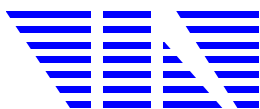

Corning Glass 7059 Properties

Corning 7059 (Barium Borosilicate)

Corning 7059 Near-Zero Alkali baria alumina borosilicate composition was originally developed for thin film electronic circuits, which require an extremely smooth substrate with special electrical properties. It is drawn into sheets of finished thickness, obtaining the final smooth, and flat surface finish directly from the molten glass. The glass has an alkali level of < 0.3%. This is of considerable importance since alkali ions are known to be detrimental to performance, reliability, and longevity of thin film devices. This is an ideal substrate glass that is also used for low-end LCD applications.

Properties	Value
Density	2.76 g/cm ³
Softening Point	844 ⁰ C
Annealing Point	639 ⁰ C
Strain Point	593 ⁰ C
Thermal Expansion (0-300 ⁰ C)	46.0 x 10 ^{-7/0} C
Refractive Index	1.5440 @ 435.8nm 1.5354 @ 546.1nm 1.5311 @ 643.8nm
Surface Smoothness	0.5 micro inch (typ)
Surface Flatness	0.004 in/in (typ)
Dielectric Constant	5.84 @1 MHz/ 20 ⁰ C
Loss Tangent	0.10% @1 MHz/ 20 ⁰ C
Volume Resistivity	13.1 ohm-cm @ 250 ⁰ C
Transmittance (t = 0.5mm)	~70% (320nm) ~90% (360nm) >90% (380 - 2200nm)

Corning 7059 is no longer available. It was discontinued by Corning some time ago. The replacement glass is Corning 1737.



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