

# View Gen 3 Insulating Glass Unit (IGU)

View Gen 3 is a generation of intelligent windows that uses electrochromic technology to predictively adjust tint levels in response to external conditions and user preference. The dynamic insulating glass unit (IGU) contains an electrochromic coating to switch between clear and tinted on demand. The IGU can be configured with a range of sizes, shapes, colors and inboard lite options.

## Benefits

View Smart Glass uses electrochromic technology to switch between clear and tinted states on demand.

- Controls glare
- Maximizes daylight
- Provides unobstructed views
- Saves energy
- Contributes to LEED and other green building rating systems

## Features

- 4 preset states from 1% to 58% visual transmission (0.5% tint 4 option available on request)
- U-value range of 0.1 to 1.66
- Fully automated control or manual control with a range of user interface options
- Maximum size of 72" x 120" (1828mm x 3048mm)
- Bird friendly product options available. Product tested and certified by the American Bird Conservancy. Please refer to bird friendly product brochure for more details

## 3rd party testing and certification

- ASTM E2141: Durability of Absorptive Electrochromic Coatings
- SGCC (ANSI Z97.1, CPSC 16 CFR 1201)
- IGCC/IGMA (ASTM E2190)

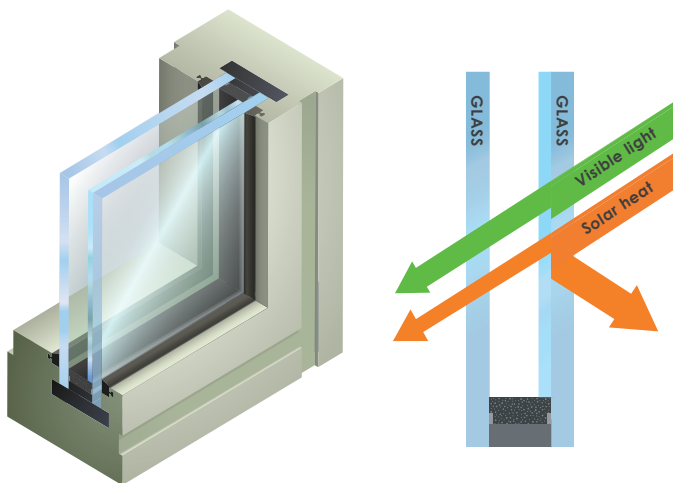
## Warranty

- Standard insulating glass unit (IGU)— 10 years from date of delivery by View
- Please refer to standard warranty terms for more details

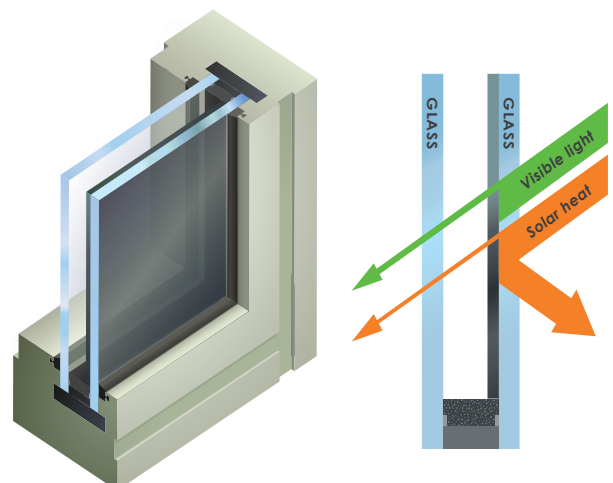
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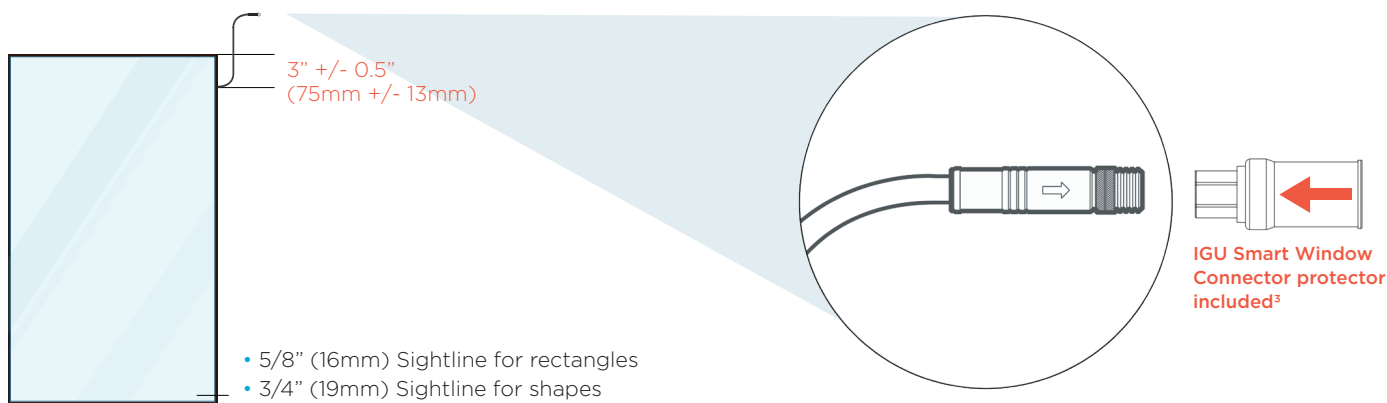
- Integrates into typical applications and framing system types
- Framing systems need to allow enough space in glazing pocket and framing channels to run system wiring
- Hole size for connector to pass through is 11mm minimum
- For Structural Silicone Glazing (SSG) applications, View IGUs will be shipped with EdgeBlack applied along the long edges of the IGU on surface 1

