



Carrier Solutions

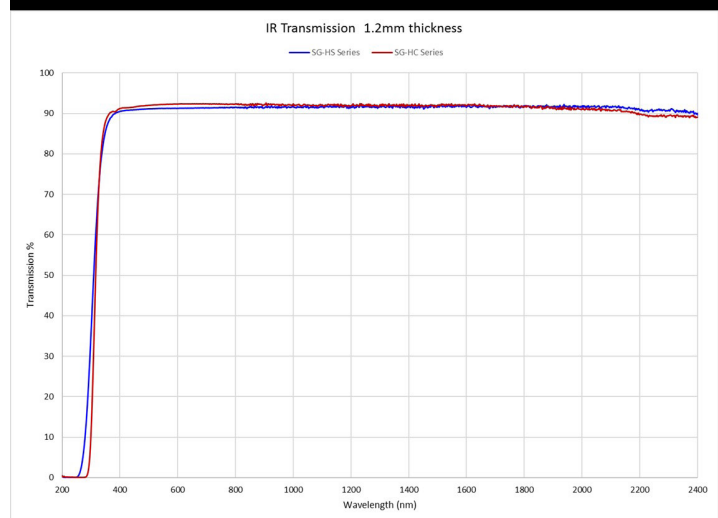
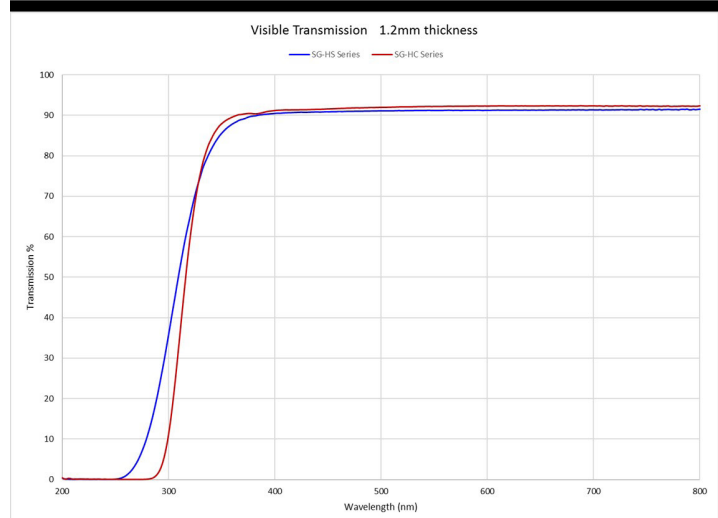
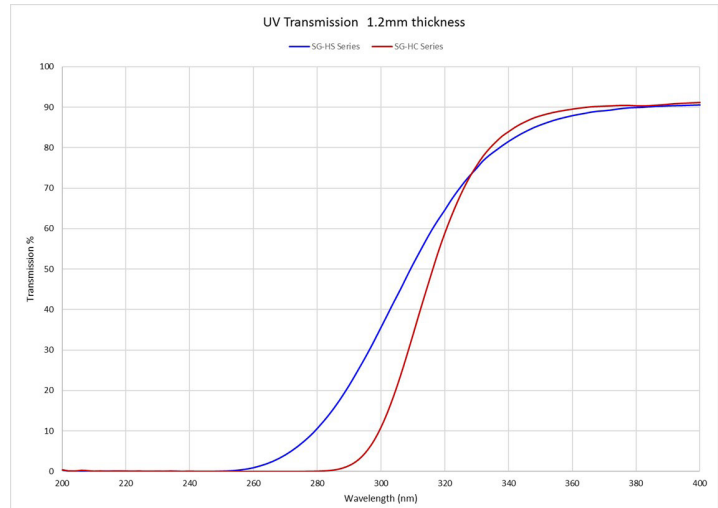
Applications

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

Benefits

- Tunable CTE and mechanical properties to meet various semiconductor process requirements
- Scalable form factor in both wafer and panel formats
- Low TTV and warp
- Optically transparent enabling UV or IR based debond processes and laser mark serialization
- Excellent chemical durability conducive to semiconductor process environments

Property	SG-HS	SG-HC
CTE (0-300°C, $\times 10^{-6}/^{\circ}\text{C}$)	4.9 - 7.9	9.6 - 12.6
CTE Granularity ($\times 10^{-6}/^{\circ}\text{C}$)	0.2	0.4
Density (g/cm^3)	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^2)	635 - 670	635 - 670
Annealing Point ($^{\circ}\text{C}$)	600 - 680	440 - 510
Strain Point ($^{\circ}\text{C}$)	560 - 640	400 - 470
Refractive Index (589.3nm)	1.54 - 1.55	1.52 - 1.53





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 Carrier Solutions offers precision glass carrier substrates in a wide range of CTEs with quick sampling to reduce customer development time. All samples are high-quality, optical-grade material with exceptionally low total thickness variation and a pristine surface.

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