

### Set up Your Detector for Different Gas Measurements

## Five New Bandpass Filters for Pyroelectric Detectors

LASER COMPONENTS introduces five new bandpass filters for pyroelectric detectors, increasing the number of standard filters available to an outstanding seventeen versions. The new filters include reference filters (B) and filters for the detection of CO<sub>2</sub> (A), water vapour (M), methane (S), and alcohol (O), and are either mounted directly inside the fixed cap of the detector or available as a separate cap, which is then mounted to an existing pyroelectric detector.

A reference filter should not have any gas absorption. Filter B can be used when SO<sub>2</sub> is part of the gas mixture ( $\lambda_{\text{peak}} = 3,86 \mu\text{m}$ , FWHM = 90 nm).

The CO<sub>2</sub> filter A with an  $\lambda_{\text{peak}} = 4.265 \mu\text{m}$  is the filter with the best possible signal and simple linearization (FWHM = 110 nm).

Water vapour is in almost every gas mixture, which often leads to a disturbing background noise. An attempt to measure this with a 2.94  $\mu\text{m}$  filter, for example, lead to problems of cross-sensitivity with CO<sub>2</sub>. The M filter has proven more reliable in such practical applications:  $\lambda_{\text{peak}} = 5,78 \mu\text{m}$ , FWHM = 180 nm.

Methane is primarily measured at 3.33  $\mu\text{m}$ ; however, this is not particularly specific. An excellent alternative is the S filter, which operates at a longer-wave band:  $\lambda_{\text{peak}} = 7,91 \mu\text{m}$ , FWHM = 160 nm.

Breath alcohol measurement is becoming more and more popular. The new standard filter has the following specifications:  $\lambda_{\text{peak}} = 9,50 \mu\text{m}$ , FWHM = 450 nm.

### More Information

<http://www.lasercomponents.com/lc/product/choice-of-filters-for-pyroelectric-detectors/>

### Trade Shows

JSOL - Journées Sécurité Optique et Laser 2017, March 28-29, Bordeaux, France  
Automate 2017, April 3-6, 2017, Chicago, IL, USA, **Booth 2661**  
DCS 2017, April 11-13, 2017, Anaheim, CA, USA, **Booth 628**  
Breko 2017, April 25-26, 2017, Messe Frankfurt, **Booth 53**  
Optics & Photonics Days 2017, May 29-31, 2017, Oulu, Finland  
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**

### 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.