

CORNING



## Carrier Solutions Advanced Packaging Carriers

### Applications

- Glass carriers for temporary bonding in advanced semiconductor packaging processes such as fan-out level processing

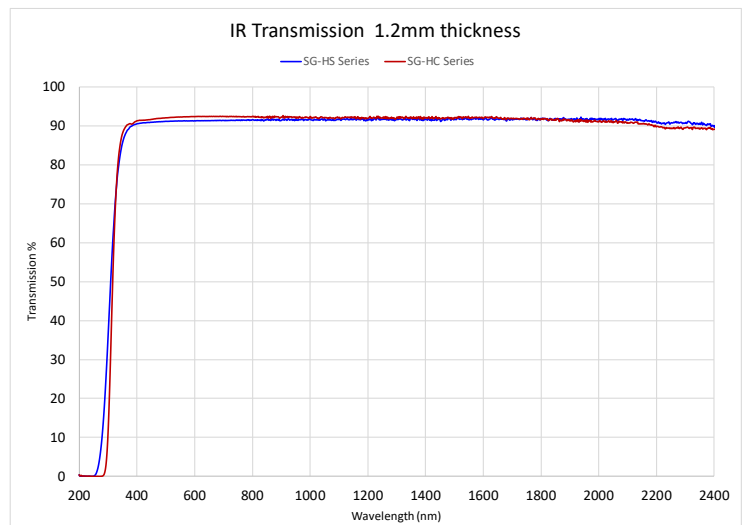
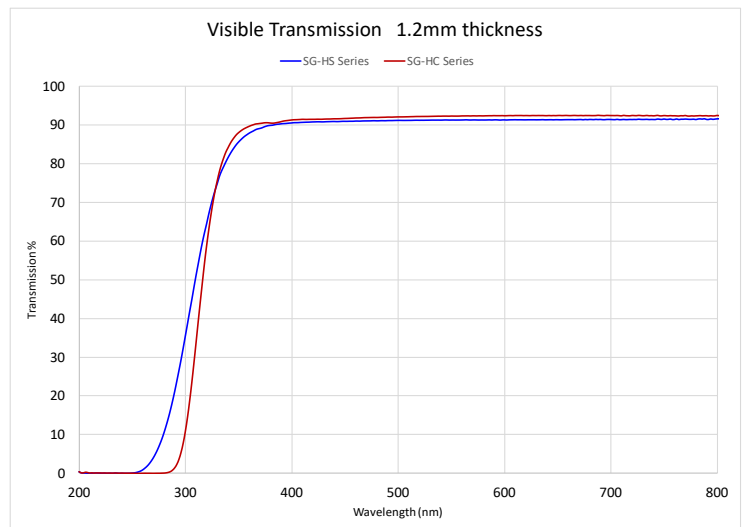
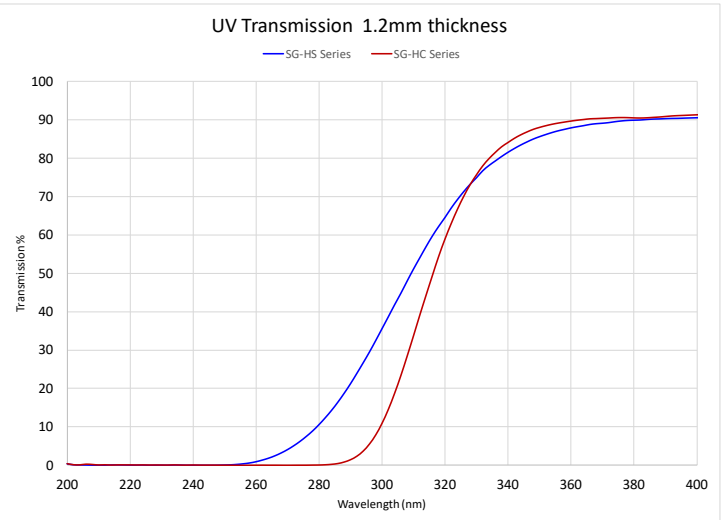
### Benefits

- Specially developed to reduce customers' challenge of in-process warp by up to 40%
- Available in fine granularities across a range of CTEs up to 12.6ppm/°C
- High stiffness to help overcome CTE mismatch challenge
- Ultra low TTV and warp
- Excellent chemical durability conducive to semiconductor process environments
- Optically transparent enabling UV or IR based debond processes and laser mark serialization

Property	SG-HS	SG-HC
CTE (0-300°C, x10 <sup>-6</sup> /°C)	4.9 - 7.9	9.6 - 12.6
CTE Granularity (x10 <sup>-6</sup> /°C)	0.2	0.4
Density (g/cm <sup>3</sup> )	2.56 - 2.57	2.50 - 2.51
Young's Modulus (GPa)	80 - 87	75 - 78
Shear Modulus (GPa)	32 - 34	30 - 32
Poisson's Ratio	0.26 - 0.27	0.23 - 0.24
Vicker's Hardness (kgf/mm <sup>2</sup> ) 200gm load	635 - 670	635 - 670
Annealing Point (°C)	600 - 680	440 - 510
Strain Point (°C)	560 - 640	400 - 470
Refractive Index (589.3nm)	1.54 - 1.55	1.52 - 1.53

### Options and Features

Diameter (mm)	100-300
Thickness (mm)	0.4 to 2.0
Edge Beveling	Radius (R) Type and Chamfer (C)
Surface Roughness (nm)	< 1.0
Features	Semi-standard notch/flat or custom
Surface ID Marking	Semi-standard or custom





**CORNING**

Precision Glass  
Solutions

# Superior Standards

## Carrier Solutions

Glass is highly transparent, has the ability to custom-match CTE, and has superior surface quality, thickness, and edge strength, making it an excellent material of choice for carrier substrates used in semiconductor manufacturing.

Corning Advanced Packaging Carriers are a new line of glass carrier wafers specially developed to help reduce customers' challenge of in-process warp by up to 40%. These high-stiffness carriers are available in fine granularities of CTE up to 12.6ppm/°C. Small quantities are available for sampling with lead times of just 4-6 weeks.

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