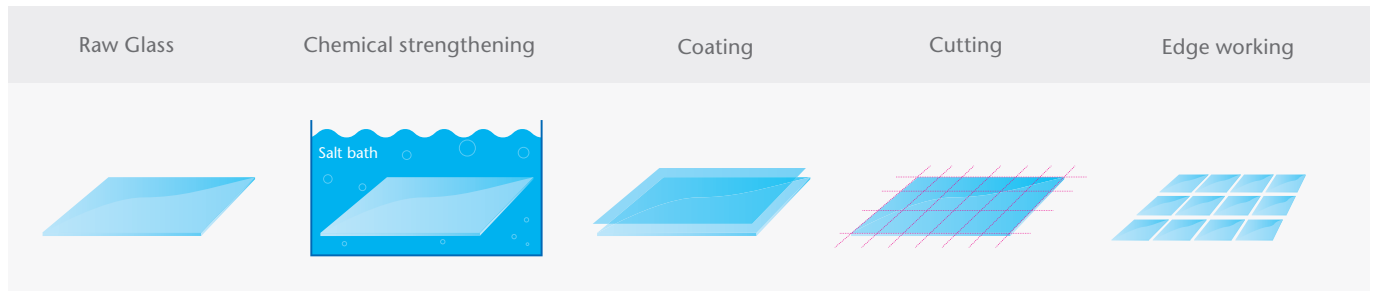


Xensation® Cover ITS

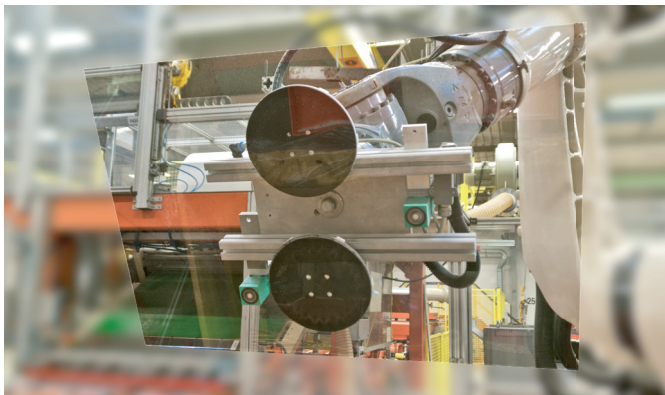
SCHOTT's chemically strengthened alumino-silicate glass sheets for innovative integrated touch solutions

Having firmly established Xensation® Cover as the world's strongest alumino-silicate glass for conventional touch sensor technologies, SCHOTT is proud to offer the same outstanding cover glass performance characteristics now adapted for the rapidly emerging integrated touch technology market, facilitating the combination of touch sensor and cover glass into one while maintaining an impressive level of mechanical and optical performance.



OGS technology enables touch panel or display makers to offer lighter and thinner touch solutions while at the same time reducing the complexity of the process chain.

Xensation® Cover ITS (Integrated Touch Solution) is now available as a full sheet, ion-exchanged specialty glass that enables integrated touch through TCO deposition on large glass sheets. The performance benefits of Xensation® Cover ITS support the design and implementation of innovative, next generation devices using integrated touch technologies such as One-Glass-Solution (OGS) with an unprecedented level of durability and reliability. This enables touch panel makers to offer lighter, thinner touch module stacks as well as reducing the complexity, and enhancing the efficiency, of their process chains.



Xensation® Cover ITS is produced using SCHOTT's unique microfloat process.

Key benefits:

- **Outstanding impact strength** enables integrated touch modules with excellent damage resistance and reliability.
- **High scratch resistance** and tolerance for superior aesthetic appeal and durability.
- Custom-sized ion-exchanged sheets designed for **easy and efficient cutting** using industry standard equipment.

By designing special ion-exchanged, full glass sheets that can be easily and efficiently cut after ITO sensor deposition, SCHOTT enables touch panel manufacturers to produce lighter, thinner touch modules protected by the strongest cover glass available on the market today.

