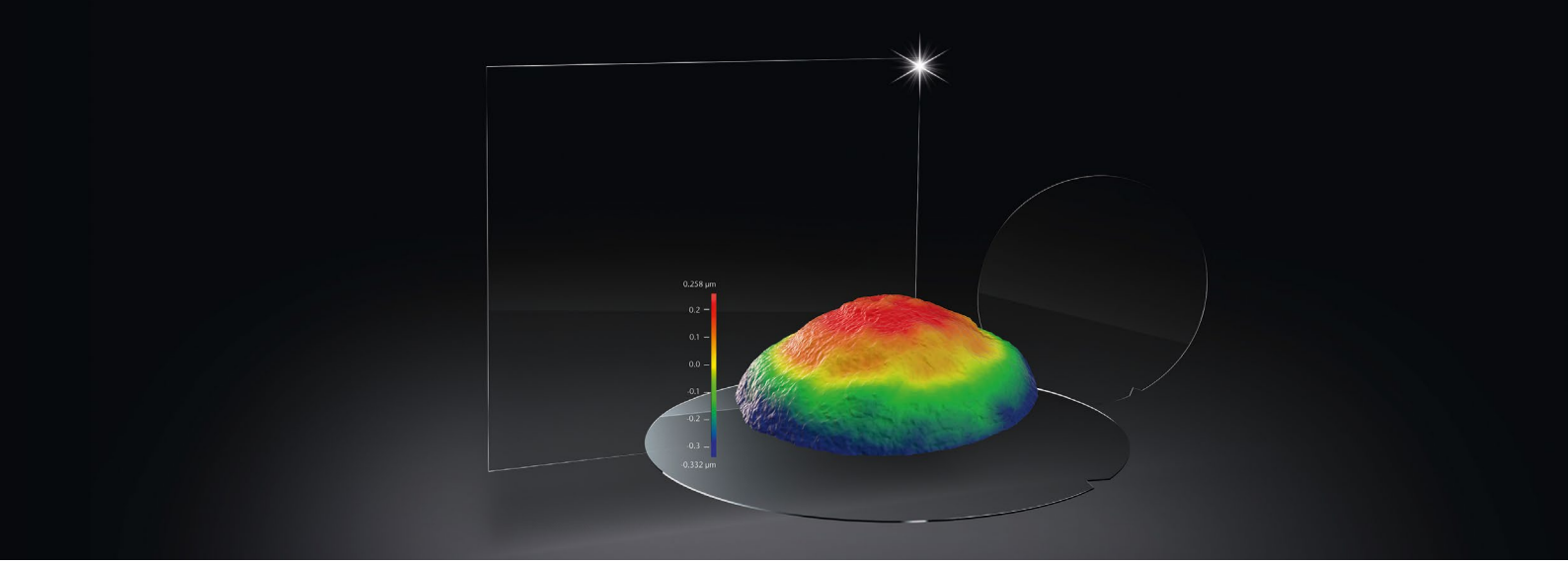


High-performance glass carriers

for advanced semiconductor packaging

For decades, SCHOTT has built a leading reputation for high-quality glass carrier wafers and panels, serving advanced industries like semiconductors, optoelectronics, automotive, science, and biotechnology. Our experts help develop tailored solutions to meet specific customer needs.

Our glass carriers are essential in semiconductor applications as temporary bonding and debonding substrates for silicon wafers and dies. SCHOTT glass's high optical transmission – from UV to IR – enables efficient laser-assisted debonding and advanced packaging solutions.

With increasingly complex semiconductor architectures, demand for mechanically and chemically stable, ultra-flat carrier materials continues to grow. Glass wafers and panels are widely used in applications such as:

- 2.5D/3D IC (2.5- and 3-dimensional integrated circuits)
- FOWLP (fan-out wafer-level packaging) & FOPLP (panel-level packaging)
- Wafer thinning

Why choose SCHOTT glass carriers?

High raw glass quality
High reproducibility of our melting processes ensures high and consistent quality of raw glass.

Broad CTE range
Wide selection of materials to ensure optimal thermal expansion matching with different device substrates.

Excellent surface quality and flatness
High-level glass quality and a surface with very low roughness values removes the nees for further surface refinement.

Unmatched precision
Ultra-low total thickness variation (TTV) and minimal warpage ensure maximum process stability.

Outstanding optical properties
Superior transmission from UV to IR, enabling advanced laser and optical processing.

Exceptional chemical resistance
High resistance to acids, alkalis, and hydrolytic degradation for enhanced durability

Multiple product geometries
Glass is an ideal carrier substrate with minimal size limitations and, as a wafer, offers silicon-compatible notch and chamfer geometries plus glass's benefits.

Designed for semiconductor processes
Ideal for temporary bonding, silicon thinning, and fan-out packaging

Versatile processing options
State of the art processing capabilities available to meet diverse semiconductor requirements for carrier wafers and panels.

Glass carriers produced according to industry standards like (example for wafers)

- Flat/Notch: SEMI-standard compliant
- Laser marking: SEMI-standard compliant
- Cleaning: Ultra-/Megasonic cleaning usually in ISO 5 cleanroom
- Packaging: Inspection & packaging usually under ISO 5 conditions in FOSB, RTU wafer boxes

Process-ready design
Laser-marked, cleanroom-packaged traceable wafers and panels for seamless integration into high-tech manufacturing

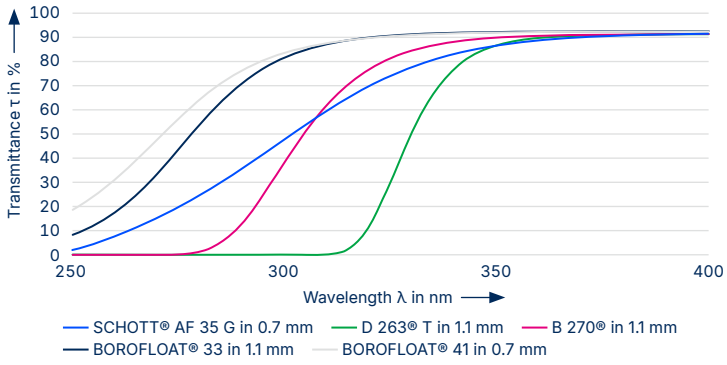
Technical expertise
Our specialists offer tailored support to help customers find the best carrier material for their application.

