Media Release

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Linear Variable Filter – a flexible solution for data acquisition in laboratory technology

Linear Variable Filters are an innovative and flexible solution for the technological demands of the fields of diagnostics and analysis.

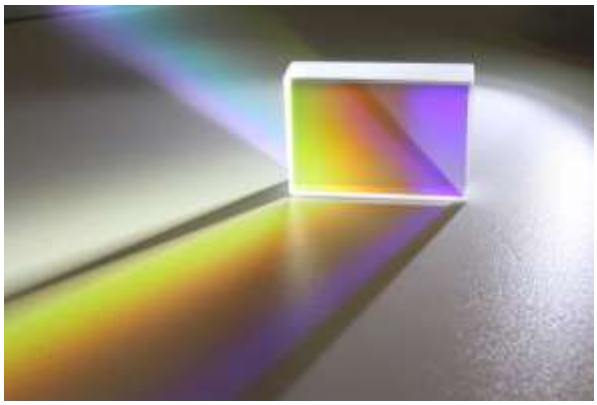
The current SARS-CoV-2 pandemic has made it abundantly clear how important it is to determine analytical laboratory values quickly and accurately. However, even in the days before the pandemic erupted, there was already a strong focus on laboratory equipment and processes. These should always be multifunctional and flexible, as a large amount of data must be collected in a short time. The results must then be analysed precisely to ensure accuracy and reliability.

Optical methods for information acquisition, e.g. based on spectroscopy, are indispensable in laboratory equipment. Fluorescence techniques such as labelling in marker technology are just one example of the integration of optical components in process analysis. The process spectroscopy division is growing continuously and the success factor lies in the segmentation of the products. However, it is precisely this segmentation and the associated specialization of laboratory equipment that poses a crucial problem in terms of cost structure. Despite the desire for diversity, the components used must allow for a certain flexibility. Only then is it possible to offer attractive and innovative solutions both in terms of technology and cost. Optics Balzers, as a globally recognized supplier of innovative coating solutions, has developed specific solutions for this market. For example, Linear Variable Filters (LVF) for use in laboratory analysis systems. Thanks to a special coating technology, these filters have a precisely defined spectral response.

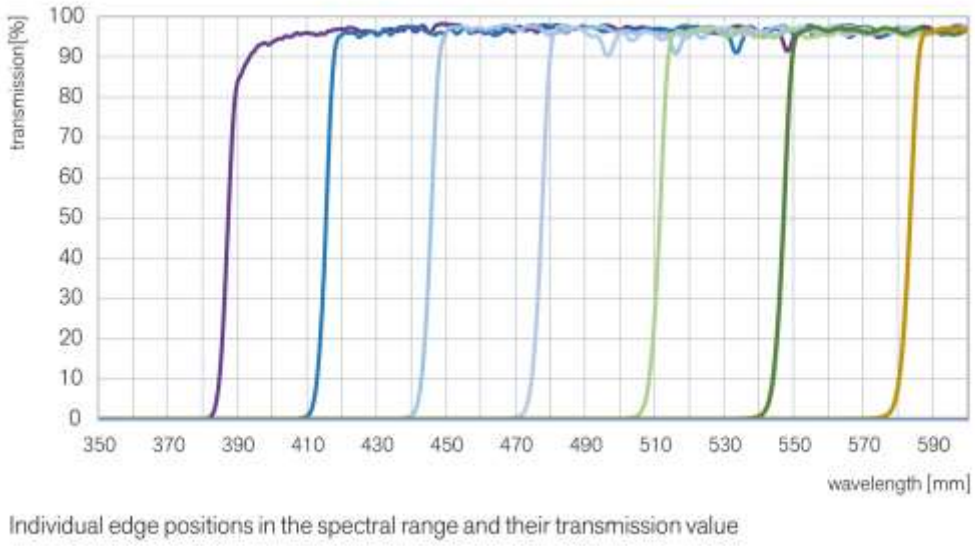
LVFs have various features that can be customized and optimized according to the application. Optics Balzers offers various LVFs in the spectrum, from 300nm to the near-infrared range. The adjustable edge position of the transmission band can be adapted to the respective measurement task.

The combination of only two filters to form a bandpass filter that can be adjusted and tuned as desired represents an inexpensive alternative to buying a large number of individual filters. LVF therefore appears to be the method of choice for diagnostic systems that require a particular degree of flexibility.

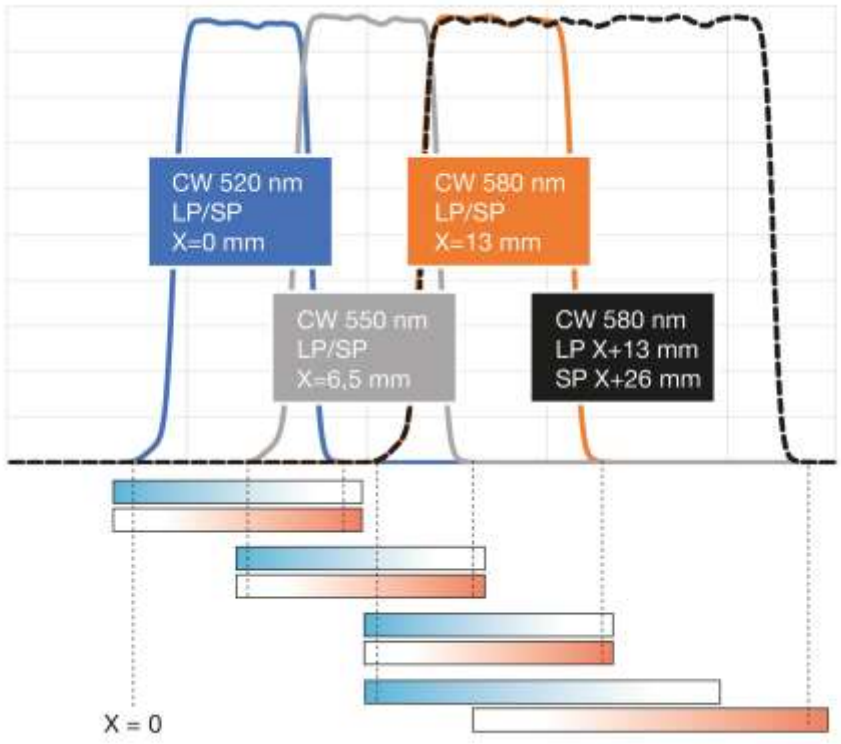
> Link to the full Application Note: https://www.opticsbalzers.com/en/services/downloads.html



Picture-Caption: Linear Variable Filter by Optics Balzers



Picture-Caption: Individual edge positions in the spectral range and their transmission value



Picture-Caption: Bandpass filter adjustment for tuning of different filter characteristics

Optics Balzers (located in the Principality of Liechtenstein) has been the preferred partner for providing innovative optical coatings and solutions for more than 70 years. Together with its subsidiaries in Jena (Germany) and Penang (Malaysia), Optics Balzers is a global leader in the supply of optical coatings and components. The Liechtenstein-based high-tech company focuses on selected markets such as Life Science, Industry, Consumer, Lighting, Space und Automotive. The products and services offered range from optical coatings and glass processing, patterning and bonding technologies to the manufacture of complete optical subassemblies and are acknowledged as being unique worldwide.

Additional information: **www.opticsbalzers.com**