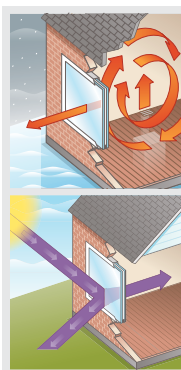
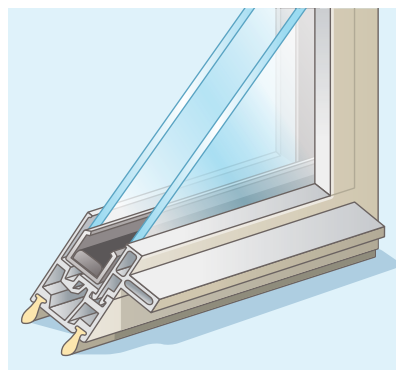




### Vitro Residential Window 3/4" (19mm) Insulating Glass Unit Performance Using 1/8" (3mm) Glass<sup>1\*</sup>

3/4" (19mm) Insulating Glass Unit Performance Using 1/8" (3mm) Glass – Based on LBNL Windows 7.3 Simulations <sup>1</sup>													
Glass Type	Transmittance (%) <sup>2</sup>			Reflectance (%) <sup>2</sup>		With Air Fill		U-Value (Imperial) <sup>3</sup>		Shading Coefficient <sup>2,4</sup>	Solar Heat Gain Coefficient <sup>5</sup>	Light to Solar Gain (LSG) <sup>6</sup>	
						U-Value (Imperial) <sup>3</sup>		Winter	Summer				
	Ultraviolet	Visible	Total Solar	Visible	Total Solar	Winter	Summer			Winter	Summer		
<b>Uncoated – with 1/8" (3mm) Glass and 1/2" (12mm) Argon Fill Outdoor Lite as Shown, Indoor Lite as Shown</b>													
Clear Glass + Clear	59	81	69	16	13	0.48	0.50	0.45	0.48	0.87	0.76	1.07	
Solargray® + Clear	32	54	49	10	9	0.48	0.50	0.45	0.48	0.66	0.58	0.93	
Starphire® + Starphire®	80	84	82	15	14	0.48	0.50	0.45	0.48	0.96	0.83	1.01	
<b>Coated – with 1/8" (3mm) Glass and 1/2" (12mm) Argon Fill Outdoor Lite + Indoor Lite as Shown</b>													
<b>Sungate® 400 Coated Glass</b>													
Sungate® 400 (2) Clear + Clear	32	78	57	14	18	0.32	0.31	0.28	0.26	0.73	0.63	1.24	
Clear + Sungate® 400 (3) Clear	32	78	57	14	19	0.32	0.31	0.28	0.26	0.78	0.68	1.15	
<b>Sungate® 460 Coated Glass</b>													
Clear + Sungate® 460 (3) Clear	17	75	44	13	28	0.32	0.31	0.24	0.21	0.65	0.57	1.32	
<b>Solarban® 60 Coated Glass</b>													
Solarban® 60 (2) Clear + Clear	20	72	36	11	34	0.29	0.27	0.25	0.22	0.46	0.40	1.80	
Solarban® 60 (2) Starphire® + Starphire®	25	75	40	11	41	0.29	0.27	.25	0.22	0.47	0.41	1.83	
Solarban® 60 (2) Solargray® + Clear	12	49	25	7	19	0.29	0.27	0.25	0.22	0.34	0.30	1.63	
Solarbronze® + Solarban® 60 (3) Clear	12	54	27	9	24	0.29	0.27	0.25	0.22	0.44	0.38	1.42	
<b>Solarban® 67 Coated Glass</b>													
Solarban® 67 (2) Clear + Clear	13	55	26	19	41	0.29	0.27	0.25	0.22	0.33	0.29	1.90	
<b>Solarban® 70XL Coated Glass</b>													
Solarban® 70XL (2) + Clear	6	63	24	12	43	0.29	0.27	0.24	0.21	0.31	0.27	2.33	
Solargray® + Solarban® 70XL (3) Clear	3	43	17	9	25	0.29	0.27	0.24	0.21	0.32	0.28	1.54	
Solarbronze® + Solarban® 70XL (3) Clear	4	48	18	9	30	0.29	0.27	0.24	0.21	0.35	0.30	1.60	
<b>Solarban® 90 Coated Glass</b>													
Solarban® 90 (2) Clear + Clear	9	52	20	12	45	0.29	0.27	0.24	0.21	0.26	0.23	2.26	



