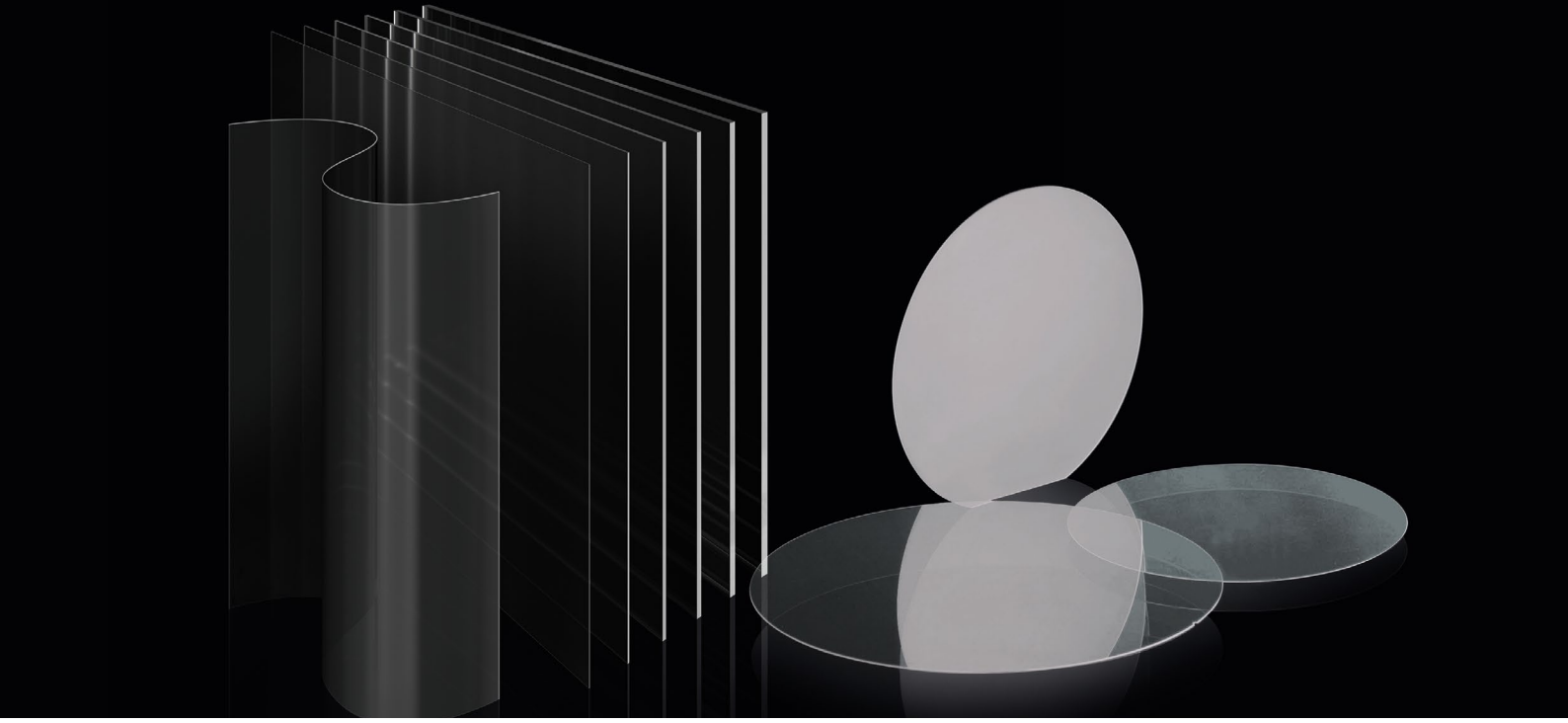


D 263® T

Precision borosilicate thin glass for imaging, sensing and optical applications

D 263® T is a colorless borosilicate thin glass designed for applications that require high optical transmittance, precise geometrical properties and reliable processing performance.

