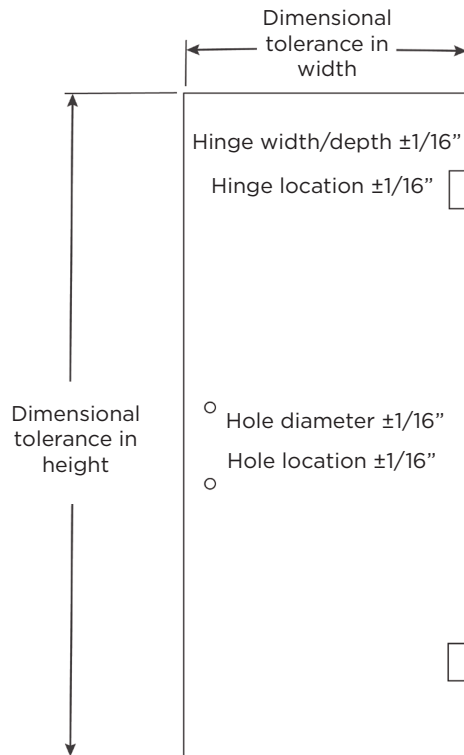


GGI GLASS SPECIFICATIONS

This document defines Finished Size Glass Tolerances, the Viewing Condition for Blemish Detection and the Bowing Tolerances allowable in accordance with ASTM C1048 Standard Specification for Heat-Treated Flat Glass.

GLASS TOLERANCES

Thickness (Inch)	Thickness (mm)	GGI Dimensional Tolerance in Width	GGI Dimensional Tolerance in Height	Squareness
5/32"	4	± 1/16"	±1/16"	5/64"
3/16"	4.7	±1/16"	±1/16"	5/64"
1/4"	5.5	±1/16"	±1/16"	5/64"
5/16"	7.6	±1/16"	±1/8"	7/64"
3/8"	9.3	±1/16"	±1/8"	1/8"
1/2"	12.3	±1/16"	±1/8"	11/64"
5/8"	15.5	±3/16"	±3/16"	7/32"
3/4"	18.8	±3/16"	±3/16"	1/4"

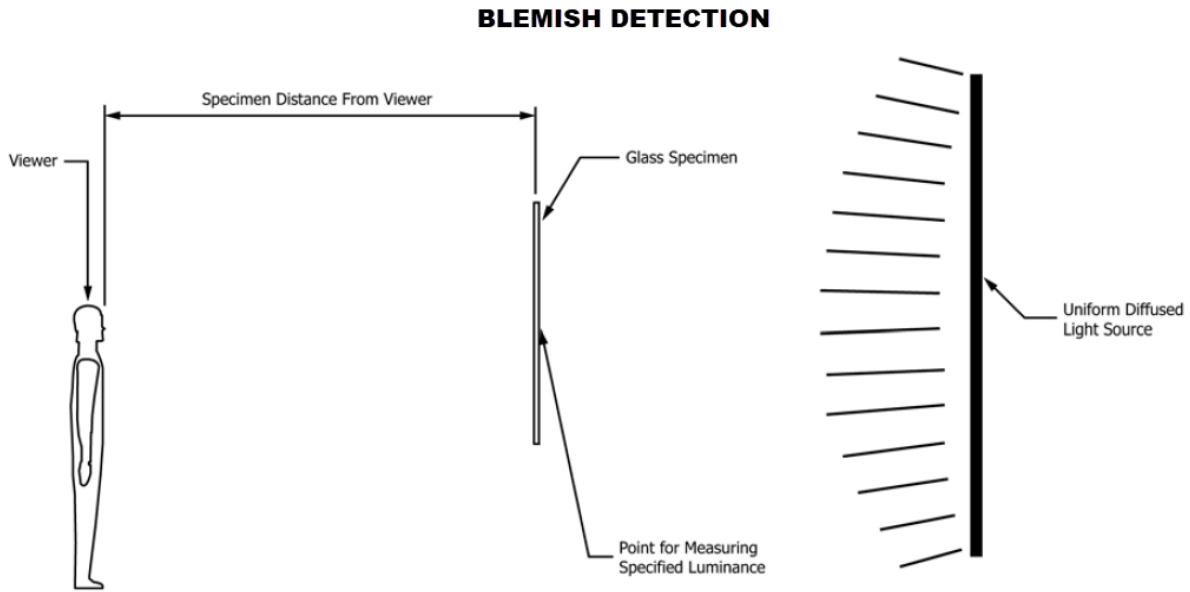


Note: If tighter tolerances are required outside of this document please communicate the tolerances to us via drawing/email and we will advise if we can accommodate.

VIEWING CONDITION FOR BLEMISH DETECTION

All visual inspections shall be made with 20/20 vision (naked eye or corrected). View samples in the vertical position at the distance as specified in the section following. The viewer shall be positioned perpendicular to the glass surface using the following lighting unless otherwise specified: daylight (without direct sunlight) or other uniform diffused background lighting that simulates daylight, with a minimum luminance of 1700 lux (160 foot-candles) measured at the center of the glass surface.

Blemish Detection for Point Blemish (Knots, Dirt, Stones, Crush, Gaseous Inclusions, Scratches, and Other Similar Blemishes) shall be viewed from a distance of approximately **36 inches**.



BOWING TOLERANCES

GGI Bowing Tolerances (Half of ASTM C1048 Standard)

Edge Dimension

Glass Thickness (in)	0-20(in)	21-35(in)	36-47(in)	48-59(in)	60-71(in)	72-83(in)	84-94(in)	95-106(in)	107-118(in)	119-130(in)	131-146(in)	147-158(in)
5/32	4/64	5/64	7/64	9/64	11/64	15/64	17/64	21/64	24/64			
3/16	4/64	5/64	7/64	9/64	11/64	15/64	17/64	21/64	24/64			
1/4	3/64	4/64	5/64	7/64	9/64	11/64	15/64	17/64	21/64	24/64	27/64	31/64
5/16	3/64	3/64	4/64	5/64	7/64	8/64	10/64	13/64	16/64	19/64	22/64	25/64
3/8	3/64	3/64	3/64	5/64	7/64	8/64	9/64	11/64	15/64	17/64	21/64	24/64
1/2 -7/8	1/64	3/64	3/64	3/64	5/64	7/64	7/64	9/64	13/64	15/64	17/64	21/64