

PRESS RELEASE

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Wafer chucks for inspection and other applications

Berliner Glas is a premium supplier of high precision, custom designed wafer chucks to the semiconductor industry. Inspection and review systems benefit from very precise adjustment and documentation of flatness and technical advanced materials.

Light and very stiff as well as functional optimized materials based on high performance glasses, glass ceramics and ceramics are **ready for 450 mm**. Special requirements such as high speed rotating and very low run out are maintained by application of these advanced materials. Thermal influence on the wafer flatness is controlled by using adapted cooling and CTE fitted materials. In combination with new algorithms for designing optimal mesa structures best flatness is adjusted to the requirement of each application.

Very fast chucking and de-chucking times of less than half a second for coulomb type electrostatic chucks as well as vacuum flow optimized chucks increase the wafer throughput and lead to high efficiency for inspection systems. Hard ceramic coatings minimize adhesion effects of wafers and improve the life time of electrostatic and vacuum chucks. Intelligent electrical controlling drives the chucking and de-chucking response to an optimum by minimizing material specific polarization effects.

Materials are chosen according to their field of application and are designed with regard to temperature requirements, type of radiation and other critical physical aspects. Due to the varying properties of these different materials the chucking performance like clamping pressure and homogeneity is measured and analyzed with a special setup using interferometry. The capability for modeling the effective clamping pressure based on specific material parameters in combination with a high effective three dimensional FE analysis of the electrostatic chuck enables the constant development of new advanced electrostatic chucks.

Berliner Glas will present a broad spectrum of its products and solutions at the Photonics West (booth 2228) in San Francisco, California / USA (held from: 05 – 07 February 2013).

Please also visit the product demonstration of wafer chucks for inspection and other applications which will be held on Wednesday, 06 February 2013 at 12:30 pm in the Demo Area 2 (North Hall D).

About Berliner Glas:

The BERLINER GLAS GROUP (www.berlinerglas.com) is one of the leading European providers of optical key components, assemblies and systems as well as high-quality refined technical glass. With more than 1,000 employees, BERLINER GLAS develops, produces and integrates optics, mechanics and electronics into innovative system solutions for its customers. As OEM partners from prototyping to volume production, the BERLINER GLAS GROUP companies serve innovative customers in various market segments - semiconductor industry, medical technology, metrology, laser and space technology, analytics, defense and the display industry.

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