SCHOTT

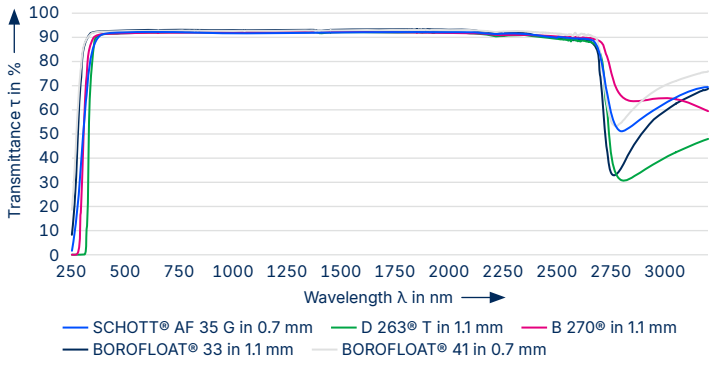
Glass carriers

Our glass carrier wafer and panels convince through high-quality processing

Spectral transmittance λ = 250 nm to 400 nm

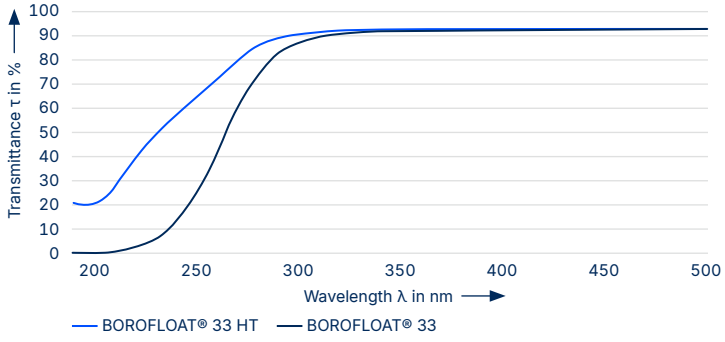


Spectral transmittance λ = 250 nm to 3,200 nm



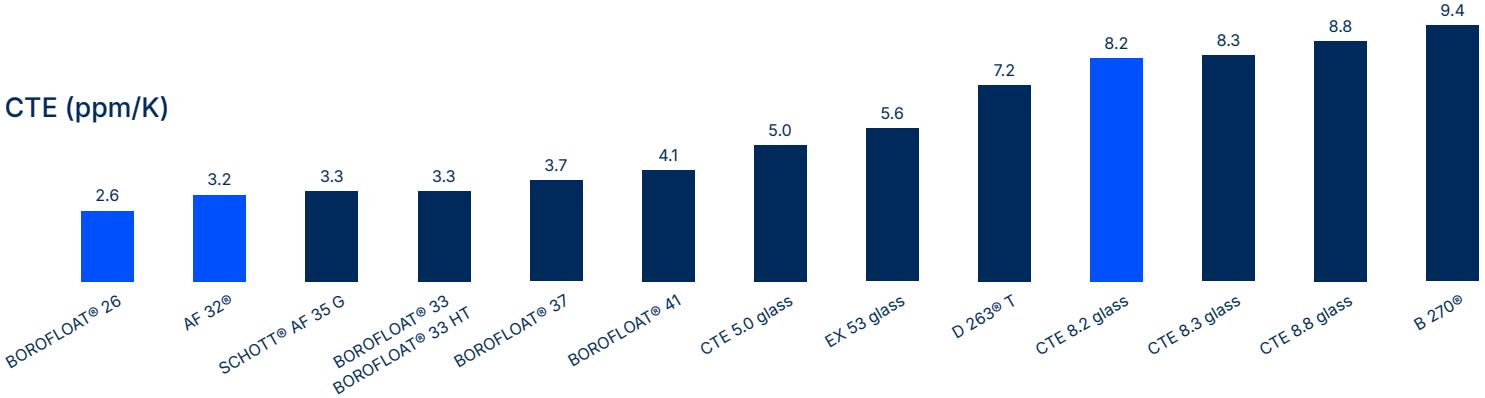
Item	Wafer(1)	Panel(1)
Format	6″, 8″, 12″ [150 – 300 mm]	max. 650 x 650 mm(2)
Thickness(3)	0.40 – 2.75 mm	0.50 – 2.75 mm
Thickness tolerance(4)	± 2.5 – 5.0 µm	± 15 – 20 µm
Total thickness variation (TTV)(4)	≤ 0.5 – 2.0 µm	≤ 15 – 20 µm
Warp(4)	12″: ≤ 50 µm 8″: ≤ 30 µm	≤ 100 – 200 µm
Cosmetic quality Scratch/Dig	40/20 – 20/10	40/20 – 20/10

Spectral transmittance λ = 200 nm to 500 nm



(1) Tighter specifications upon request
(2) Typically 600 x 600 mm
(3) Typical values, other thicknesses on demand possible
(4) Typical values, depending on glass type and thickness

CTE (ppm/K)



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