SCHOTT Xensation® Cover 3D
Lithium Alumino-Silicate Glass for Capacitive 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 capacitive, resistive, optical and acoustic. Xensation® Cover 3D is a high-quality, easy to shape lithium alumino-silicate glass with outstanding resistance to breakage and scratches for capacitive touch technologies. Discover Germany’s newest Xensation®.

Key-Benefits of Xensation® Cover 3D

- **Low Tg** facilitates more efficient 3D cover glass precision molding processes for unique, innovative device design opportunities
- **Extremely high impact and bending strength** enables thinner, sleeker and more sensitive devices without compromising on strength
- **High scratch resistance and tolerance** for superior aesthetic appeal and durability
- **Pristine, display grade cover glass** for a clear, elegant visual quality

In capacitive touchscreen technology, electrodes generate a weak electrical field that changes when touched. A controller determines the exact position of the touch by analyzing this change.

Xensation® Cover 3D is produced using SCHOTT’s unique microfloat process.
### Sheet Dimensions

<table>
<thead>
<tr>
<th>Sheet Size**</th>
<th>1150 x 950 mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thickness Range</td>
<td>0.5 - 2.0 mm</td>
</tr>
</tbody>
</table>

**Other sizes on request.

### Electrical Properties*

<table>
<thead>
<tr>
<th>Frequency MHz</th>
<th>Dielectric Constant $\varepsilon'$</th>
<th>Loss Tangent $\tan \delta$</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>7.60</td>
<td>0.0064</td>
</tr>
<tr>
<td>54</td>
<td>7.37</td>
<td>0.0063</td>
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<tr>
<td>480</td>
<td>7.35</td>
<td>0.0082</td>
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<tr>
<td>825</td>
<td>7.22</td>
<td>0.0088</td>
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<tr>
<td>912</td>
<td>7.22</td>
<td>0.009</td>
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<tr>
<td>1977</td>
<td>7.18</td>
<td>0.01</td>
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<tr>
<td>2170</td>
<td>7.17</td>
<td>0.01</td>
</tr>
<tr>
<td>2986</td>
<td>7.15</td>
<td>0.01</td>
</tr>
</tbody>
</table>

Electric Volume Resistivity $p_D$ for A.C. at 50Hz

- $\nu = 250 ^\circ C$: 1.8 $\cdot 10^6 \, \Omega \cdot cm$
- $\nu = 350 ^\circ C$: 6.5 $\cdot 10^4 \, \Omega \cdot cm$

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

### Chemical Properties

- Hydrolytic resistance acc. to DIN ISO 719: HGB 2
- Equivalent of alkali (Na2O) per gram of glass grains in µg/g: 41

- Acid resistance acc. to DIN 12116: Acid class S 3
- Half surface weight loss after 6 hours in mg/dm²: 10

- Alkali resistance acc. to DIN ISO 695: Class A 1
- Surface weight loss after 3 hours in mg/dm²: 41

### Mechanical Properties

- Density: 2.49 g/cm³
- Young's Modulus E: 83 kN/mm²
- Poisson's Ratio: 0.225
- Shear Modulus: 34 kN/mm²
- Knoop Hardness HK 0.1/20: 590
- Non-strengthened: 740
- Strengthened: 640
- Vickers Hardness HV 0.2/20: 690

### Optical Properties

- Refractive Index at 588 nm: 1.527, 633 nm: 1.525, 780 nm: 1.520
- Core Glass: 1.533, Compression Layer: 1.530
- KNO₃ pure: 1.531, Mixture Salt: 1.528
- Transmittance $\tau$ (Glass Thickness 0.7mm):
  - 840 nm: > 91 %
  - 560 nm: > 91 %
  - 380 nm: > 90 %
- Photoelastic Constant: 27.4 nm/cm/MPa

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