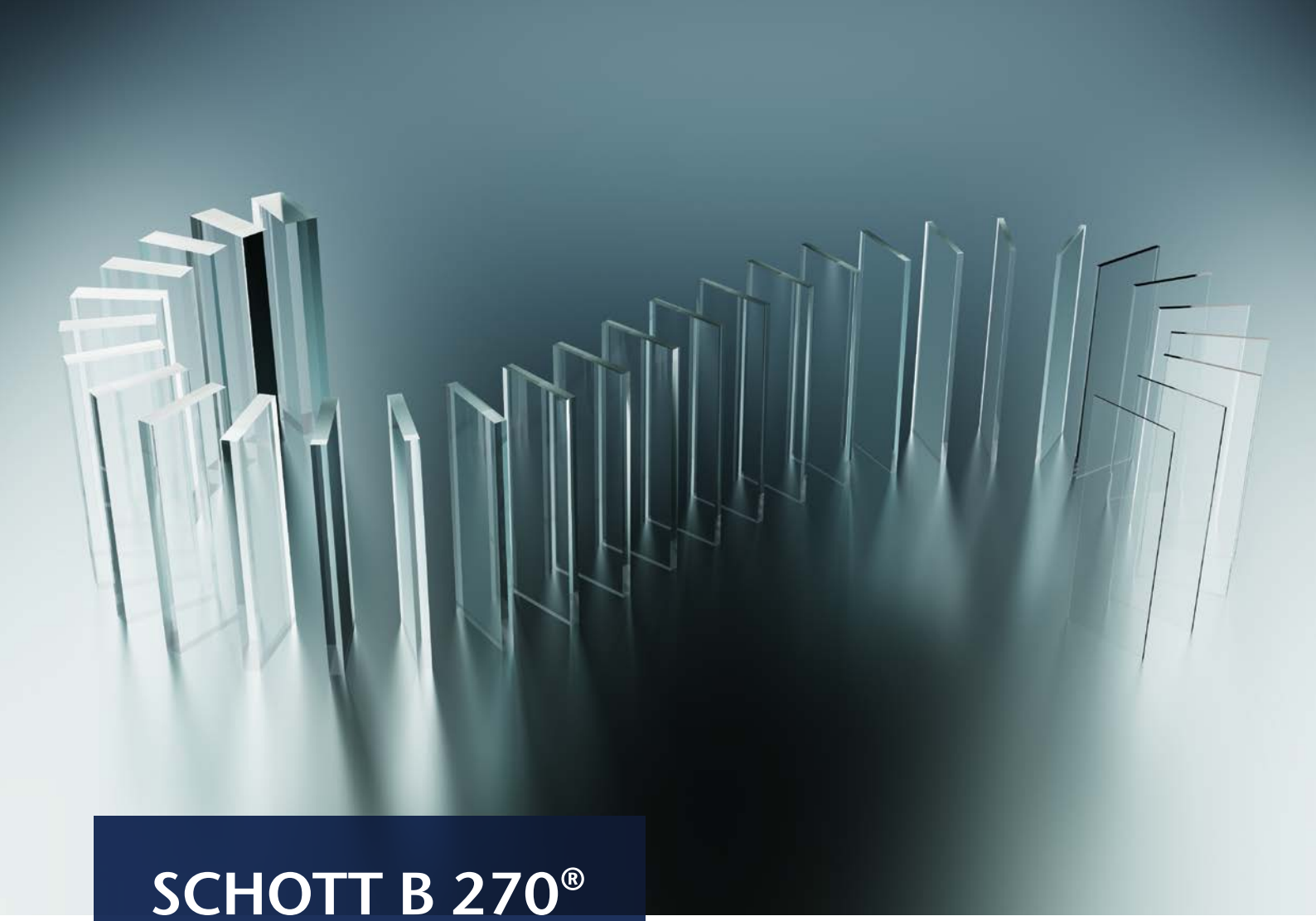

SCHOTT B 270®

The clear choice.

SCHOTT B 270® offers outstanding optical performance in a wide range of thicknesses. Suitable for a broad range of applications, customers across a wide variety of industries have relied on this highly transparent, super-white modified soda-lime glass for decades thanks to its high quality.

Outstanding transmission

Homogenous refractive index

High stability against solarization

High coefficient of thermal expansion

Fire-polished surface

Easy-to-process

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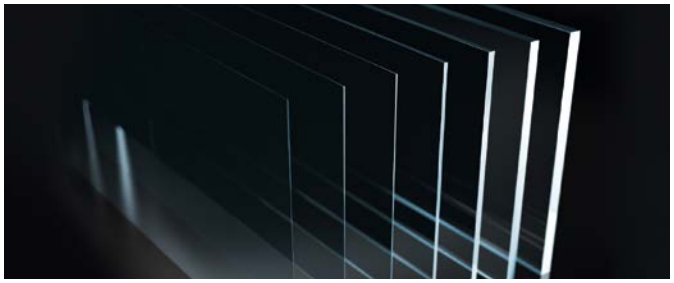
Crystal-clear performance

The crown glass B 270® is designed to deliver consistent transmittance of light across a range of wavelengths, from ultraviolet to near-infrared. SCHOTT uses a selection of high-purity raw materials for the manufacture of this modified soda-lime glass to avoid any discoloration, which gives the glass a beautifully pure super-white look and exceptional clarity.