*Vitro low-e glass allows natural light to enter freely. In winter, indoor heat energy is reflected back into the home. In summer, outdoor heat energy is reflected back outside.*





### Vitro Residential Window 3/4" (19mm) Insulating Glass Unit Performance Using 3/32" (2.5mm) Glass<sup>1\*</sup>

3/4" (19mm) Insulating Glass Unit Performance Using 3/32" (2.5mm) Glass – Based on LBNL Windows 7.3 Simulations <sup>1</sup>													
Glass Type	Transmittance (%) <sup>2</sup>			Reflectance (%) <sup>2</sup>		With Air Fill		U-Value (Imperial) <sup>3</sup>		Shading Coefficient <sup>2,4</sup>	Solar Heat Gain Coefficient <sup>5</sup>	Light to Solar Gain (LSG) <sup>6</sup>	
						U-Value (Imperial) <sup>3</sup>		Winter	Summer				
	Ultraviolet	Visible	Total Solar	Visible	Total Solar	Winter	Summer						Winter
<b>Uncoated – with 3/32" (2.5mm) Glass and 9/16" (14mm) Argon Fill Outdoor Lite as Shown, Indoor Lite as Shown</b>													
Clear Glass + Clear	63	82	74	16	14	0.48	0.50	0.46	0.48	0.90	0.78	1.05	
<b>Coated – with 3/32" (2.5mm) Glass and 9/16" (14mm) Argon Fill Outdoor Lite + Indoor Lite as Shown</b>													
<b>Sungate® 400 Coated Glass</b>													
Sungate® 400 (2) Clear + Clear	34	79	61	14	19	0.33	0.30	0.28	0.25	0.75	0.65	1.22	
Clear + Sungate® 400 (3) Clear	34	49	61	14	21	0.33	0.30	0.28	0.25	0.80	0.70	1.13	
<b>Sungate® 460 Coated Glass</b>													
Clear + Sungate® 460 (3) Clear	18	76	46	13	31	0.33	0.30	0.26	0.23	0.67	0.58	1.31	
<b>Solarban® 60 Coated Glass</b>													
Solarban® 60 (2) Clear + Clear	22	73	37	11	37	0.30	0.26	0.25	0.20	0.46	0.40	1.83	
<b>Solarban® 67 Coated Glass</b>													
Solarban® 67 (2) Clear + Clear	14	56	27	20	44	0.30	0.26	0.25	0.20	0.33	0.29	1.93	
<b>Solarban® 70XL Coated Glass</b>													
Solarban® 70XL (2) + Clear	6	65	25	12	47	0.29	0.25	0.25	0.19	0.31	0.27	2.41	
<b>Solarban® 90 Coated Glass</b>													
Solarban® 90 (2) Clear + Clear	9	53	20	13	49	0.29	0.25	0.24	0.21	0.26	0.23	2.30	

1. Figures may vary due to manufacturing tolerances. All tabulated data is based on NFRC methodology using the LBNL Window 7.3 software.
2. Transmittance and reflectance values based on spectrophotometric measurements and energy distribution of solar radiation.
3. **U-value** is the overall coefficient of heat transmittance or heat flow measured in BTU/hr. • ft<sup>2</sup> • °F (watts/m<sup>2</sup>•°C). Lower U-values indicate better insulating performance.
4. **Shading coefficient** is the ratio of the total amount of solar energy that passes through a glass relative to 1/8-in. (3.0mm) thick clear glass under the same design conditions. It includes both solar energy transmitted directly plus any absorbed solar energy re-radiated and convected. Lower shading coefficient values indicate better performance in reducing solar heat gain.
5. **Solar heat gain coefficient (SHGC)** represents the solar heat gain through the glass relative to the incident solar radiation. It is equal to 86% of the shading coefficient.
6. **Light to Solar Gain ratio (LSG)** is the ratio of visible light transmittance to solar heat gain coefficient.