CLEAR STATE



TINT STATE





#### IGU Smart Window Connector

- Located 3" +/- 0.5" (75mm +/- 13mm) from corner
- 15.5" +/- 1.5" (390mm +/- 40mm) in length
- 4mm diameter
- Threaded connection
- Preterminated
- Hand screw 5-pin male M8 connector
- Requires 7/16" (11mm) min. hole size

IGU SPECIFICATIONS <sup>1</sup>	
<b>Type</b>	Dual pane or Triple pane
<b>IGU Strength</b>	Tempered (Inboard & Outboard)
<b>Dimensions</b>	Maximum: 72" x 120" (1,828mm x 3,048mm) Minimum: 14" x 14" (356mm x 356mm) Maximum overall thickness: 2" (52mm)
<b>Outboard Lite</b>	Thickness: 1/4" (6mm) Color: Clear Coating: Dynamic coating on surface 2
<b>Inboard Lite</b>	Various options. Please refer to next table
<b>Gas Fill<sup>2</sup></b>	>90% Argon, <10% Air
<b>Seal</b>	Primary PIB; Secondary Silicone
<b>Spacer Materials and Thickness</b>	Black Foam Super Spacer® T-Spacer™ 1/2", 5/8" thickness (12.7mm, 15.9mm)

IGU SPECIFICATIONS <sup>1</sup>			
	Thickness	Color	Coating
<b>Monolithic</b>	6mm	Multiple <sup>4</sup>	None
	5mm	Clear	None
	4mm	Clear	None
	6mm	Clear	SN 68 or I-89
<b>Laminate</b>	6mm/6mm	Clear	None
	5mm/5mm	Clear	None
	4mm/4mm	Clear	None
	6mm/6mm	Clear	SN 68 or I-89
<b>Laminate Interlayer</b>	0.03" or 0.06" or 0.09" PVB or 0.09" SGP (0.75mm or 1.5mm or 2.3mm PVB or 2.3mm SGP)		

## Additional Notes

- Dynamic coating meets or exceeds specifications for scratches, pinholes, and defects stated in ASTM C1376.
- The inner ply of a tinted laminated lite is colored.
- View Smart Glass transitions from the long edges of the glass inward to the center. Transition speed varies by the size.
- View complies with the industry standard specification requirements, ASTM C1048 and ANSI Z97.1 for tempered glasses. Any tempered lite installed with a base dimension > 84" (2134mm) will exhibit vertical roll wave distortion rather than horizontal roll wave distortion.
- Using a spark-type analyzer to measure gas content within the IGU will damage the electrochromic coating and void the warranty.
- The overall thickness of the IGU may vary within the glass thickness tolerance stated in ASTM C1036 and the air space thickness tolerance stated in ASTM E2190.

<sup>1</sup> Other sizes, colors, and thicknesses available based on specifications.

<sup>2</sup> An IGU installed 2,500 ft (762m) above sea level will include 100% air and an open capillary tube installed on the corner closest to the Smart Window Connector running down several inches through the secondary seal.

<sup>3</sup> The IGU Smart Window Connector protector is a disposable cap and should be removed prior to installation.

<sup>4</sup> Color options include Clear, SolarBlue, SolarGray, Azuria, CrystalGray and Pacifica.

