



AutoGrade™ Corning Gorilla Glass for 3D Interiors

Automakers are taking displays from simple to interactive, small to large, and flat to curved. Thin, tough AutoGrade™ Gorilla Glass for 3D with patented Corning® ColdForm™ Technology is manufactured flat before being bent into shape at room temperature. This process can economically enable uniformly coated curved parts with consistent optical performance, bringing curved trends to life while meeting industry reliability standards.

Advantaged Designs

Design flexibility for 3D shapes through cost-effective and patented Corning® ColdForm™ Technology

- Preservation of pristine, fusion-formed surface without optical distortion
- No 3D mold tooling or hot-forming cost
- 2D part processing for 3D shapes, including surface treatments for uniform coatings and decoration
- AutoGrade™ 3D maintains retained strength of ≥900 MPa after being bent to shape

Enhanced Performance

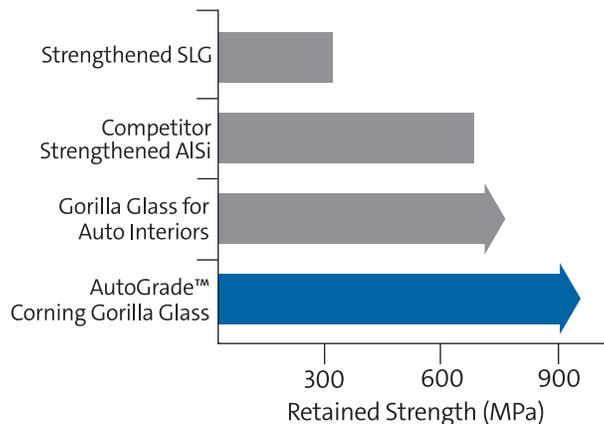
vs. chemically strengthened soda-lime glass (SLG) and other strengthened aluminosilicate (AlSi) glasses:

- Widens design window to pass Headform-Impact Test (HIT) without breakage
- Can eliminate need for anti-splinter film, preserving the glass's feel, look, and performance

Industry HIT standards: FMVSS201, ECE-R21, GB11552
Using Corning's system-level design guidelines

Superior Retained Strength

Exhibits retained strength needed for cockpit display systems to reliably pass HIT without cover glass breakage



Glass thickness 1.1 mm; Measured by ring-on-ring after introducing a representative distribution of automotive supply chain flaw sizes. Reference: "Retained Strength for AutoGrade™ Cover Glass" - Layouni et al., Corning, NY, US, SID 2019 26th ANNUAL SYMPOSIUM & EXPO

Surface Treatments

Help improve readability of displays in ambient sunlight

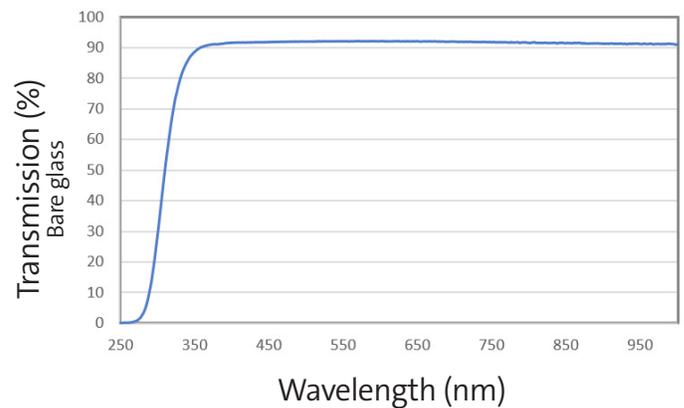
Anti-Reflective (AR) Coating with Easy-To-Clean (ETC):

- Enhances ambient contrast ratio
- Improves color uniformity over large viewing angles
- Reduces fingerprint visibility, improves removability

Anti-Glare (AG):

- Reduces reflected ghost image, improves tactile feel
- Mitigates visible sparkle for high-resolution displays

Refractive Index (590nm)	1.51
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Properties

Density	2.44 g/cm ³
Young's Modulus	74 GPa
Poisson's Ratio	0.23
Shear Modulus	30 GPa
Coefficient of Thermal Expansion (0 °C – 300 °C)	80.1 x 10 ⁻⁷ /°C
Vickers Hardness*	≥650 kgf/mm ²
Indentation Fracture Threshold (IFT) **	≥50 N
Retained Strength	≥900 MPa

*Using Vickers indenter: 5 indents with a Vickers diamond are performed on 1 sample with a given load of 200g and a dwell time of 15 sec.; **Using Vickers indenter: The crack initiation threshold is defined at the indentation load at which 50% of 10 indents exhibit any number of radial cracks emanating from the corners of the indent impression; Fractography of Glasses and Ceramics VI by James R. Varner, Marlene Wightman

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