processes with CO<sub>2</sub> lasers, and detect errors such as welding spatter or hairline cracks more quickly. These cameras are based on bolometer arrays that detect radiation in the range of 8-12µm which includes the CO<sub>2</sub> laser wavelength. The intense laser light outshines the processes actually observed. To allow for efficient monitoring, these wavelengths have to be dimmed.

#### More Information

[www.lasercomponents.com/de-en/product/notch-filters/](http://www.lasercomponents.com/de-en/product/notch-filters/)

#### Trade Shows

ECOC, September 22 – 26, 2019, Dublin, Ireland, **Booth 337**  
 22. **Breitbandkongress des FRK**, September 23 – 24, 2019, H4 Hotel, Leipzig  
**Measurement World**, September 24 – 26, Paris expo Porte de Versailles, France  
 JNPLI, September 25 – 26, 2019, Strasbourg, France  
**Photonex Europe**, October 09 – 10, 2019, Ricoh Arena, Coventry, UK, **Booth D15**

#### The Company

LASER COMPONENTS specialises 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 230 employees worldwide.