Xensation® Cover ITS - bringing unprecedented durability and reliability to the industry's most innovative integrated touch-based devices.

Thermal Properties

Thermal Conductivity λ (25 °C)	0.96 W/(m·K)
Specific Heat Capacity C_p (20 °C; 100 °C)	0.84 KJ/(Kg·K)
Coefficient of Mean Linear Thermal Expansion α (20 °C; 300 °C)	$8.8 \cdot 10^{-6} \text{ K}^{-1}$ *
Transformation Point T_g	615 °C*
Annealing Point (10^{13} dPas)	635 °C
Softening Point ($10^{7.6}$ dPas)	880 °C
Working Point (10^4 dPas)	1265 °C

*cooled according to DIN

Chemical Properties

Hydrolytic Resistance	DIN ISO 719	Class HGB 1
Acid Resistance	DIN 12116	Class S 4
Alkali Resistance	DIN ISO 695	Class A 1

Optical Properties

Refractive Index at	588 nm (n_d)	633 nm	780 nm
Core Glass	1.508	1.506	1.502
Compression Layer			
KNO ₃ pure	1.516	1.514	1.510
Transmittance τ (Glass Thickness 0.7 mm)			
840 nm			> 91.5 %
560 nm			> 91.5 %
380 nm			> 90 %
Photoelastic Constant			29.2 nm/cm/MPa

Electrical Properties*

Frequency	Dielectric Constant	Loss Tangent
MHz	ϵ'	$\tan\delta$
1	7.74	0.011
54	7.49	0.008
480	7.40	0.009
825	7.38	0.010
912	7.38	0.010
1977	7.35	0.012
2170	7.35	0.012
2986	7.34	0.012
Electric Volume Resistivity ρ_p for A.C. at 50Hz		
$\nu = 250$ °C		$1.5 \cdot 10^6 \text{ W-cm}$
$\nu = 350$ °C		$8.9 \cdot 10^4 \text{ W-cm}$

*These values are no guaranteed data - for customer orientation only

Sheet Dimensions

Sheet Size:	up to Gen. 6
Thicknesses*:	0.55 mm and 0.70 mm

*Other thicknesses on request

Mechanical Properties

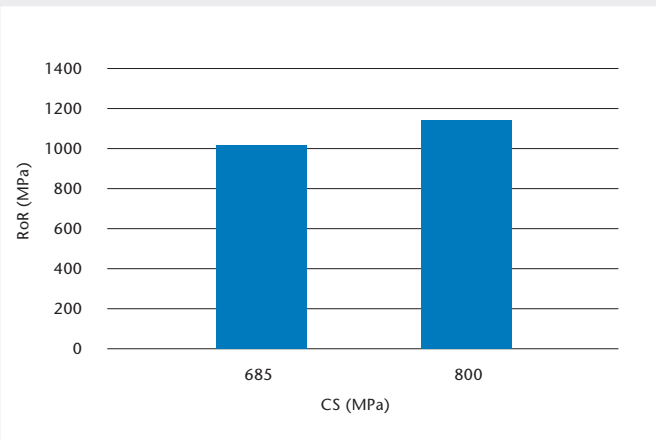
Density	2.477 g/cm ³ *
Young's Modulus E	74 kN/mm ²
Poisson's Ratio	0.215
Shear Modulus	30 kN/mm ²
Knoop Hardness HK _{0.1/20}	
Strengthened	639
Vickers Hardness HV _{0.2/20}	
Strengthened	681

*cooled according to DIN

Chemical Strengthening

Compressive Stress	> 750 MPa
Depth of Layer	> 20 μm
Ring-on-Ring Strength	> 1,100 MPa

Example: Xensation® Cover ITS, 0.7 mm



High strength even when chemically strengthened for shorter time or at lower temperatures.

SCHOTT North America Inc
Cover & Touch
5530 Shepherdsville Road
Louisville, KY 40228
Tel.: +1-502-657-4423
Fax.: +1-502-966-4976
info.xensation@us.schott.com

www.us.schott.com/xensation

SCHOTT
glass made of ideas