

SCHOTT Xensation™ Touch

Clear Borosilicate Glass for Resistive Touch Technologies

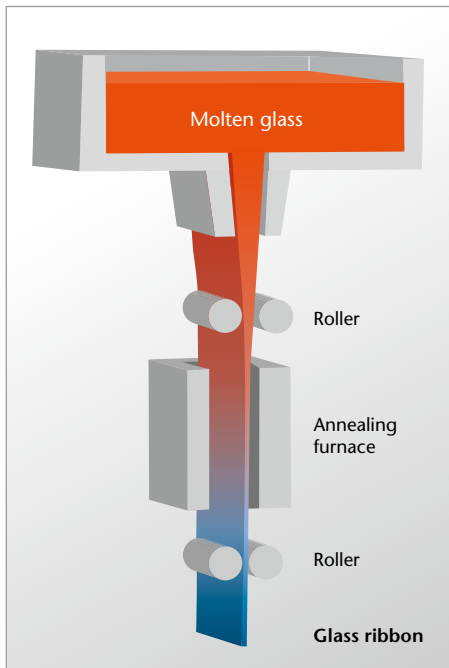
Xensation™ is the answer to all of your cover and touch technology needs. SCHOTT is unique in being able to offer the broadest range of high-quality glass types for all cover and touch applications, including resistive, capacitive, optical and acoustic. Xensation™ Touch is a thin, clear, borosilicate glass with outstanding resistance to chemical attack and tough environmental conditions for resistive touch technologies. Discover Germany's newest Xensation™.

Key-Benefits of Xensation™ Touch

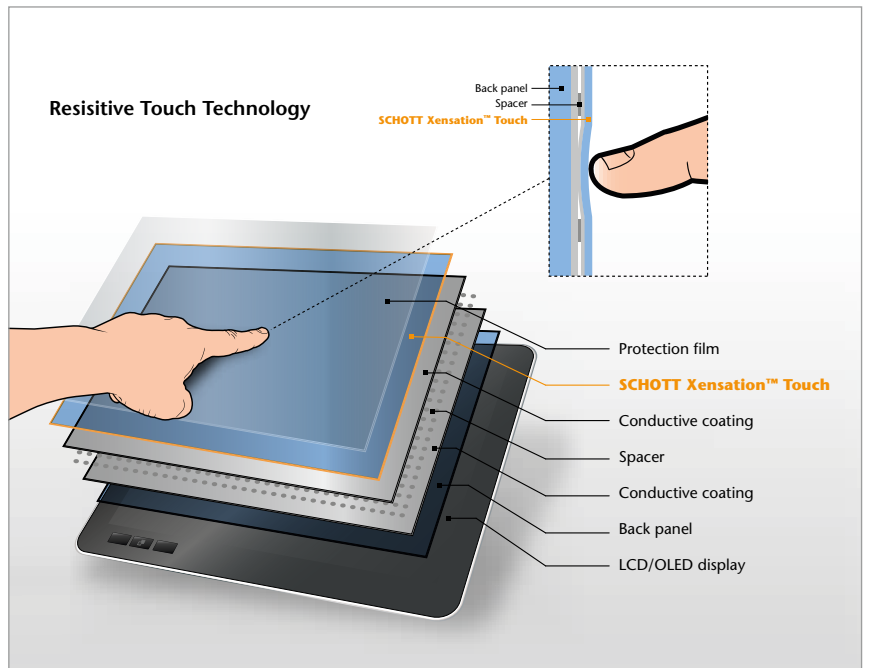
- **High transmittance** for bright display luminance
- Excellent **resistance to humidity and smudges**
- **Sleek and lightweight**, with a thickness range starting at 0.03 mm
- **High process stability** for ITO backside coating
- Fire-polished surface grade



Xensation™ Touch is our solution to resistive touch technologies.



Xensation™ Touch is produced using SCHOTT's special down-draw process.



A light touch to the resistive touch screen creates contact between the two conductive layers behind the screen. The exact position is determined by a controller.

Thermal Properties

Coefficient of Mean Linear Thermal Expansion α (20 °C; 300 °C)	$7.2 \cdot 10^{-6} \text{ K}^{-1}$
Transformation Temperature T_g	557 °C
Strain Point ($10^{14.5}$ dPas)	529 °C
Annealing Point (10^{13} dPas)	557 °C
Softening Point ($10^{7.6}$ dPas)	736 °C
Specific Heat Capacity c_p (20 °C; 100 °C)	0.8 J/(g·K)

Chemical Properties

Hydrolytic resistance acc. to DIN ISO 719	Hydrolytic class	HGB 1
Equivalent of alkali (Na_2O) per gram of glass grains in $\mu\text{g/g}$		20
Acid resistance acc. to DIN 12116	Acid class	S 2
Half surface weight loss after 6 hours in mg/dm^2		1.4
Alkali resistance acc. to DIN ISO 695	Class	A 2
Surface weight loss after 3 hours in mg/dm^2		88

Electrical Properties

Dielectric Constant ϵ_r at 1 MHz	6.7
Dissipation factor $\tan \delta$ at 1 MHz	$61 \cdot 10^{-4}$
Electric Volume Resistivity ρ_D for A.C. at 50Hz	
$v = 250 \text{ °C}$	$1.6 \cdot 10^8 \Omega \cdot \text{cm}$
$v = 350 \text{ °C}$	$3.5 \cdot 10^6 \Omega \cdot \text{cm}$

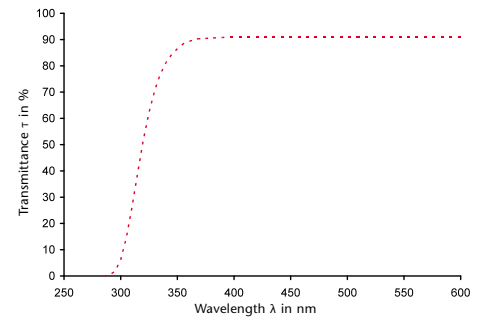
Sheet Dimensions

Nominal Thickness [mm]	Width [mm]	Length [mm]
0.03 - 1.1	360 + 10 / -0	440 ± 10

Following Thicknesses are available [mm] :
 0.03; 0.05; 0.07; 0.10; 0.145; 0.175; 0.21;
 0.25; 0.30; 0.40; 0.50; 0.55; 0.70; 0.90; 1.10

Optical Properties

Refractive Indices	
n_e ($\lambda = 546 \text{ nm}$)	1.5255
n_d ($\lambda = 588 \text{ nm}$)	1.5231
Abbe Value v_e	55
Luminous Transmittance τ_{VD65} (Glass thickness 1.1 mm)	91.7 %



Spectral Transmittance
 Thickness: 0.4 mm

Mechanical Properties

Density annealed at 40 °C/h	2.51 g/cm ³
Young's Modulus E	72.9 kN/mm ²
Knoop Hardness HK _{0.1/20}	590
Poisson's Ratio	0.208
Stress Optical Coefficient C ($1.02 \cdot 10^{-12} \text{ m}^2/\text{N}$)	3.4
Torsion Modulus G	30.1 kN/mm ²

