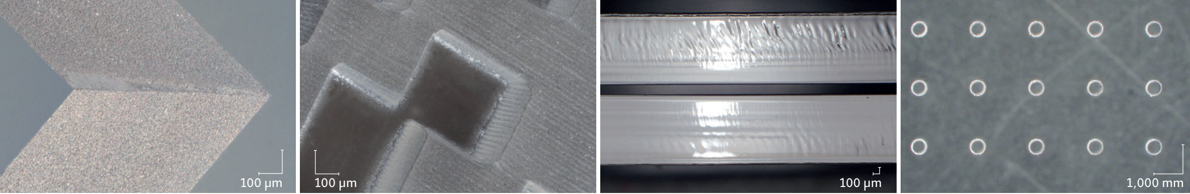

GLASS MACHINING

contact person
Antje Oßmann

PERFORMANCE FEATURES

- ultrafast laser cutting, drilling, filamenting, ablation & structuring of glasses, sapphire and transparent ceramics
- cutting quartz glass with fire-polished edges
- no burr or melt adhesion, hardly any post-processing with loose particles
- extremely high reproducibility
- typical taper when drilling approx. 1/3 of the material thickness › vertical bores or undercuts (on request)
- high-contrast laser inscription of plain text, serial numbers, DMC codes

PROCESSING OPPORTUNITIES

- different laser sources/systems from CO_2 to ultrafast lasers with wavelengths of 10,600 nm, 1,030 nm (IR), 515 nm (green), 355 nm (UV)
- minimum focus sizes up to ‹25 µm, tolerances of +/- 20 µm (structuring) and +/- 50 µm (drilling, cutting & filamenting)
- machining space of 400 x 500 mm^2
- material thicknesses of the thinnest glasses (‹20 µm) up to 3 mm
- automatic image recognition of position features

MATERIALS

- fused silica
- borosilicate glass, D 263®
- sapphire, spinel
- transparent ceramic
- soda-lime glass
- other optically transparent materials

TYPICAL APPLICATIONS

- interposers, through glass vias
- windows for optical components
- assembly of substrate materials for semiconductor technology
- separation of micro components on transparent substrates
- cavities and channel structures for microfluidic applications
- introduction of predetermined breaking points for later separation
- targeted matting of transparent surfaces for optical applications

Vielfalt in Material und Anwendung.

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LCP LASER CUT PROCESSING