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PRESS RELEASE

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Description of aspherical surfaces
Berliner Glas published specialist article about aspheres and cylindrical lenses

Aspheres and cylindrical lenses are key optical components that the company Berliner Glas develops and manufactures, while using special measuring and production technologies. The description forms of these optics as well as the specification of the form quality were revised and supplemented in the context of revisions in the series of standards ISO 10110 "Optics and photonics - Preparation of drawings for optical elements and systems". Here, the experts of the Berliner Glas Group actively participated at national and international level and made corresponding contributions.

Dr. Rainer Schuhmann, Head of Measurement and Software Development at Berliner Glas, published a specialist article in which the various forms of description of such surfaces are considered. The surface descriptions listed in the latest version of "ISO 10110, Optics and photonics - Preparation of drawings for optical elements and systems - Part 12: Aspheric surfaces" are listed herein, as well as other forms derived from older work.

The various forms of the arrow height formulas are compared and thereby the peculiarities and their advantages and disadvantages are shown. In the article, the calculations of the orthogonal polynomials used for this purpose as well as the partial derivatives of the heights of the arrows are explicitly listed for all considered forms, as they are hardly found elsewhere in this completeness. In addition to the rotationally invariant aspheres, more complex surface forms up to the noncircular cylinder surfaces are also considered.

For more information, visit our website: https://www.berlinerglasgroup.com/white-papers.

In addition, Berliner Glas created a poster with selected formulas and information: "Characterization of optical surface forms" (see image below).

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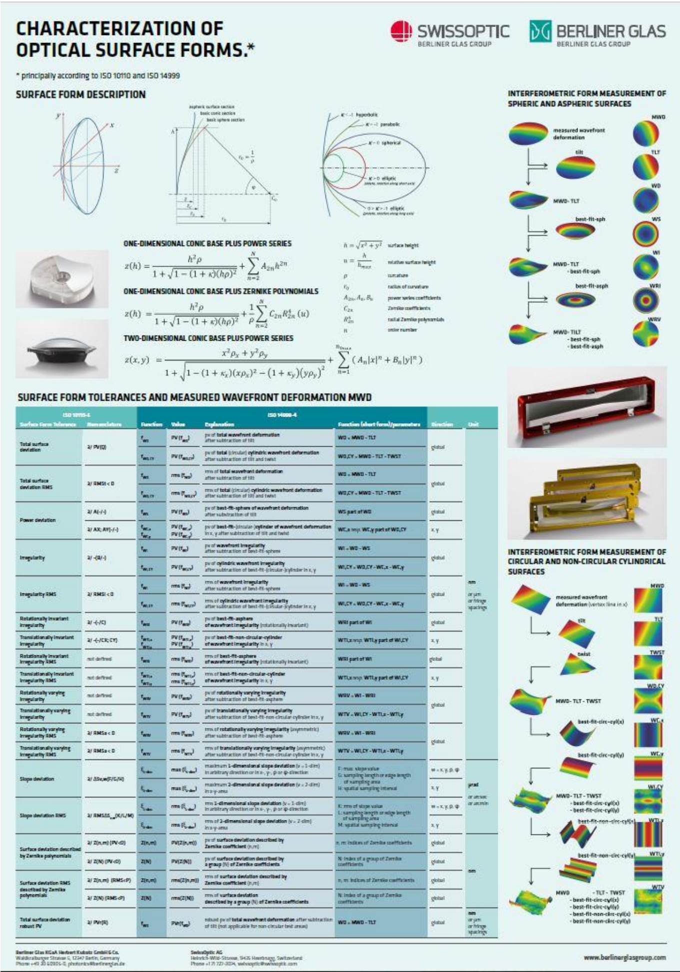

Image: Characterization of optical surface forms

You are welcome to order a copy of this poster - just send a short e-mail to marketing@berlinerglas.de.

About the Berliner Glas Group:
The Berliner Glas Group (www.berlinerglasgroup.com) is one of the world's leading providers of optical key components, assemblies and systems, high-quality refined technical glass as well as glass touch assemblies. With more than 1,500 employees, the BERLINER GLAS GROUP 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 – semiconductor industry, laser and space technology, medical technology, metrology and the display industry.

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