Wide thickness range

SCHOTT ensures that B 270® fits the broad spectrum of customer requirements by offering a wide thickness portfolio. SCHOTT B 270® is available in a thickness range from 0.3 mm up to 10 mm. This means the need for further processing is reduced to a minimum, if not avoided altogether.

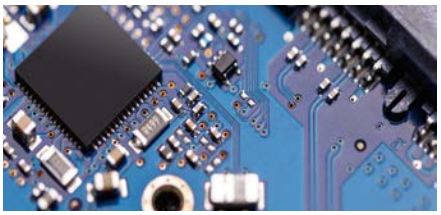
Easy to process

Easy processing of B 270® enables highly cost-effective processing. One of its advantages is the **fast edge processing** – similar to standard soda-lime glass. The **high CTE** of 9.4 (in $10^{-6}\cdot K^{-1}$) is an unique feature compared to other specialty glass materials and makes it **ideal for thermal toughening**. The **high alkaline content** enables **chemical strengthening**. Thanks to its chemically identical **fire-polished surfaces** on both sides, B 270® is well suited for **coating processes**, without additional effort of polishing or tracking of the “tin side”.

A broad range of applications

As one of our most popular products, B 270® has been relied upon for decades by our customers for a wide variety of applications, from standard optical components to packaging solutions for consumer electronics. A true all-rounder, B 270® continues to provide versatility and reliability in a vast number of areas.

Filter substrates



IC Packaging

Optical components

Coating substrates

Biotech

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SCHOTT B 270®

Key Properties

General

Technical data* in mm	
Dimensions	• 1.680 x 900 • 900 x 840 • 406 x 258
Standard thicknesses	• 0.9 • 1.0 • 1.65 • 2.0 • 2.3 • 2.5 • 3.0 • 3.5 • 4.0 • 5.0 • 10.0

* Other formats and thicknesses upon request

Optical

Properties	Value
Refractive index n_e	1.5251 ± 0.001
Abbe value ν_e	58.3 ± 0.6

Thermal

General Properties	Unit	Value
CTE (Coefficient of thermal expansion) α	in $10^{-6} \cdot K^{-1}$(20 °C; 300 °C)	9.4
Mean specific heat capacity c_p	in J/(g·K) (20 °C to 100 °C)	0.8
Transformation temperature T_g	in °C	542

Viscosities	Viscosity lg η in dPas	Temperature ϑ in °C
Strain point	14.5	507
Annealing point	13.0	535
Softening point	7.6	711

Mechanical

Properties	Unit	Value
Density ρ	in g/cm³	2.56
Young's modulus E	in kN/mm²	71.1
Poisson's ratio μ		0.22
Torsion modulus G	in kN/mm²	29
Knoop hardness	HK 0.1/20	500
Vickers hardness	HV 0.2/25	510

Transmittance values

Luminous transmittance at thickness in mm	τV_{D65} in %
0.9	91.9
2.0	91.7
6.0	91.6

Edge wavelength λc (τ = 0,46) at thickness in mm	Wavelength in mm
0.9	300
2.0	310
6.0	323

Electrical properties

Dielectric constant εr (at ϑ = 25 °C)	Value
at 1 MHz	7.5
at 1 GHz	6.7
at 5 GHz	6.7

Dissipation factor tan δ (at ϑ = 25 °C)	Value
at 1 MHz	$32 \cdot 10^{-4}$
at 1 GHz	$59 \cdot 10^{-4}$
at 5 GHz	$84 \cdot 10^{-4}$

Chemical

Hydrolytic resistance (acc. to DIN ISO 719)	Value
Class	HGB 3
Equivalent of alkali per gram glass grains in µg/g	136

Acid resistance (acc. to DIN 12116)	Value
Class	S 2
Half surface weight loss after 6 hours in mg/dm²	0.7

Alkali resistance (acc. to DIN ISO 695)	Value
Class	A 1
Surface weight loss after 3 hours in mg/dm²	71

