

# SCHOTT Xensation™ Look

## Clear Borosilicate Glass for Optical Touch Technologies

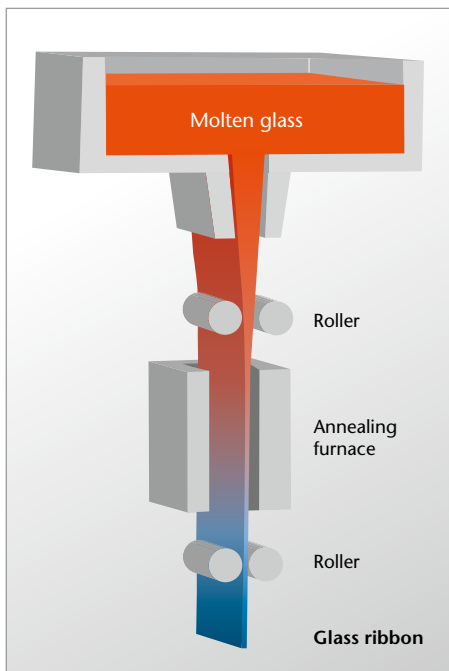
Xensation™ is the answer to all of your cover and touch technology needs. SCHOTT is unique in being able to offer the broadest range of high-quality glass types for all cover and touch applications, including optical, capacitive, resistive and acoustic. Xensation™ Look is a thin, clear, borosilicate glass with high transmission in IR and VIS for optical touch technologies. Discover Germany's newest Xensation™.

### Key-Benefits of Xensation™ Look

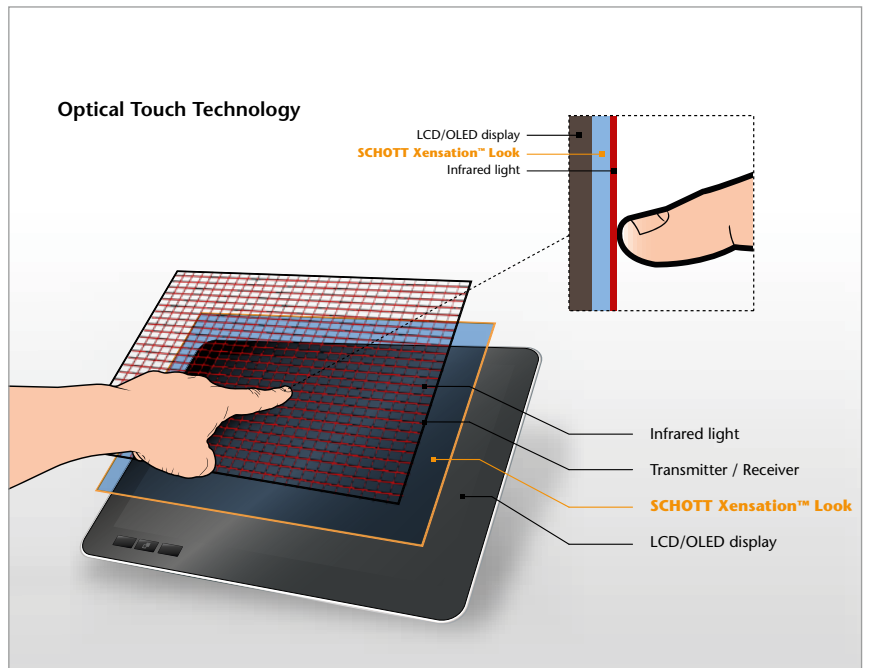
- **High transmittance** for bright display luminance
- Excellent **resistance to humidity and smudges**
- **Low attenuation rate of IR wavelengths** used in optical touch systems
- **Broad thickness range** to accommodate any display size
- Fire-polished surface grade



Xensation™ Look is our solution to optical touch technologies.



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



In optical touchscreen technology, transmitters and receivers create a photoelectric grid which is disrupted upon touch. A controller determines the exact position of the touch by analyzing the disruption.

**SCHOTT**  
glass made of ideas

## Thermal Properties

|   |                                    |
|---|------------------------------------|
| Coefficient of Mean Linear Thermal Expansion $\alpha$ (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 ( $\text{Na}_2\text{O}$ ) 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 $\text{mg/dm}^2$                                 |                  | 1.4   |
| Alkali resistance acc. to DIN ISO 695  | Class            | A 2   |
| Surface weight loss after 3 hours in $\text{mg/dm}^2$                                      |                  | 88    |

## Electrical Properties

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

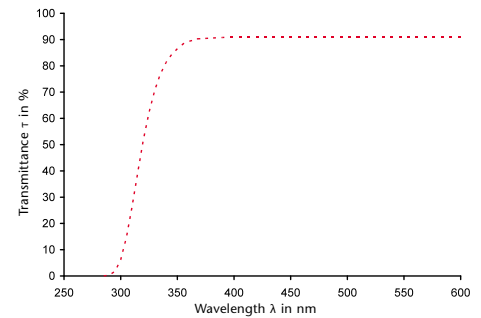
## Sheet Dimensions

| Nominal Thickness<br>[mm] | Width<br>[mm] | Length<br>[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 $\tau_{VD65}$<br>(Glass thickness 1.1 mm) | 91.7 % |



Spectral Transmittance  
Thickness: 0.4 mm

## Mechanical Properties

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

