SCHOTT Glass Panels

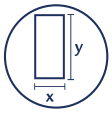
for advanced semiconductor packaging

Explore the advantages of glass as material for advanced IC substrates or Interposers, contributing to high-density interconnect technology and advanced heterogeneous packaging. Thanks to its tailored Coefficient of Thermal Expansion (CTE), versatile sizing, high stiffness and smooth surfaces, combined with precise structurability, glass enables optimum package performance for advanced semiconductor applications.

With a wide material range and ambitious development roadmap, we offer customized glass solutions for semi-conductors' packaging. Our Glass Panels address challenging trends such as high data transfer efficiency thanks to high I/O density, subsequent increase of unit sizes and the emergence of next-generation technologies like co-packaged optics.

Glass is becoming the preferred material for IC and micro-electronic packaging due to its adjustable thermal expansion, excellent electrical properties, high temperature resistance, and cost effectiveness. It offers rigidity and smooth surfaces that enable fine line lithography and reduce thermal distortion in thin packages.

Hugh versatility



Various formats

High precision

Structuring-ready

High stiffness

Excellent dielectric properties

Key Features:

High-Performance Panels:

- Available in various glass formats, including panels sized at 510 x 515 mm with varying thicknesses, our panels feature high geometrical accuracy and surface quality, completed with precisely processed edges.

Unmatched Versatility:

- Thanks to a range of glass types with different CTEs and beneficial dielectric properties, our panels provide unlimited opportunities for IC and RF substrate designs, as well as system packages.

Ready for Advanced Structuring:

- Proven to excel in super fine, high-density through glass via (TGV) laser structuring, our panels can effortlessly accommodate complex designs and mechanically reliably openings for embedding.

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glass made of ideas

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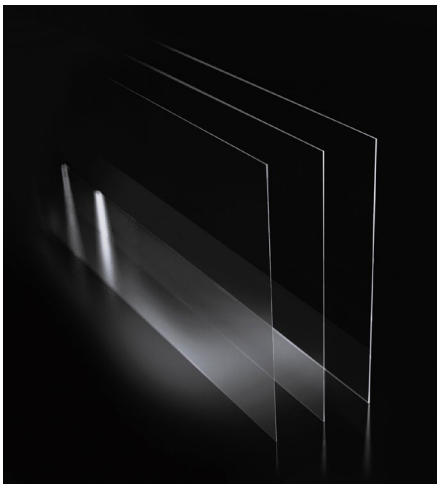
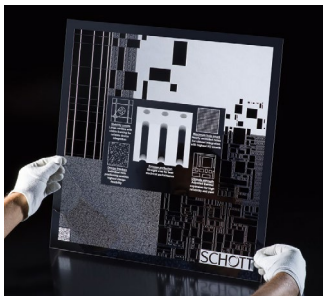
Technical specifications

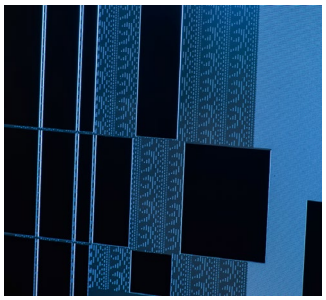
SCHOTT Glass Panel product features for high-density interconnect technologies

Properties*	Target specification
CTE range (20 – 300 °C)**	3.2 | 3.3 | 5.0 | 7.2
Format	510 x 515 mm
Panel thickness**	0.5 – 1.1 mm
Thickness tolerance range***	± 10 – 20 µm
TTV range***	≤ 10 – 20 µm
Warp range***	≤ 100 – 200 µm
Scratch/Dig	40/20
Particles (non-removable)	≤ 100 – 200 µm
Edge defects	≤ 100 – 200 µm
Edge processing	round or chamfer shape, grinded



* tighter specifications upon request
** other materials or thicknesses upon request
*** depending on glass type and thickness





Introducing the SCHOTT sampling offering: highly accurate structuring

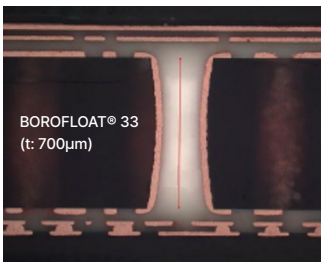
Emerged from SCHOTT's extensive experience in laser structuring for sensing & imaging applications, FLEXINITY® connect is offered to assist customer development projects.

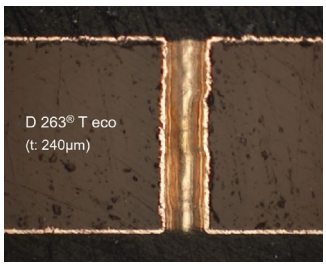
FLEXINITY® connect comprises super precise high-density TGV through – hole patterns, combinable with large openings ready for embedding of active and passive components.

Explore our application support: high performance metallization

SCHOTT glass can be perfectly metallized on both, surfaces and through-holes, using diverse process conditions.

Our **partner network** offers various glass types, including D 263® T eco, BOROFLOAT® 33, and SCHOTT® AF 35 G, with sizes up to 515 mm x 510 mm, achieving aspect ratios over 1:5 and peel-off strengths from 500 to 1500 N/m or more, with both full and conformal metallization options.





ENGLISH 07/2024 kn/nino Printed in Germany

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