Product Information

Benefits
- Enhanced retained strength after use
- High resistance to scratch and sharp contact damage
- Improved drop performance
- Superior surface quality

Applications
- Ideal protective cover for electronic displays in:
  - Smartphones
  - Laptop and tablet computer screens
  - Mobile devices
- Touchscreen devices
- Optical components
- High strength glass articles

Dimensions
Thickness: 0.4 mm - 1.0 mm
Additional thicknesses available upon request.

Viscosity
Softening Point (10^7.6 poises) 912 °C
Annealing Point (10^13.2 poises) 646 °C
Strain Point (10^14.7 poises) 596 °C

Properties
- Density 2.42 g/cm^3
- Young’s Modulus 65.8 GPa
- Poisson’s Ratio 0.22
- Shear Modulus 26.0 GPa
- Vickers Hardness (200 g load)
  - Un-strengthened 489 kgf/mm^2
  - Strengthened 596 kgf/mm^2
- Fracture Toughness 0.67 MPa m^{0.5}
- Coefficient of Expansion
  86.9 x 10^{-7} /°C
(0 °C - 300 °C)

Chemical Strengthening
Capability of >850MPa CS, and >50 μmDOL

* Specifications subject to change

Optical

Refractive Index (590 nm)
Core glass** 1.49
Compression layer 1.51
Photo-elastic constant 30.3 nm/cm/MPa
** Core index is used for FSM-based measurements since it is unaffected by ion-exchange conditions.

Chemical Durability
Durability is measured via weight loss per surface area after immersion in the solvents shown below. Values are highly dependent upon actual testing conditions. Data reported is for Corning® Gorilla® Glass 4.

<table>
<thead>
<tr>
<th>Reagent</th>
<th>Time</th>
<th>Temperature (°C)</th>
<th>Weight Loss (mg/cm^2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HCl - 5%</td>
<td>24 hrs</td>
<td>95</td>
<td>34.7</td>
</tr>
<tr>
<td>NH₄F:HF - 10%</td>
<td>20 min</td>
<td>20</td>
<td>3.3</td>
</tr>
<tr>
<td>HF - 10%</td>
<td>20 min</td>
<td>20</td>
<td>39.4</td>
</tr>
<tr>
<td>NaOH - 5%</td>
<td>6 hrs</td>
<td>95</td>
<td>5.9</td>
</tr>
</tbody>
</table>

Electrical

<table>
<thead>
<tr>
<th>Frequency (MHz)</th>
<th>Dielectric Constant</th>
<th>Loss Tangent</th>
</tr>
</thead>
<tbody>
<tr>
<td>54</td>
<td>7.89</td>
<td>0.026</td>
</tr>
<tr>
<td>163</td>
<td>7.77</td>
<td>0.024</td>
</tr>
<tr>
<td>272</td>
<td>7.70</td>
<td>0.024</td>
</tr>
<tr>
<td>381</td>
<td>7.66</td>
<td>0.024</td>
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<tr>
<td>490</td>
<td>7.63</td>
<td>0.023</td>
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<tr>
<td>599</td>
<td>7.60</td>
<td>0.024</td>
</tr>
<tr>
<td>912</td>
<td>7.43</td>
<td>0.024</td>
</tr>
<tr>
<td>1499</td>
<td>7.39</td>
<td>0.025</td>
</tr>
<tr>
<td>1977</td>
<td>7.37</td>
<td>0.025</td>
</tr>
<tr>
<td>2466</td>
<td>7.34</td>
<td>0.026</td>
</tr>
<tr>
<td>2986</td>
<td>7.33</td>
<td>0.027</td>
</tr>
</tbody>
</table>

Terminated coaxial line similar to that outlined in NIST Technical Notes 1520 and 1355-R.
Putting Corning® Gorilla® Glass 4 to the test.

Greater damage resistance with deep abrasion.

(15 psi abrasion pressure)

![Graph showing improved damage resistance between Corning® Gorilla® Glass 3 and Corning® Gorilla® Glass 4.](image)

Improved Damage Resistance

Shallower check depth with higher abrasion levels

(15 psi abrasion pressure)

![Image showing the check depth comparison between Corning® Gorilla® Glass 3 and Corning® Gorilla® Glass 4.](image)

Enables thickness reduction

(15 psi abrasion pressure)

![Graph showing the load comparison between Corning® Gorilla® Glass 3 and Corning® Gorilla® Glass 4.](image)

For more information about Corning® Gorilla® Glass 4:

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