



School Guard Glass' products are manufactured by:  
**LTI Smart Glass, Inc.**  
 14 Federico Drive / Pittsfield, MA 01201 / www.LTISmartGlass.com



- PRODUCT NAME:** SG4™ IGU (PATENT PENDING)
- PRODUCT DESCRIPTION:** SG4™ IGU is a hermetically sealed make up consisting of SG4™ on the interior lite and tempered or laminated glass on the exterior lite. SG4™ IGU combines the forced entry attributes of SG4™ while also complying with strict energy codes. Our IGU make up can be combined with almost any glass coating for an aesthetically pleasing and energy efficient window or entrance.
- CONSTRUCTION:** SG4™ on interior lite, tempered or laminated glass on exterior lite.
- STANDARD DIMENSIONS:** Up to 60" X 96"
- MAXIMUM DIMENSIONS:** Up to 50 sq. ft.
- NOMINAL THICKNESS:** 1" - 1 ½"
- WEIGHT (SQ/FT):** 7.4 lbs.
- WARRANTY:** 10 year warranty against delamination and 10 year warranty against seal failure. Please refer to the warranty information sheets.
- COMPLIANCE:**
  - ASTM 1048 – Standard Specification-Heat Strengthened & Fully Tempered Flat Glass
  - ASTM C1036 - Standard Specification-Flat Glass
  - ASTM C1172 - Standard Specification for Laminated Architectural Flat Glass
  - ANSI Z97.1 Safety Materials Used in Buildings
  - CPSC 6 CFR 1201
- RATINGS:** 5-aa1 rated for 6 minutes.  
 BR Level 2 low spall in certain configurations.  
 F1233 Class 1  
 UL 972
- PERFORMANCE CRITERIA/VALUES:** Values vary.  
 Please refer to the performance criteria sheets.

Product	Ballistic Impact	Concentrated Assault		Forced Entry (sequentially tested)			Total Time to Failure
	5 shots with a .762 round	Brick	Steel Toed Boots	Tools <sup>1</sup> 2 min. test	3lb. Hammer & Bat 3½ min. test	Sledge hammer 6 min. test	
1/4" Tempered	Fail - 1 shot	Fail	Fail	Fail	Fail	Fail	0 seconds
1/4" Tempered w/12 mil. Blast Film	Pass <sup>2</sup>	Fail - 4 impacts	Pass	Fail - 8 seconds	Fail - 2 impacts/2 seconds	N/A	4 seconds
5/16" Annealed Laminated Glass w/ 0.060 SGP® Interlayer by DuPont®	Pass <sup>2</sup>	Fail - 20 impacts	Fail	Fail	Fail	N/A	16 seconds
5/16" Annealed Laminated Glass w/ 0.090 PVB Interlayer	Pass <sup>2</sup>	Pass	Pass	Fail - 40 seconds	Fail	N/A	40 seconds
3/8" Glass Clad Polycarbonate	Pass <sup>2</sup>	Pass	Pass	Fail - 1 min. 12 sec.	Fail	N/A	1 min. 12 sec.
SG4™ IGU	Pass <sup>2</sup>	Pass	Pass	Pass	Pass	N/A	6 mins. 10 sec.

**Test failure occurs when a 4" object can pass through the glass or frame material.**

<sup>1</sup> See testing methods for tools list. <sup>2</sup>Bullets penetrate but glass stays in place.

**Independent Testing Completed by H.P. White Laboratory, Inc. 3114 Scarboro Road, Street, MD 21154-1822**



School Guard Glass  
 5 Hoosac Street / Adams, MA 01220  
 Contact: (844) SG-GLASS / www.SchoolGuardGlass.com



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**SG4™ IGU**  
**Performance Criteria and Values**

VALUE	1" Clear IGU	1 1/8" IGU ES28 w/Argon
Summer U-Value	.49	.20
Winter U-Value	.46	.23
Solar Heat Gain Coefficient	.67	.27
Relative Heat Gain	160	65
Visible Light Transmission	.76	.59
Shading Coefficient	.77	.31
Visible Light Reflectance-Outside	.15	.13
Visible Light Reflectance-Inside	.14	.14
Total Solar Transmittance	.52	.22
Total Solar Reflectance-Outside	.11	.41
Ultraviolet Transmittance	0.00	0.00

**Values represent a range of SG4™ products dependent on exterior lite and IGU make up.  
 Details for specific products can be provided upon request.**