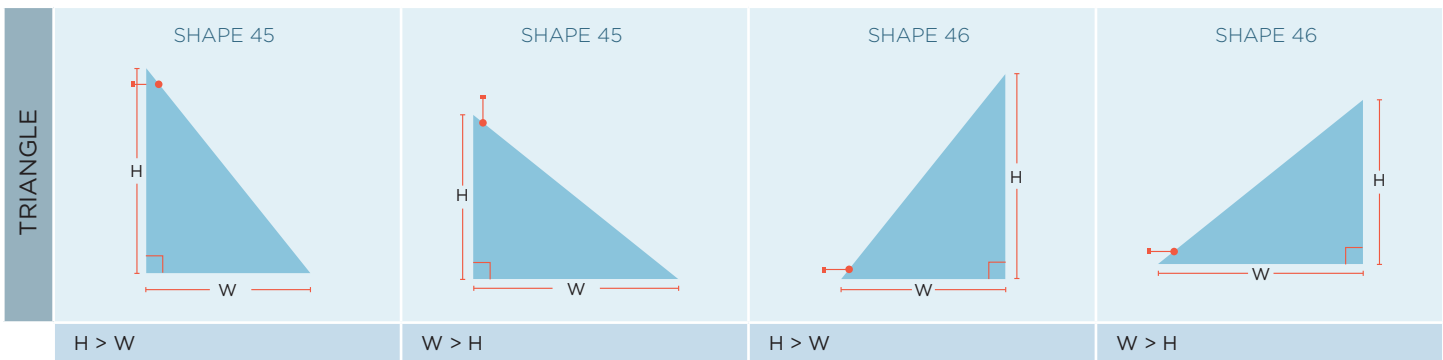
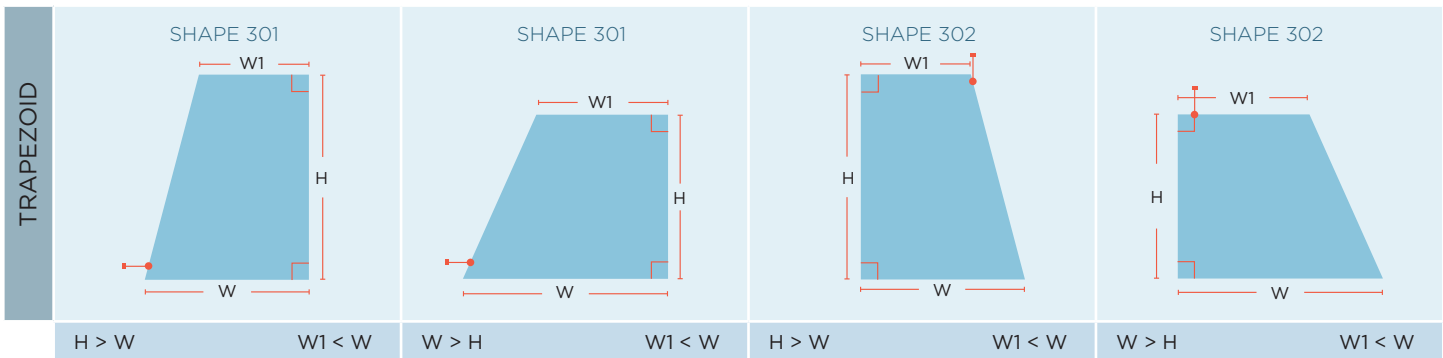
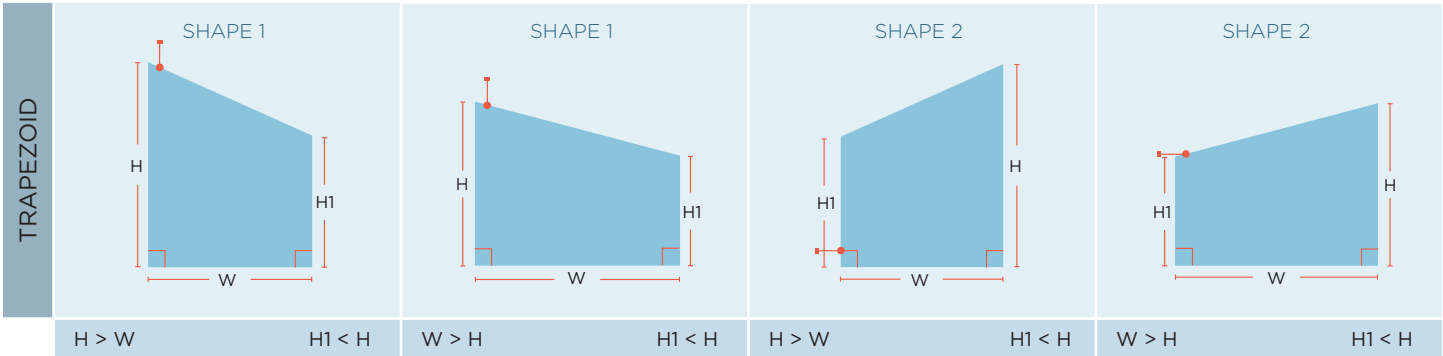
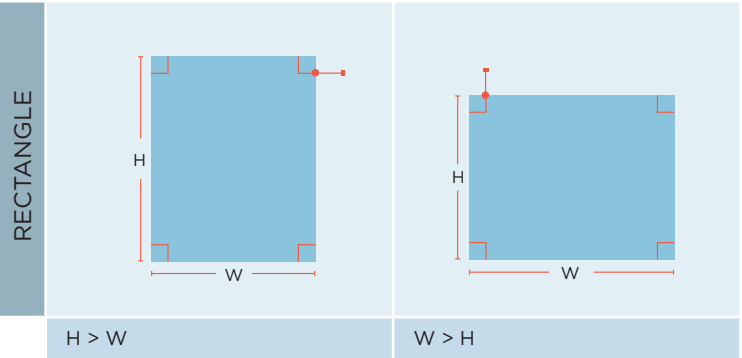
Each View Smart Glass makeup contains four performance values corresponding to the electrochromic (EC) tint level of the glass, ranging from the clear state (Tint 1) to the fully tinted state (Tint 4)<sup>1</sup>. Lead times may vary for certain configurations<sup>2</sup>.

