

# D 263<sup>®</sup> T eco

The gold standard in imaging & sensing

This thin borosilicate glass is the gold standard in imaging and sensing fields. Thanks to unique down-draw technologies, D 263<sup>®</sup> T eco has a fire-polished surface, high optical precision and geometrical accuracy. It is available in a variety of thicknesses from 1.1 mm down to 0.03 mm.



High optical transmittance



Wide thickness range



High chemical resistance



Tight geometrical properties



Fire-polished surface with low roughness



High temperature stability

## Applications

All-round technical excellence makes D 263<sup>®</sup> T eco a highly valued glass in many applications across different fields, setting gold standards in these markets.

D 263<sup>®</sup> T eco can be used for:

- IR cut filter
- Optical low pass filter (OLPF) substrate
- Wafer-level optics
- Micro-lens arrays (MLA)
- Diffractive optical elements (DOE)
- Diffusors
- Sensor cover
- Carrier wafer



Automotive



Consumer electronics



Smart home



Optics



Semiconductors



Industry

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glass made of ideas

# SCHOTT D 263<sup>®</sup> T eco

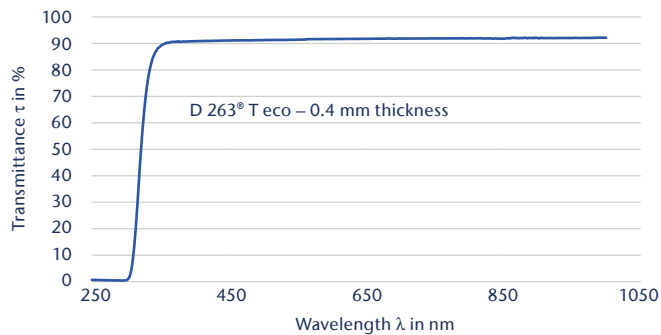
## Outstanding and adaptable technical advantages

### High optical transmittance

The unique composition of D 263<sup>®</sup> T eco and its top-quality blend of raw materials enables a high level of high optical transmittance in the UV to NIR range. A colorless appearance also helps to deliver optimum image quality, without unwanted colorization effects regardless of application.

### High chemical stability

SCHOTT D 263<sup>®</sup> T eco performs consistently well in demanding conditions. Its high chemical resistance makes it particularly resilient in the consumer electronics, semiconductor, automotive and optical fields.



### A wide range thicknesses

While D 263<sup>®</sup> T eco 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.

### Tight geometrical properties

Tight thickness tolerance, low TTV and warp enables high quality wafer level optics.

Mechanical properties		
Density ρ	g/cm <sup>3</sup>	2.51
Young's modulus E	kN/mm <sup>2</sup>	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 <sub>r</sub>	1 GHz	6.4
	5 GHz	6.3
Dissipation factor tan δ in 10 <sup>-4</sup>	1 GHz	74
	5 GHz	101

Thermal properties		
Coefficient of thermal expansion α (20°C; 300°C)	7.2 · 10 <sup>-6</sup> K <sup>-1</sup>	
Transformation temperature T <sub>g</sub>	557°C	

Optical properties	
Refractive index n <sub>D</sub>	1.5230
Luminous transmittance τ <sub>vD65</sub> (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

Geometrical properties	Sheet		Wafer	
	Formats*	Min. Length x Width [mm]	440 x 360	Rectangular min.
	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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