Manufactured using SCHOTT's down-draw process, D 263® T offers a fire-polished surface with low roughness and is available in thicknesses from 0.03 mm to 1.10 mm. Its combination of optical quality, tight thickness control and chemical durability and thermal stability makes it suitable for demanding applications in optics, sensing, semiconductors and consumer electronics.

Key advantages

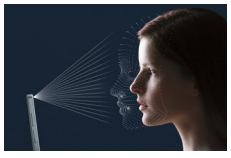
- High optical transmittance
- Wide thickness range
- Tight geometrical properties
- Fire-polished surface
- High chemical resistance
- High temperature stability

Applications

D 263® T is suited for technically demanding applications in:



Automotive electronics



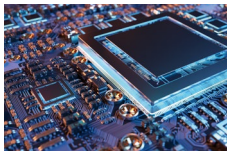
Consumer electronics



Smart home devices



Optical devices



Semiconductor applications



Industrial applications

D 263® T can be used as a thin glass substrate or cover glass for:

- IR cut filters
- Optical low-pass filter (OLPF) substrates
- Wafer-level optics
- Micro-lens arrays (MLA)
- Diffractive optical elements (DOE)
- Diffusers
- Sensor covers
- Carrier wafers

SCHOTT

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Optical performance

D 263® T provides high optical transmittance in the UV to NIR range and a colorless appearance for applications where image quality and low coloration are important.

Chemical and thermal reliability

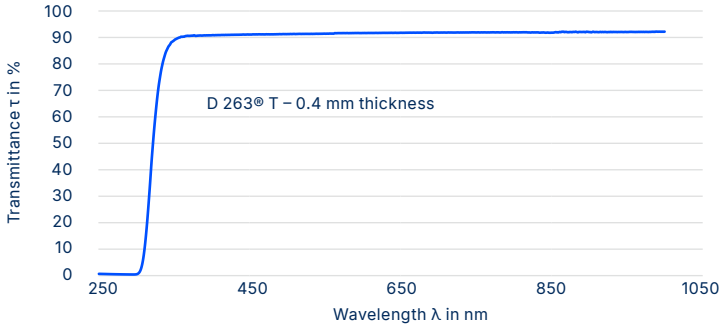
D 263® T is designed for demanding processing and application environments.

Geometrical precision

Tight thickness tolerance, low TTV and low warp support high-quality wafer-level optics and precise substrate processing.

A wide range of thicknesses

While D 263® T is available in a wide variety of thicknesses (from 0.03 mm to 1.1 mm), the geometrical tolerances of the glass remain consistently tight, with guaranteed quality for sheet, cut-to-size substrates and wafer.



Optical properties	
Refractive index n_D	1.5230
Luminous transmittance τ_{vD65} (d = 0.30 mm)	91.7 %

Chemical properties		
Hydrolytic resistance	DIN ISO 719	HGB 1
Acid resistance	DIN 12116	S 3
Alkali resistance	DIN ISO 695	A 2

Mechanical properties		
Density ρ	g/cm³	2.51
Young's modulus E	kN/mm²	72.9
Poisson's ratio μ		0.21
Knoop hardness	HK 0.1/20	470
Vickers hardness	HV 0.2/25	510
Chemical toughening		Possible

Electrical properties		
Dielectric constant ε_r	1 GHz	6.4
	5 GHz	6.3
Dissipation factor tan δ in 10^{-4}	1 GHz	74
	5 GHz	101

Thermal properties	
Coefficient of thermal expansion α (20 °C; 300 °C)	$7.2 \cdot 10^{-6}\ K^{-1}$
Transformation temperature T_g	557 °C

Geometrical properties	Sheet		Wafer	
Formats*	Min. length x width [mm]	440 x 360	Rectangular min.	50 x 50
	Max. length x width [mm]	510 x 430	Rectangular max.	300 x 300
			Round min.	50 (2 inch)
			Round max.	300 (12 inch)
Thickness range	Min. [mm]	0.03		
	Max. [mm]	1.10		
Surface roughness		< 1 nm RMS		

* Customized formats are available upon request.

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