Double Pane IGU Configurations			Transmittance (%)			Reflectance (%)			U-Value (Btu/h-ft <sup>2</sup> F   W/m <sup>2</sup> K)	Solar Heat Gain Coefficient	Sound Transmission Class Rating (dB)
			Visible	UV	Solar	Visible Out	Visible In	Solar Out			
Outboard Lite	6mm clear FT with EC coating on #2	Tint 1	58	4	34	15	18	15	0.29   1.65	0.46	35
Inboard Lite	<b>6mm clear</b>	Tint 2	40	3	21	12	17	12		0.35	
Cavity	12.7mm	Tint 3	6	1	2	9	16	11		0.13	
Gas Fill	90% argon	Tint 4	1	0	1	10	17	12		0.12	
Outboard Lite	6mm clear FT with EC coating on #2	Tint 1	37	2	20	14	10	14	0.29   1.65	0.43	35
Inboard Lite	<b>6mm SolarBlue</b>	Tint 2	26	2	13	11	10	12		0.33	
Cavity	12.7mm	Tint 3	4	1	2	9	10	11		0.19	
Gas Fill	90% argon	Tint 4	1	0	0	10	10	12		0.18	
Outboard Lite	6mm clear FT with EC coating on #2	Tint 1	29	2	18	14	9	14	0.29   1.65	0.42	35
Inboard Lite	<b>6mm SolarGray</b>	Tint 2	21	1	11	11	8	12		0.32	
Cavity	12.7mm	Tint 3	3	0	1	9	8	11		0.19	
Gas Fill	90% argon	Tint 4	1	0	0	10	8	12		0.18	
Outboard Lite	6mm clear FT with EC coating on #2	Tint 1	41	3	24	14	11	14	0.29   1.65	0.43	35
Inboard Lite	<b>6mm CrystalGray</b>	Tint 2	29	2	15	11	11	12		0.33	
Cavity	12.7mm	Tint 3	4	1	2	9	11	11		0.19	
Gas Fill	90% argon	Tint 4	1	0	0	10	11	12		0.18	
Outboard Lite	6mm clear FT with EC coating on #2	Tint 1	28	1	13	14	8	14	0.29   1.65	0.41	35
Inboard Lite	<b>6mm Pacifica</b>	Tint 2	20	1	9	11	8	12		0.32	
Cavity	12.7mm	Tint 3	3	0	1	9	7	11		0.19	
Gas Fill	90% argon	Tint 4	1	0	0	10	8	12		0.18	
Outboard Lite	6mm clear FT with EC coating on #2	Tint 1	45	3	17	14	13	14	0.29   1.65	0.42	35
Inboard Lite	<b>6mm Azuria</b>	Tint 2	32	2	12	11	12	12		0.33	
Cavity	12.7mm	Tint 3	4	1	2	9	12	11		0.19	
Gas Fill	90% argon	Tint 4	1	0	0	10	12	12		0.18	
Outboard Lite	6mm clear FT with EC coating on #2	Tint 1	50	3	22	14	14	18	0.24   1.38	0.36	35
Inboard Lite	<b>6mm clear with low-e SN68 on #3</b>	Tint 2	35	2	15	11	13	12		0.29	
Cavity	12.7mm	Tint 3	5	1	2	9	12	11		0.16	
Gas Fill	90% argon	Tint 4	1	0	0	10	13	12		0.14	
Outboard Lite	6mm clear FT with EC coating on #2	Tint 1	57	4	32	15	18	15	0.23   1.31	0.42	35
Inboard Lite	<b>6mm clear with low-e i89 on #4</b>	Tint 2	40	3	20	12	17	12		0.31	
Cavity	12.7mm	Tint 3	6	1	2	9	16	11		0.15	
Gas Fill	90% argon	Tint 4	1	0	1	10	16	12		0.14	
Outboard Lite	6mm clear FT with EC coating on #2	Tint 1	55	0	30	15	17	15	0.28   1.59	0.45	39
Inboard Lite	<b>6mm clear/ 1.5mm PVB/6mm clear</b>	Tint 2	39	0	19	12	16	12		0.34	
Cavity	12.7mm	Tint 3	5	0	2	9	15	11		0.19	
Gas Fill	90% argon	Tint 4	1	0	1	10	16	12		0.17	
Outboard Lite	6mm clear FT with EC coating on #2	Tint 1	54	0	29	15	16	14	0.28   1.59	0.44	42
Inboard Lite	<b>6mm clear/2.3mm PVB/6mm clear</b>	Tint 2	38	0	18	12	15	12		0.34	
Cavity	12.7mm	Tint 3	5	0	2	9	15	11		0.19	
Gas Fill	90% argon	Tint 4	1	0	0	10	15	12		0.17	
Triple Pane IGU Configurations											
Outboard Lite	6mm clear FT with EC coating on #2	Tint 1	52	3	28	18	22	16	0.21   1.19	0.41	39
Inboard Lite	<b>6mm clear x 2</b>	Tint 2	37	2	18	13	21	12		0.31	
Cavity	12.7mm	Tint 3	5	1	2	9	21	11		0.16	
Gas Fill	90% argon	Tint 4	1	0	0	10	21	12		0.15	
Outboard Lite	6mm clear FT with EC coating on #2	Tint 1	44	2	19	17	17	17	0.14   0.79	0.33	39
Inboard Lite	<b>6mm clear x 2; SN68 low-e on #5</b>	Tint 2	32	2	13	13	16	13		0.25	
Cavity	12.7mm	Tint 3	4	0	2	9	16	11		0.12	
Gas Fill	90% argon	Tint 4	1	0	0	10	16	12		0.10	

<sup>1</sup> Performance calculated in LBNL Window at CEN environmental conditions. <sup>2</sup> Other configurations available based on specifications.

SHAPES CATALOG

- All drawings are viewing surface 1
- Each angle  $\geq 30^\circ$ . Trapezoids must have two right angles and  $(H-H1)$  or  $(W-W1)$  must be  $\geq 2"$  (50mm)
- Smart Window Connector exit indicated by and cannot be moved.
- Smart Window Connector is approx. 3" (75mm) from indicated corner
- Each dimension  $\geq 14"$  (356mm) and  $\leq 120"$  (3048mm), including the hypotenuse of triangles and all sides of trapezoids
- Either W or H must be  $\leq 72"$  (1830mm)



# View Gen 4 Insulating Glass Unit (IGU)

View Gen 4 Smart Glass is the next generation of smart windows with the most natural color rendition, picture-perfect clarity, and enhanced external appearance. View Gen 4 uses electrochromic coating and View Intelligence<sup>®</sup>, the most advanced, predictive technology to adjust tint levels in response to external conditions and user preference. The tint levels on these cloud-connected windows are customizable for optimized comfort. The IGUs are available in a wide range of sizes, shapes, colors, and performance.

## Benefits

View Smart Glass uses electrochromic technology to switch between clear and tinted states on demand.

