

PRESS RELEASE

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Berliner Glas expands its coating competencies – broadband monitoring allows the production of highly sophisticated optical layers for fluorescence applications

Optical broadband monitoring, a new technology to monitor the production process of optical layers, allows very complex layers for reflection, transmission and absorption on optical components to be produced with very high precision and accuracy.

Examples of their application in medical technology include filters with very steep angles for fluorescence applications, interference filters for the separation of colors on high-quality 3-chip cameras in endoscopy or holographic gratings for laboratory analysis and diagnostics. In the field of microscopy, complex and simple layers can also be used in beam splitters to separate illuminating and fluorescent channels which are close together.

“These type of channels which are close together have to be viewed separately for example when using the dye indocyanine green (ICG)”, explains Sven Knuth, Head of the Medical Applications Business Unit, at the commissioning of the equipment in Berlin.

Although there are usually up five layers, and in extreme cases up to and above 80, positioned on top of each other, the individual layers often have a height of just a few nanometers. Broadband monitoring makes it possible to precisely control the coating process, which in turn allows the coating quality and yield to be improved. Supported by in-house process development, custom coatings are available to cover from 130nm to 6000nm and be applied to customer-specific components including spherical lenses, aspherical components, plane optics and cylindrical lenses produced by the Berliner Glas Group.

Thanks to the inter-disciplinary development teams at the Berlin and Heerbrugg sites which consist of optical designers, physicists, design engineers, system and electrical engineers, the Medical Applications Business Unit also offers the integration of optical, mechanical and electronic components into complete assemblies or devices.

The assemblies include high quality beam guidance and beam shaping objectives for short-pulsed lasers, customer-specific zoom objectives and camera assemblies for endoscopy. The Berliner Glas Group supplies high-quality structured light 3D scanning systems, LED cold light sources and other OEM system solutions to the medical and life science industries.

About Berliner Glas:

The Berliner Glas Group, with around 1000 employees, is one of the leading European providers of optical key components, assemblies and systems as well as high-quality refined technical glass. With an understanding of optical systems and optical production technology, Berliner Glas develops, produces and integrates optics, mechanics and electronics into innovative system solutions for its customers. These solutions are used worldwide in the semiconductor industry, medical technology, metrology, laser and space technology, analytics, defense and the display industry.

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