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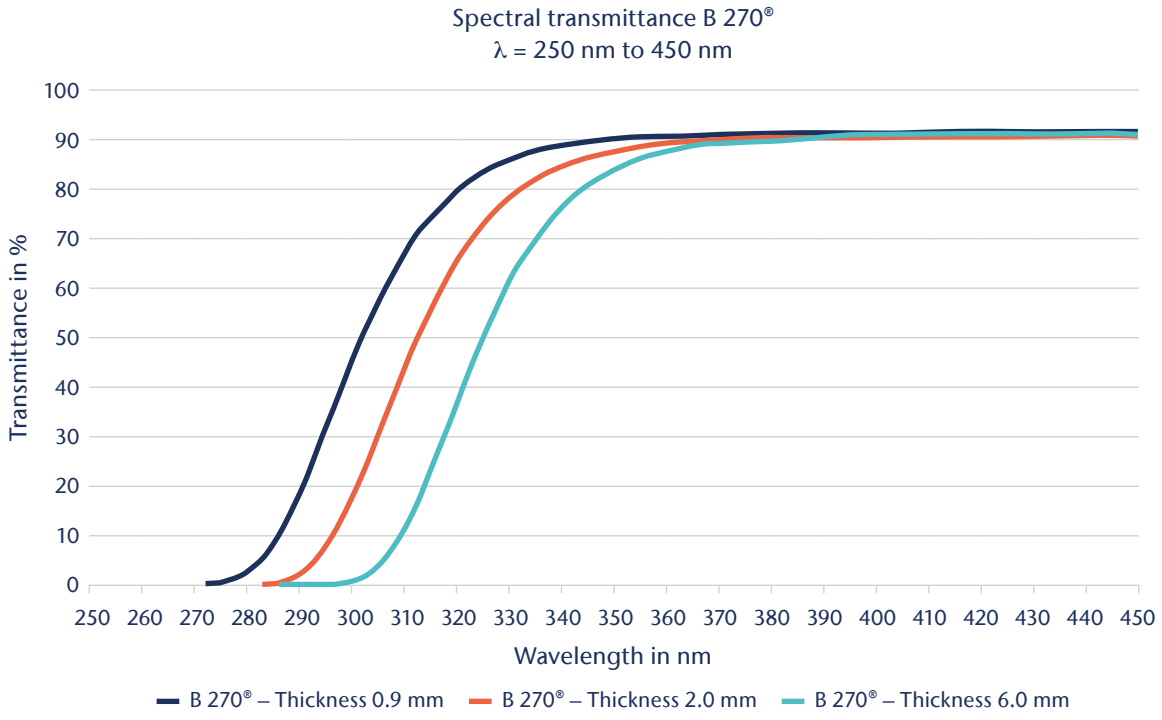
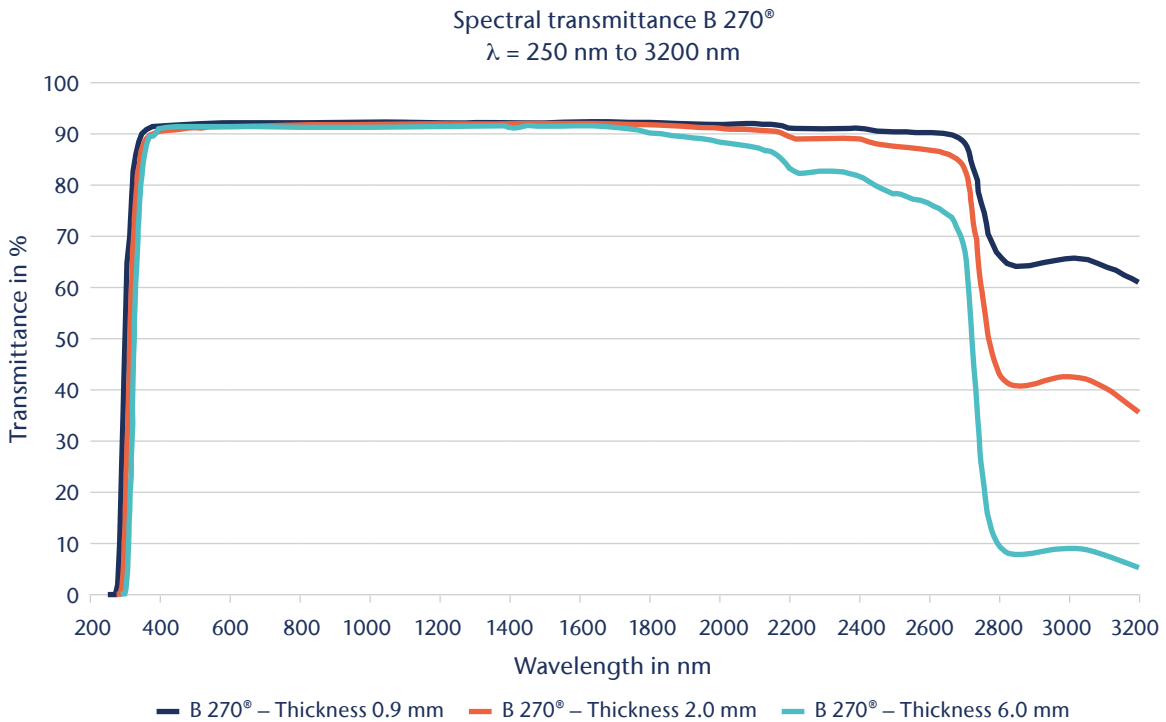
SCHOTT B 270®

Spectral transmittance





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