- Controls glare
- Maximizes daylight
- Provides unobstructed views
- Saves energy
- Contributes to LEED and other green building rating systems

## Features

- 4 preset states from 0.5% to 52% visual transmission
- Solar heat gain coefficient range of 0.09 to 0.40
- Fully automated control or manual control with a range of user interface options
- Maximum size of 72" x 120" (1829mm x 3048mm)
- Most natural color rendition
- Picture-perfect clarity
- Enhanced exterior aesthetic
- Bird friendly product options available. Product tested and certified by the American Bird Conservancy. Please refer to bird friendly product brochure for more details.

## 3rd party testing and certification

- ASTM E-2141: Durability of Absorptive Electrochromic Coatings
- SGCC (ANSI Z97.1, CPSC 16 CFR 1201)
- IGCC/IGMA (ASTM E-2190)

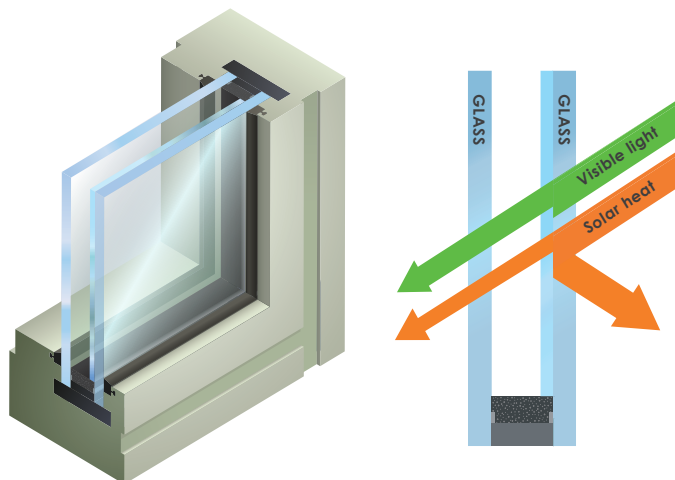
## Warranty

- Standard insulating glass unit (IGU)— 10 years from date of delivery by View
- Please refer to standard warranty terms for more details

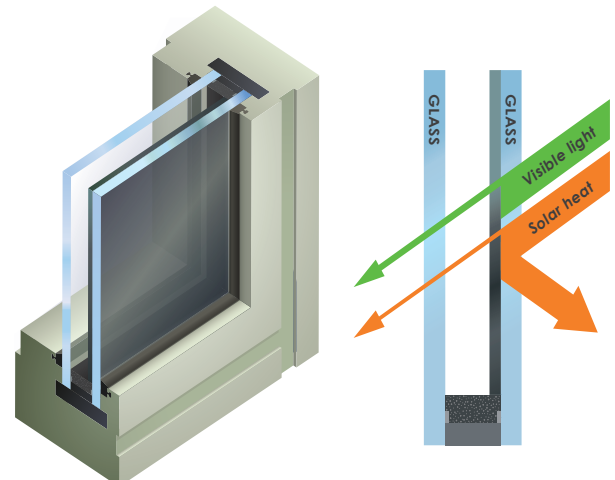
## Framing requirements

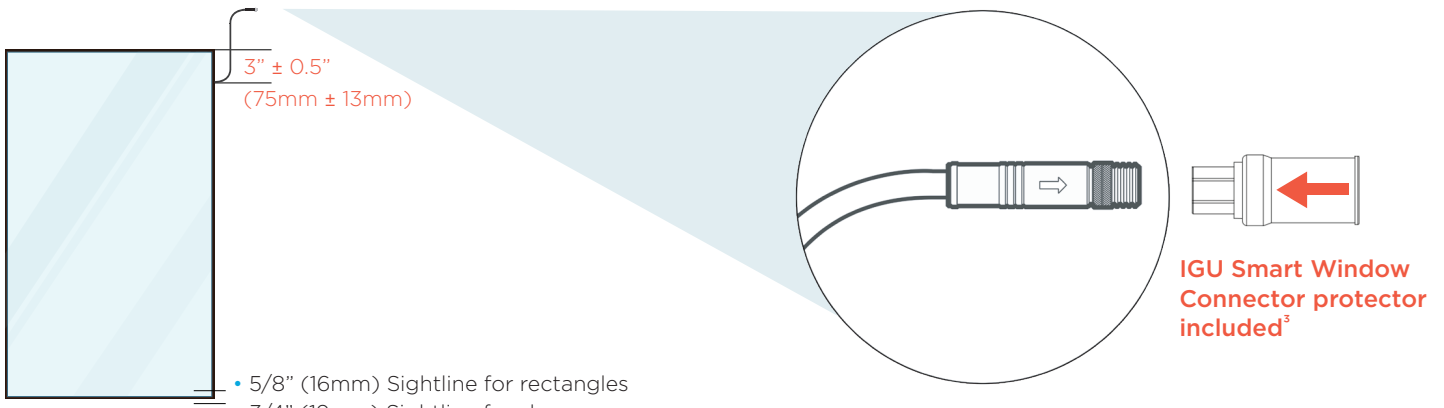
- Integrates into typical applications and framing system types
- Framing systems need to allow enough space in glazing pocket and framing channels to run system wiring
- Hole size for connector to pass through is 7/16" minimum
- For Structural Silicone Glazing (SSG) applications, View IGUs will be shipped with EdgeBlack applied along the long edges of the IGU on surface<sup>1</sup>

CLEAR STATE



TINT STATE





**IGU Smart Window Connector**

- Located 3" ± 0.5" (75mm ± 13mm) from corner
- 15.5" ± 1.5" (390mm ± 40mm) in length
- 4mm diameter wire
- Threaded connection
- Preterminated
- Hand screw 5-pin male M8 connector (10mm diameter)
- Requires 7/16" (11mm) min. hole size

