CORNING

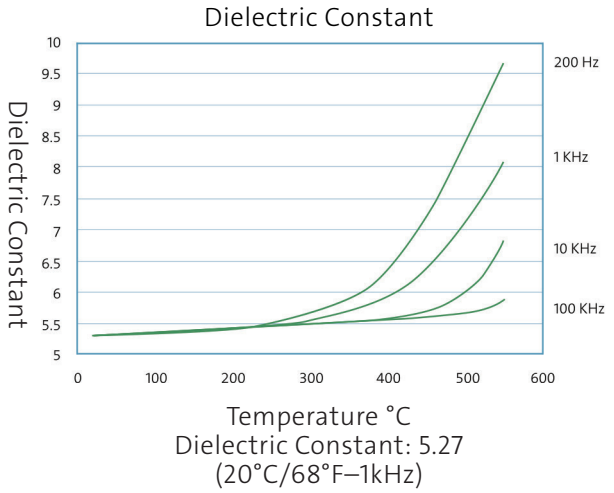
EAGLE XG® Slim

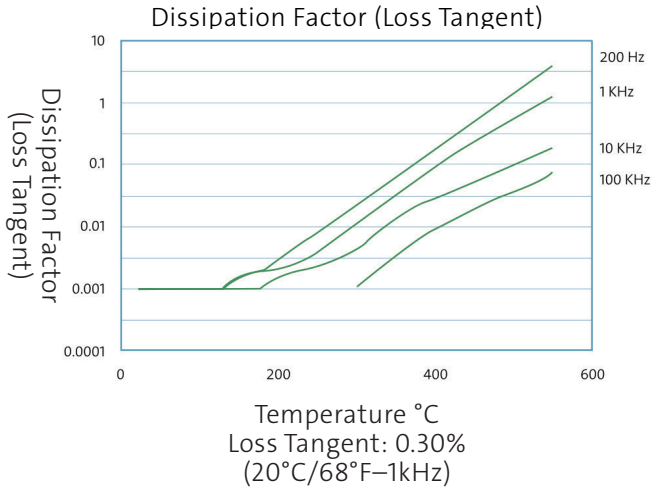
Product Information Sheet

Material Information

Glass Type	Alkaline Earth Boro-Aluminosilicate	
Forms Available	Fusion Drawn Sheet	
Principle Uses	Substrates for active-matrix flat panel displays	
Mechanical Properties	Density (20°C)	2.38 g/cc^3
	Young's Modulus	73.6 GPa
	Shear Modulus	30.1 GPa
	Poisson's Ratio	0.23
	Vicker's Hardness (200 gm load, 25 sec dwell)	560
Thermal Expansion	0-300°C	31.7x10^{-7} / °C
	Room Temperature to Setting Point	35.5x10^{-7} / °C (25-675°C)
Viscosity	Working Point (10^4 poises)	1293
	Softening Point (10$^{7.6}$ poises)	971
	Annealing Point (10^{13} poises)	722
	Strain Point (10$^{14.5}$ poises)	669
Electrical Properties	Log$_{10}$ Volume Resistivity (ohm-cm)	
	12.9	250°C
	8.8	500°C
Optical Properties	Birefringence Constant	331 (nm/cm)/(kg/mm^2)

Electrical





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Chemical

Durability:

Durability is measured via weight loss per surface area after immersion. Values are highly dependent upon actual testing conditions. Unless otherwise noted, concentrations refer to weight percent.

Weathering: 1

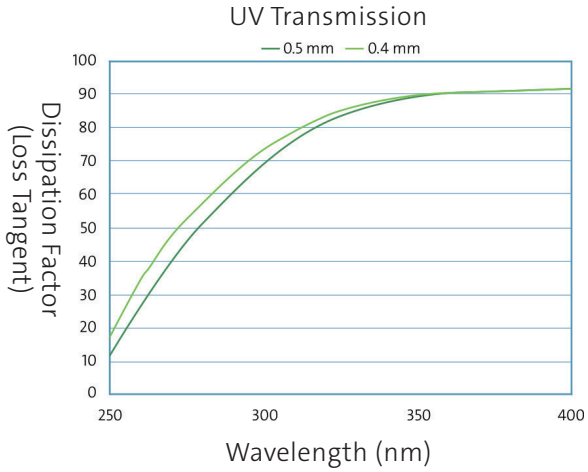
Weathering is defined as corrosion by atmospheric-borne gases and vapor such as water and carbon dioxide. Glasses rated 1 will almost never show weathering effects; those rated 2 will occasionally be troublesome, particulary if weathering products cannot be removed; those rated 3 require more careful consideration.

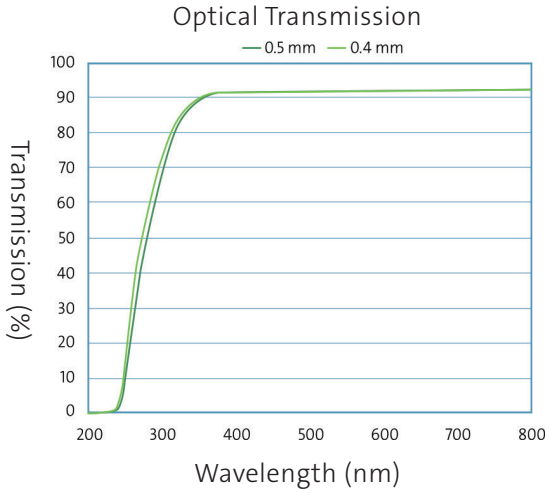
Reagents	Time	Temp	Weight Loss (mg/cm^2)
HCl - 5%	24 hrs	95°C	0.79
HNO_3 - 1M	24 hrs	95°C	0.49
HF - 10%	20 min	20°C	5.18
NH_4F:HF - 10%	20 min	20°C	0.84
1HF:10HNO_3	3 min	20°C	1.48
1HF:100HNO_3	3 min	20°C	0.16
DI H_2O	24 hrs	95°C	0.00
Na_2CO_3 - 0.02N	6 hrs	95°C	0.16
NaOH - 5%	6 hrs	95°C	1.83

Total alkali content is approximately: 0.1wt% (Typical <0.05wt%)

Optical Wavelength	Refractive Index
435.8nm	1.5198
467.8nm	1.5169
480nm	1.5160
508.6nm	1.5141
546.1nm	1.5119
589.3nm	1.0599
643.8nm	1.5078

Transmittance





Thermal Conductivity

Thermal conductivity is a calculated value, and is equal to the product of the thermal diffusivity multiplied by specific heat multiplied by the density of the glass.

Tempurat (°C)	Specific Heat (J/gm –°K)	Thermal Diffusivity (cm^2/sec)	Thermal Conductivity (W/cm –°K)
23	0.768	0.00601	0.0109
100	0.896	0.00572	0.0122
200	0.998	0.00546	0.0129
300	1.067	0.00530	0.0134
400	1.110	0.00522	0.0137
500	1.154	0.00518	0.0142

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