

PRESS RELEASE

05 January 2016
Berlin, Germany

Interferometric measurement of large-scale cylindrical optical components – Berliner Glas Group publishes technical article

One of the key competences of the Berliner Glas Group is the development and production of large-scale optical mirrors and cylinder lenses in lengths up to 2,000 mm with the highest surface qualities. These cylinder lenses and mirrors are used to expand and homogenize laser beams, for example in laser annealing and laser lift-off processes to produce AMOLED displays for smartphones, tablets and TVs.

The evaluation of the surface form quality of large-scale optical components in general and large cylindrical components in particular is most challenging. Due to the limitation of the measuring apertures and the application-dependent local footprints, the requirements on the surface form quality have to be specified in a special way. For this the standards for drawings and interferometric measurement of spherical and aspherical optical surfaces have been extended to cylindrical surfaces. Such surfaces can be measured by using a standard planar Fizeau interferometer in combination with computer generated holograms (CGHs). A CGH is placed between the Fizeau reference flat and the surface to be measured and acts as a wave forming element to achieve the required null-testing condition.

Berliner Glas wrote a technical article that provides an overview of the measurement process using sup-aperture stitching techniques, the degrees of freedom of the measuring system, the requirements on input data and the importance of computer generated holograms. This article was published in the December 2015 edition of the magazine *Optik & Photonik* and can be downloaded from the Wiley Online Library: <http://dx.doi.org/10.1002/opph.201500034>.

About Berliner Glas:

The BERLINER GLAS GROUP (www.berlinerglasgroup.com) is one of the world's leading providers of optical key components, assemblies and systems as well as high-quality refined technical glass. With more than 1,100 employees, BERLINER GLAS develops, produces and integrates optics, mechanics and electronics into innovative system solutions for its customers. As OEM partners from concept to volume production, the BERLINER GLAS GROUP companies serve innovative customers in various market segments – laser and space technology, semiconductor industry, medical technology, metrology and the display industry.

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