

SCHOTT Xensation™ Sound

Clear, High Transmission Crown Glass for Acoustic Touch Technologies

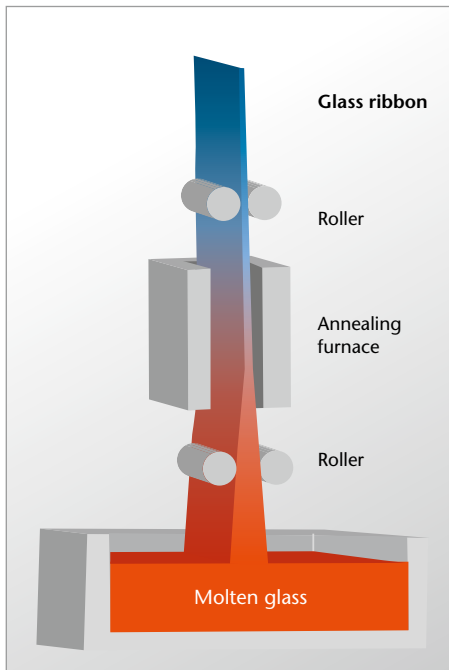
Xensation™ is the answer to all of your cover and touch technology needs. SCHOTT is unique in being able to offer the broadest range of high-quality glass types for all cover and touch applications, including acoustic, capacitive, resistive and optical. Xensation™ Sound is a clear, high transmission crown glass resulting in pure transformation of signals for acoustic touch technologies. Discover Germany's newest Xensation™.

Key-Benefits of Xensation™ Sound

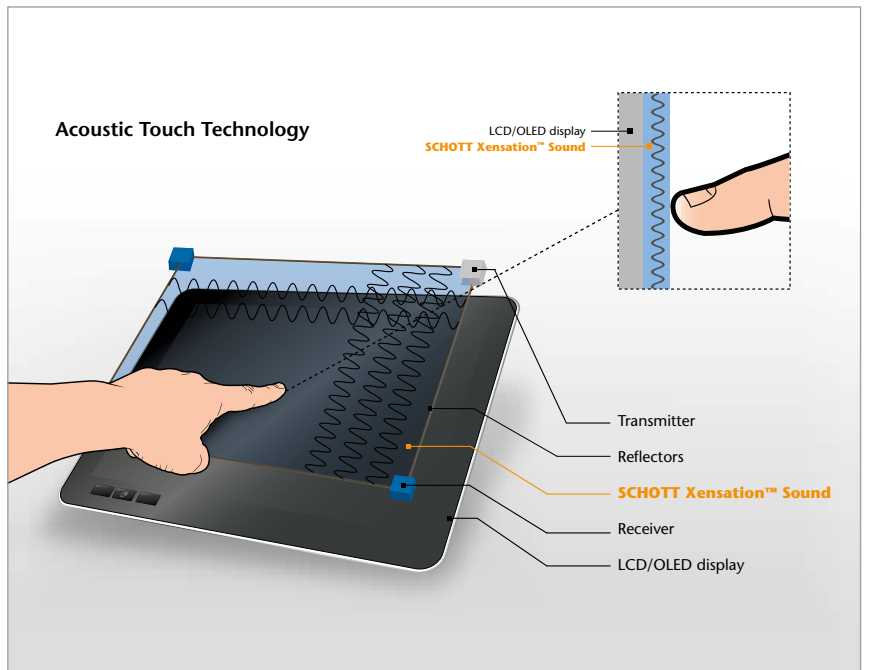
- **High transmittance** for bright display luminance
- **High clarity** enables brilliant color reproduction
- **Low attenuation rate for surface acoustic wave** touch systems
- **Low susceptibility to solarization** for outdoor applications
- Fire-polished surface grade



Xensation™ Sound is our solution to acoustic touch technologies.



Xensation™ Sound is produced using SCHOTT's special up-draw process.



In acoustic touchscreen technology, transmitters constantly send ultrasonic waves through the glass directed by the reflectors. A touch changes the pattern of the waves and a controller determines the exact position of the touch by analyzing this change.

Thermal Properties

Coefficient of Mean Linear Thermal Expansion α (20 °C; 300 °C)	$9.4 \cdot 10^{-6} \text{ K}^{-1}$
Transformation Temperature T_g	536 °C
Strain Point ($10^{14.5}$ dPas)	505 °C
Annealing Point (10^{13} dPas)	535 °C
Softening Point ($10^{7.6}$ dPas)	723 °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 3
Equivalent of alkali (Na_2O) per gram of glass grains in $\mu\text{g/g}$		170
Acid resistance acc. to DIN 12116	Acid class	S 2
Half surface weight loss after 6 hours in mg/dm^2		1.0
Alkali resistance acc. to DIN ISO 695	Class	A 2
Surface weight loss after 3 hours in mg/dm^2		80

Electrical Properties

Dielectric Constant ϵ_r at 1 MHz	7.0
Dissipation Factor $\tan \delta$ at 1 MHz	$26 \cdot 10^{-4}$
Electric Volume Resistivity ρ_D for A.C. at 50Hz	
$v = 250 \text{ °C}$	$2.4 \cdot 10^8 \Omega \cdot \text{cm}$
$v = 350 \text{ °C}$	$5.8 \cdot 10^6 \Omega \cdot \text{cm}$

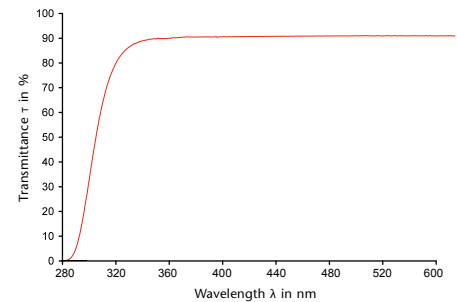
Sheet Dimensions*

Thickness [mm]		Length • Width [mm]
0.80 - 4.00	Stock Sizes from Melting Tank	1680 • 840 - 920 ± 25
	Cut Sizes	840 - 920 • 560 ± 10
		840 - 920 • 840 ± 10
4.50 - 10.00	Stock Sizes from Melting Tank	1680 • 860 - 920 ± 25
	Cut Sizes	860 - 920 • 560 ± 10
		860 - 920 • 840 ± 10
0.80 - 8.00	Cut Sizes	406 • 258 ± 1
> 8.00 - 10.00	Cut Sizes	406 • 258 ± 2

*Special dimensions upon request

Optical Properties

Refractive Indices	
n_e ($\lambda = 546 \text{ nm}$)	1.5231
n_d ($\lambda = 588 \text{ nm}$)	1.5230
Abbe Value v_e	58
Luminous Transmittance τ_{VD65} (Glass Thickness 1.1 mm)	91.7 %



Spectral Transmittance
Thickness: 2 mm

Mechanical Properties

Density annealed at 40 °C/h	2.56 g/cm^3
Young's Modulus E	69.8 kN/mm^2
Knoop Hardness $\text{HK}_{0.1/20}$	500
Poisson's Ratio	0.228
Stress Optical Coefficient C ($1.02 \cdot 10^{-12} \text{ m}^2/\text{N}$)	2.7
Torsion Modulus G	28.4 kN/mm^2