IGU SPECIFICATIONS <sup>1</sup>	
<b>Type</b>	Dual pane or Triple pane
<b>IGU Strength</b>	Tempered (Inboard & Outboard)
<b>Dimensions</b>	Maximum: 72" x 120" (1829mm x 3048mm) Minimum: 14" x 20" (356mm x 508mm) Maximum overall thickness: 2" (52mm)
<b>Outboard Lite</b>	Thickness: 1/4" (6mm) Color: Clear Coating: Dynamic coating on surface 2
<b>Inboard Lite</b>	Various options. Please refer to next table
<b>Gas Fill<sup>2</sup></b>	>90% Argon, <10% Air
<b>Seal</b>	Primary PIB; Secondary Silicone
<b>Spacer Materials and Thickness</b>	Black Foam Super Spacer® T-Spacer™ 1/2", 5/8" thickness (12.7mm, 15.9mm)

Note: Spacer thicknesses mentioned here are nominal and may differ from actual, based manufacturing tolerances, stated in 'IGU Quality Standard Reference Document'.

IGU INBOARD OPTIONS <sup>1</sup>			
	Thickness	Color	Coating
<b>Monolithic</b>	6mm	Multiple <sup>4</sup>	None
	5mm	Clear	None
	4mm	Clear	None
	6mm	Clear	SN68
<b>Laminate</b>	6mm/6mm	Clear	None
	5mm/5mm	Clear	None
	4mm/4mm	Clear	None
	6mm/6mm	Clear	SN68
<b>Laminate Interlayer</b>	0.03" or 0.06" or 0.09" PVB or 0.09" SGP (0.75mm or 1.5mm or 2.3mm PVB or 2.3mm SGP)		

Note: Glass thicknesses mentioned here are nominal and may differ from actual, based on ASTM C1036 tolerance ranges.

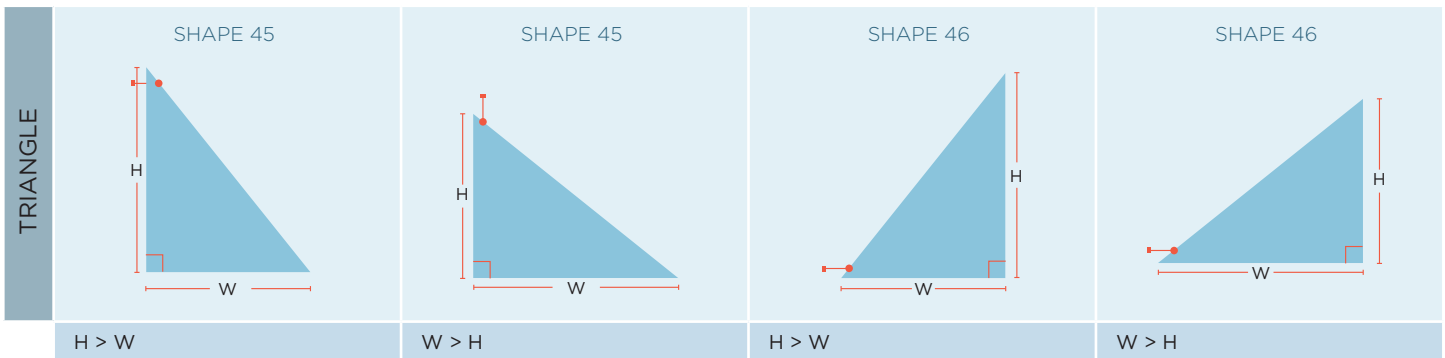
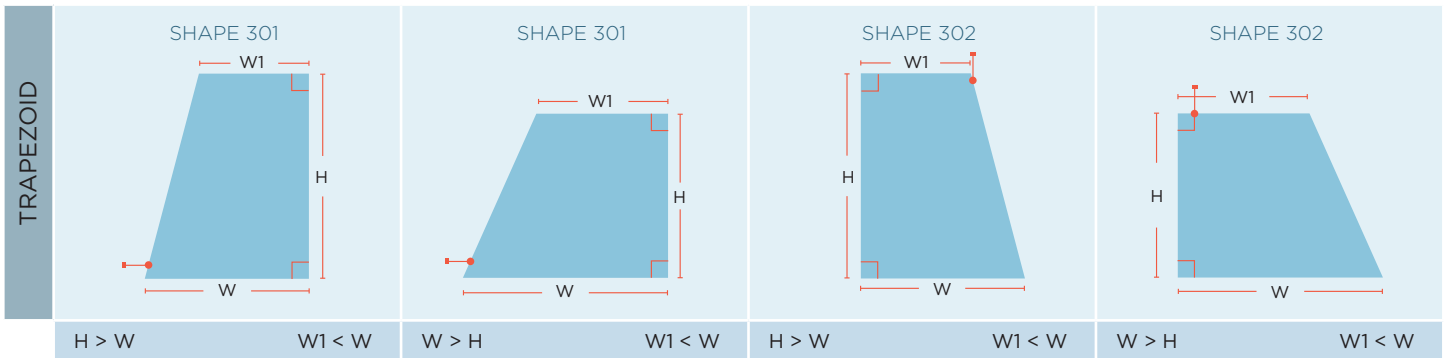
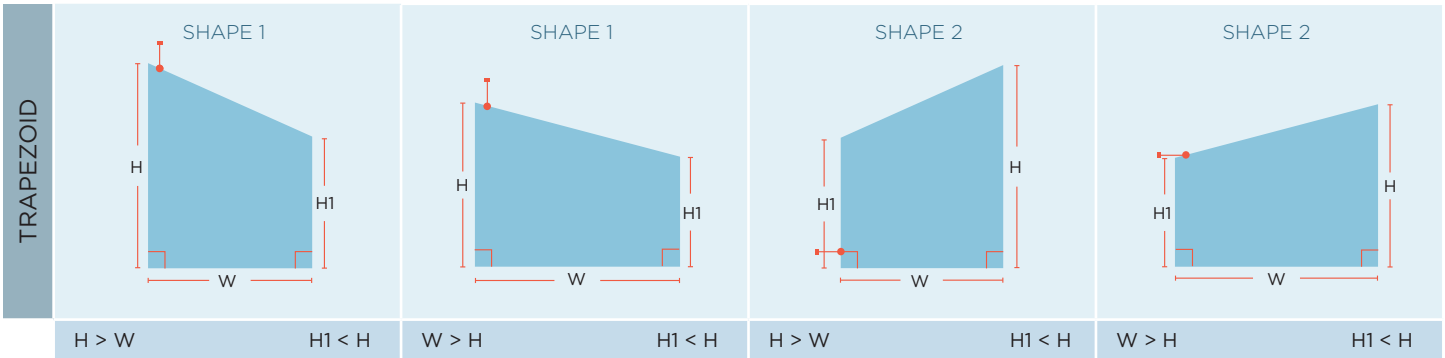
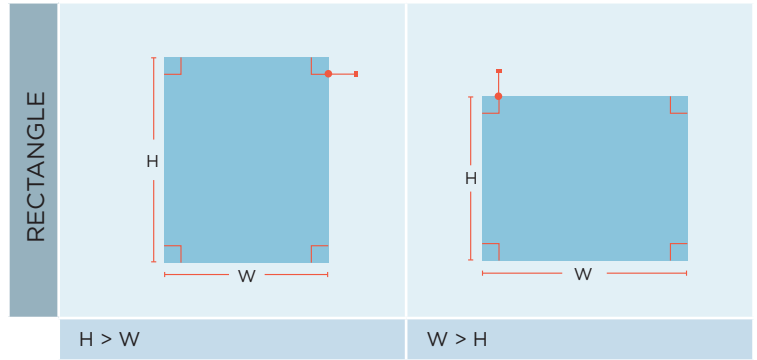
## View Gen 4 Smart Glass

