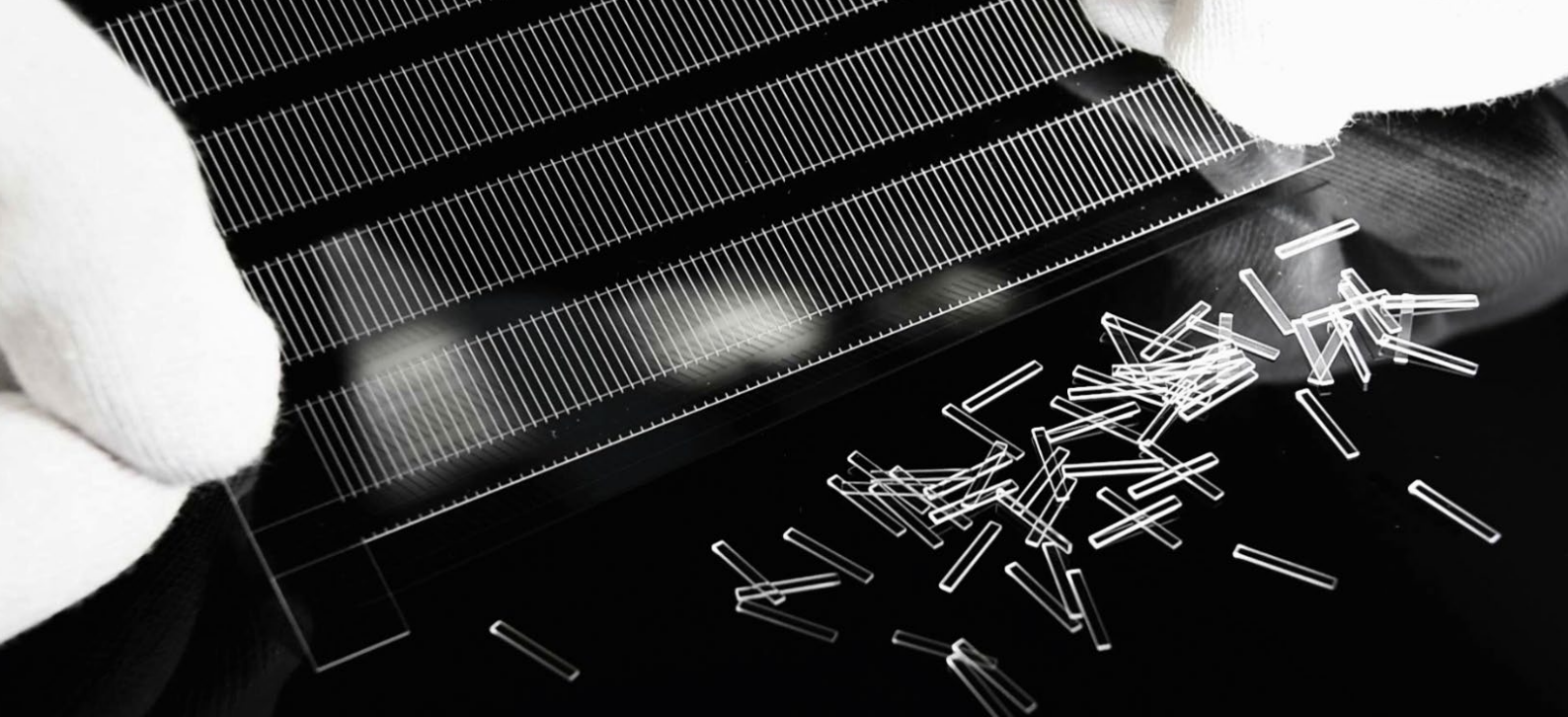




FLEXINITY® mini

Precision miniature glass components delivered in-frame for easier handling and integration

FLEXINITY® mini is designed for applications requiring miniature glass components with precise geometries, high-quality edges and reliable handling throughout manufacturing and integration.

