

## PRESS RELEASE

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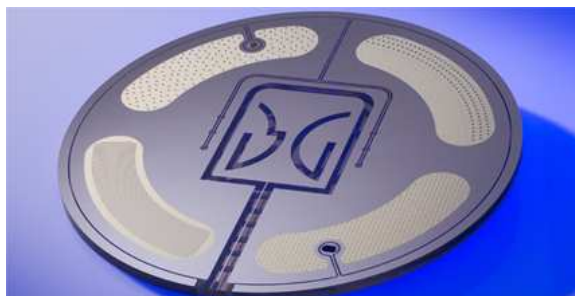
### Chucking Solutions made by Berliner Glas – Ultra fast for highest yield in Semiconductor Production

BERLINER GLAS supports the semiconductor industry with innovative chucks for the various processing steps use in chip-manufacturing. With many years of experience in glass and ceramics processing, Berliner Glas produces chucking systems, both electrostatic chucks and vacuum chucks, which show significant advantages custom tailored to the market's requirements. The know-how encompasses:

- Glass processing (2-D, 3-D contours, lapping, polishing)
- Ceramics processing (silicon carbide, silicon nitride, aluminium oxide, Cordierite, Zerodur®)
- Bonding of glass/ceramics
- Deterministic fine-correction techniques using computer controlled polishing, magneto-rheological finishing and ion-beam-figuring
- Individual and the highest standards in metrology (interferometry, electrical characteristics)

Focussing on electrostatic chucks, the advantages are obvious:

- Ultrafast chucking and de-chucking (0,1sec.)
- low sticktion effects
- cut-off current of only a few nano amperes
- Use under all ambient pressures from high vacuum to normal pressure
- High voltage breakthrough threshold materials allow high clamping force



Materials for both vacuum and electrostatic chucks are zero-expansion (ULE or Zerodur®) or near zero-expansion such as Cordierite, Silicon-Carbide, Silicon-Nitride, SiSiC & Borosilicate glass.

The use of different chuck materials allows a tailored thermal conductivity. All materials are low out gassing and extremely pure.

With its wide range of know-how and experience in engineering and production, Berliner Glas provides the industry with ultra fast chucking solutions for highest yield and the ultimate benefit for high power fab equipment.

The BERLINER GLAS GROUP is one of the leading European providers of optical key components, assemblies and system for the whole light-using industry such as semiconductor, Sensors and Analytics, medical applications and defence. The BERLINER GLAS GROUP has about 950 employees in Germany, Switzerland, the United States and China.

**Contact:**

Berliner Glas KGaA  
Herbert Kubatz GmbH & Co.  
Waldkraiburger Str. 5  
D-12347 Berlin  
[www.berlinerglas.com](http://www.berlinerglas.com)

Astrid Freiding  
Marketing/Communications  
Phone: +49 30 60905-368  
Fax: +49 30 60 90 5-100  
[freiding@berlinerglas.de](mailto:freiding@berlinerglas.de)