Each View Smart Glass makeup contains four performance values corresponding to the electrochromic (EC) tint level of the glass, ranging from the clear state (Tint 1) to the fully tinted state (Tint 4). Lead times may vary for certain configurations.<sup>5</sup>

Double Pane IGU Configurations		EC Tint Level	Transmittance (%)			Reflectance (%)			U-Value (Btu/h-ft <sup>2</sup> F   W/m <sup>2</sup> K)	Solar Heat Gain Coefficient	Sound Transmission Class Rating (dB)
			Visible	UV	Solar	Visible Out	Visible In	Solar Out			
Outboard Lite	6mm clear FT with EC coating on #2	Tint 1	52	2	31	12	18	12	0.29   1.65	0.40	35
Inboard Lite	<b>6mm clear</b>	Tint 2	31	1	16	8	16	10		0.25	
Cavity	1/2" (12.7mm)	Tint 3	6	0	3	6	16	9		0.12	
Gas Fill	90% argon	Tint 4	1	0	0	6	16	9		0.09	
Outboard Lite	6mm clear FT with EC coating on #2	Tint 1	33	1	19	12	10	12	0.29   1.65	0.38	35
Inboard Lite	<b>6mm SolarBlue</b>	Tint 2	19	1	10	8	9	10		0.24	
Cavity	1/2" (12.7mm)	Tint 3	4	0	2	6	9	9		0.11	
Gas Fill	90% argon	Tint 4	1	0	0	6	9	9		0.09	
Outboard Lite	6mm clear FT with EC coating on #2	Tint 1	26	1	16	12	8	12	0.29   1.65	0.37	35
Inboard Lite	<b>6mm SolarGray</b>	Tint 2	15	1	9	8	8	10		0.24	
Cavity	1/2" (12.7mm)	Tint 3	3	0	1	6	8	9		0.11	
Gas Fill	90% argon	Tint 4	1	0	0	6	8	9		0.09	
Outboard Lite	6mm clear FT with EC coating on #2	Tint 1	37	1	22	12	12	12	0.29   1.65	0.38	35
Inboard Lite	<b>6mm CrystalGray</b>	Tint 2	22	1	12	8	11	10		0.24	
Cavity	1/2" (12.7mm)	Tint 3	4	0	2	6	10	9		0.12	
Gas Fill	90% argon	Tint 4	1	0	0	6	11	9		0.09	
Outboard Lite	6mm clear FT with EC coating on #2	Tint 1	25	1	12	12	8	12	0.29   1.65	0.37	35
Inboard Lite	<b>6mm Pacifica</b>	Tint 2	15	0	7	8	7	9		0.23	
Cavity	1/2" (12.7mm)	Tint 3	3	0	1	6	7	9		0.11	
Gas Fill	90% argon	Tint 4	1	0	0	6	7	9		0.09	
Outboard Lite	6mm clear FT with EC coating on #2	Tint 1	40	2	15	12	13	12	0.29   1.65	0.37	35
Inboard Lite	<b>6mm Azuria</b>	Tint 2	24	1	9	8	12	10		0.23	
Cavity	1/2" (12.7mm)	Tint 3	5	0	2	6	11	9		0.11	
Gas Fill	90% argon	Tint 4	1	0	0	6	12	9		0.09	
Outboard Lite	6mm clear FT with EC coating on #2	Tint 1	44	1	19	11	13	15	0.24   1.38	0.29	35
Inboard Lite	<b>6mm clear with low-e SN68 on #3</b>	Tint 2	26	1	11	8	12	10		0.19	
Cavity	1/2" (12.7mm)	Tint 3	5	0	2	6	12	9		0.09	
Gas Fill	90% argon	Tint 4	1	0	0	6	12	9		0.07	
Outboard Lite	6mm clear FT with EC coating on #2	Tint 1	51	1	29	13	18	12	0.28   1.59	0.39	42
Inboard Lite	<b>6mm clear/0.060" PVB/6mm clear</b>	Tint 2	30	0	15	8	16	10		0.24	
Cavity	1/2" (12.7mm)	Tint 3	6	0	3	6	16	9		0.11	
Gas Fill	90% argon	Tint 4	1	0	0	6	16	9		0.09	
Outboard Lite	6mm clear FT with EC coating on #2	Tint 1	51	1	29	13	17	12	0.28   1.59	0.39	42
Inboard Lite	<b>6mm clear/0.090" PVB/6mm clear</b>	Tint 2	30	0	15	8	16	10		0.24	
Cavity	1/2" (12.7mm)	Tint 3	6	0	3	6	16	9		0.11	
Gas Fill	90% argon	Tint 4	1	0	0	6	16	9		0.09	
Triple Pane IGU Configurations											
Outboard Lite	6mm clear FT with EC coating on #2	Tint 1	47	2	25	15	22	13	0.21   1.20	0.35	39
Inboard Lite	<b>6mm clear x 2</b>	Tint 2	27	1	13	9	21	10		0.22	
Cavity	1/2" (12.7mm)	Tint 3	5	0	2	6	18	9		0.09	
Gas Fill	90% argon	Tint 4	1	0	0	7	21	10		0.07	
Outboard Lite	6mm clear FT with EC coating on #2	Tint 1	40	1	16	14	16	14	0.14   0.79	0.27	39
Inboard Lite	<b>6mm clear x 2; SN68 low-e on #5</b>	Tint 2	23	1	9	8	16	10		0.17	
Cavity	1/2" (12.7mm)	Tint 3	5	0	2	6	15	9		0.07	
Gas Fill	90% argon	Tint 4	1	0	0	6	15	9		0.05	

