

Glass designation :	<b>Borosilicate</b>	Code	<b>7052</b>
Color : <b>White</b>			
Glass type : <b>borosilicate</b>			



*Compatible with  
 Kovar or Kovar-  
 like alloys;  
 thermal shock  
 resistance*

	Metric	English
<b>Mechanical</b>		
Density	2.27 g/cm <sup>3</sup>	141.7 lb/ft <sup>3</sup>
Youngs Modulus	5.76 x 10 <sup>3</sup> kg/mm <sup>2</sup>	8.2 x 10 <sup>6</sup> psi
Poissons Ratio	0.22	
Shear Modulus	2.39 x 10 <sup>3</sup> kg/mm <sup>2</sup>	3.4 x 10 <sup>6</sup> psi
Knoop Hardness (KNH <sub>100</sub> )	403	5.73 x 10 <sup>5</sup> psi
<b>Viscosity</b>		
Working Point (10 <sup>4</sup> poise)	1128 °C	2062 °F
Softening Point (10 <sup>7.6</sup> poise)	712 °C	1314 °F
Annealing Point (10 <sup>13</sup> poise)	484 °C	903 °F
Strain Point (10 <sup>14</sup> poise)	440 °C	824 °F
<b>Thermal</b>		
Coefficient of Expansion (0 °C - 300 °C)	47.0 x 10 <sup>-7</sup> / °C	26.1 x 10 <sup>-7</sup> / °F
(25 °C to set point 441 °C)	53.1 x 10 <sup>-7</sup> / °C	29.5 x 10 <sup>-7</sup> / °F
<b>Electrical</b>		
Log <sub>10</sub> Volume Resistivity @ 250 °C	9.2 ohm-cm	
Log <sub>10</sub> Volume Resistivity @ 350 °C	7.4 ohm-cm	
Dielectric Constant @ 20 °C, 1 MHz	5.1	
Loss Tangent @ 20 °C, 1 MHz	0.15%	
<b>Optical</b>		
Refractive index (589.3nm)	1.484	
<b>Chemical</b>		
Weathering: 2		
Acid Durability:3		
Weathering is defined as corrosion by atmospheric-borne gases and vapors such as water an carbon dioxide. Glasses rated(1) will almost never show weathering effects;those rated (2) will occasionally be troublesome,particularly if weathering products cannot be removed; those glasses rated (3) will require more carreful consideration.		
Acid durability classified glasses according to their behavior in 5% hydrochloric acid at 95 °C (203 °F) for 24 hours.		
Classification: Thickness loss (inches) (1) < 10 <sup>-6</sup> (2) 10 <sup>-6</sup> - 10 <sup>-5</sup> (3) 10 <sup>-5</sup> - 10 <sup>-4</sup> (4) > 10 <sup>-4</sup>		

**Non-toleranced numerical values are typical values**