As part of the SCHOTT FLEXINITY® portfolio, FLEXINITY® mini combines precision structuring with in-frame delivery, enabling detached glass components down to 1 mm while supporting coating, transport, pick-and-place assembly and final integration.

Why FLEXINITY® mini?

As glass components become smaller, they become increasingly challenging to handle, process and integrate reliably. Stable manufacturing therefore depends not only on precise geometries, but also on a delivery concept that supports every step of the production process.

FLEXINITY® mini keeps miniature glass components securely supported within a surrounding frame until final separation. This improves handling stability, simplifies manufacturing processes and helps reduce the risk of damage during coating, transport and assembly.

Application areas

FLEXINITY® mini supports applications requiring miniature glass components with precise geometries, clean edge quality and reliable handling, including:

- Opto-electronics
- Sensing components
- Semiconductor-related packaging
- Pick-and-place assembly
- High-end consumer and luxury goods
- Small structured glass components for compact technical systems

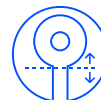
Key advantages



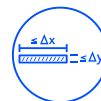
Small component geometry
Precise detached glass components for compact opto-electronic, sensing and packaging applications.



Defined contours and high-quality edges
Round, rectangular and free-shape outer contours with precise edge geometry.



In-frame delivery
Supports easier handling during coating, transport, assembly and integration.



Through-structures and tight tolerances
Optional through-structures with feature and position tolerances down to $\pm 10 \mu\text{m}$.

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Why FLEXINITY® mini for opto-electronics

For small, precise and easy-to-handle glass components in compact optical and opto-electronic systems.

FLEXINITY® mini supports applications where defined geometry, tight tolerances and reliable handling are required for downstream assembly and integration.

Why FLEXINITY® mini for semiconductor packaging and sensing

For miniature glass parts requiring defined contours, clean edges, reliable positioning and compatibility with automated handling processes.

FLEXINITY® mini can support compact technical assemblies where geometry, alignment and handling are critical to the integration process.

Why FLEXINITY® mini as premium design components

For visible functional or aesthetic glass elements requiring defined contours, optical through-holes or coating options.

FLEXINITY® mini enables small glass parts with precise outer contours and optional in-frame coating for design-driven applications.

Overcoming the limits of conventional singulation

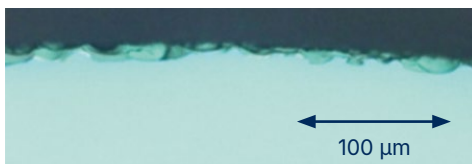
Small glass components can be challenging to process with conventional singulation methods. Depending on geometry and process flow, methods such as CNC processing, hollow drilling or sand blasting may involve trade-offs in edge quality, final geometry, handling efficiency or total cost of ownership.

FLEXINITY® mini offers an alternative approach by combining precise outer contours, optional through-structures and in-frame delivery for easier downstream processing and integration.



FLEXINITY® mini Precise edge geometry

Structured miniature glass parts with defined contours and high-quality edges.



Hollow drilling Potential edge irregularities

Conventional drilling methods may create limitations in final edge quality depending on geometry and process conditions.



Sand blasting Potentially rougher edge profile

Abrasive structuring methods may result in rougher edges or less controlled final geometries depending on the design.

Standard structuring capabilities*

Thickness range (depending on glass type)	0.1 – 3.3 mm
Format (frame)	Max. 600 mm in diameter 
Size of detached parts	Down to 1 mm
Layout (outer contour of detached parts)	Round, rectangular, free shape
Layout (holes)	Through structures according to customer specifications
Outer contour & hole radius	Down to 25 µm
Minimum dimension of structure element	100 µm
Feature size tolerance	< 20 µm (equiv. ± 10 µm)
Position tolerance of features	< 20 µm (equiv. ± 10 µm)
Frame size	≥ 10 mm

* Limitations in feature design and demands deviating from these capabilities will be evaluated upon request



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