SHAPES CATALOG

- All drawings are viewing surface 1
- Each angle  $\geq 30^\circ$ . Trapezoids must have two right angles and  $(H-H1)$  or  $(W-W1)$  must be  $\geq 2"$  (50mm)
- Smart Window Connector exit indicated by and cannot be moved.
- Smart Window Connector is approx. 3" (75mm) from indicated corner
- Each dimension  $\geq 14"$  (356mm) and  $\leq 120"$  (3048mm), including the hypotenuse of triangles and all sides of trapezoids
- Either  $W$  or  $H$  must be  $\leq 72"$  (1829mm)





## View Gen 4 Color Performance

### Daylight

	Tint 1	Tint 2	Tint 3	Tint 4
<b>Tvis</b>	52%	31%	6%	1%
<b>Color Fidelity<sup>6</sup> (Rf)</b>	93	92	90	87
<b>Color Gamut<sup>6</sup> (Rg)</b>	95	94	92	90
<b>CRI</b>	92	90	88	86

- Color Fidelity (Rf) quantifies how accurately a light source renders colored objects and finishes as compared to a standard daylight source of the same color temperature.
- Color Gamut (Rg) quantifies how saturated or unsaturated colors appear under a given light source as compared to a reference daylight source of the same color temperature.
- Color Rendering Index (CRI) quantifies the ability of a light source to reveal the colors of various objects in comparison with an ideal or natural light source.

### Additional Notes

- Dynamic coating meets or exceeds specifications for scratches, pinholes, and defects stated in ASTM C1376.
- The inner ply of a tinted laminated lite is colored.
- View Smart Glass transitions from the long edges of the glass inward to the center. Transition speed varies by the size of the unit.
- View complies with the industry standard specification requirements, ASTM C1048 and ANSI Z97.1 for tempered glasses. Any tempered lite with a base dimension > 84" will exhibit vertical roll wave distortion rather than horizontal roll wave distortion.
- Using a spark-type analyzer to measure gas content within the IGU will damage the electrochromic coating and void the warranty.
- The overall thickness of the IGU may differ from nominal thickness. Glass thicknesses stated in this document follow tolerance specifications in ASTM C1036 and spacer tolerances are as per manufacturer, stated in the 'IGU Quality Standard Reference Document'. For example, an IGU with 1" nominal thickness can have an actual overall thickness between 0.90" to 0.99".

### References

<sup>1</sup> Other sizes, colors, and thicknesses available based on specifications.

<sup>2</sup> An IGU installed 2,500 ft above sea level will include 100% air and an open capillary tube installed on the corner closest to the Smart Window Connector running down several inches through the secondary seal.

<sup>3</sup> The IGU Smart Window Connector protector is a disposable cap and should be removed prior to installation.

<sup>4</sup> Color options include Clear, SolarBlue, SolarGray, Azuria, CrystalGray, and Pacifica

<sup>5</sup> Other configurations available based on specifications

<sup>6</sup> Assumptions: Rf and Rg values assume 5,500K exterior daylight conditions. Color properties are calculated for View's standard IGU with a clear matelite. Color performance for non-standard buildups can be calculated upon request.