Center of Glass Performance Data – Dual-Pane

For current performance information, please visit **andersenwindows.com**.

	Andersen® 400 Series Products With Low-E4 Glass	VT[1]	SC[2]	SHGC[3]	RHG[4]	Fading Tuv[5]	Fading Tdw[6]	%RH @ center[7]	IGST[8]
Dual-Pane	**Low-E4**								
	Casement, Awning, Tilt-Wash Double-Hung Full Frame and Tilt-Wash Double-Hung Insert Windows	73%	0.48	0.42	99	17%	34%	61%	56°F
	Gliding Windows	73%	0.48	0.42	99	17%	34%	61%	56°F
	Circle and Quarter Circle Windows	73%	0.48	0.42	99	17%	34%	59%	55°F
	Woodwright® Double-Hung Full Frame and Woodwright Double-Hung Insert Windows	72%	0.48	0.41	99	16%	33%	61%	56°F
	Picture and Transom Windows	72%	0.47	0.41	98	16%	33%	59%	55°F
	Half Circle, Oval and Elliptical Windows, Frenchwood® Gliding and Hinged Inswing Patio Doors, Frenchwood Patio Door Sidelights and Transoms, Complementary Curved Top Springline™ and Arch Inswing Patio Doors	72%	0.48	0.41	98	16%	33%	61%	56°F
	Flexiframe®, Arch and Springline Windows	70%	0.46	0.40	95	14%	31%	61%	56°F
	Tilt-Wash Double-Hung Window with Factory Applied Energy Performance Panel	67%	0.48	0.41	98	15%	31%	68%	59°F
	Low-E4 With HeatLock® Technology								
	Casement, Awning, Tilt-Wash Double-Hung Full Frame and Tilt-Wash Double-Hung Insert Windows	71%	0.47	0.41	97	17%	33%	44%	47°F
	Gliding Windows	71%	0.47	0.41	97	17%	33%	44%	47°F
	Circle & Quarter Circle Windows	71%	0.47	0.41	96	17%	33%	44%	47°F
	Woodwright Double-Hung Full Frame and Woodwright Double-Hung Insert Windows	70%	0.47	0.41	96	16%	33%	44%	47°F
	Picture and Transom Windows	70%	0.47	0.40	95	16%	33%	44%	47°F
	Half Circle, Oval and Elliptical Windows, Frenchwood Gliding and Hinged Inswing Patio Doors, Frenchwood Patio Door Sidelights and Transoms, Complementary Curved Top Springline and Arch Inswing Patio Doors	70%	0.47	0.41	96	16%	33%	44%	47°F
	Flexiframe, Arch and Springline Windows	68%	0.45	0.39	92	14%	31%	44%	47°F
	Tilt-Wash Double-Hung Window with Factory Applied Energy Performance Panel	65%	0.46	0.40	95	15%	30%	53%	52°F

	Andersen® 400 Series Products With Low-E4 SmartSun™ Glass	VT[1]	SC[2]	SHGC[3]	RHG[4]	Fading Tuv[5]	Fading Tdw[6]	%RH @ center[7]	IGST[8]
Dual-Pane	**Low-E4 SmartSun**								
	Casement, Awning, Tilt-Wash Double-Hung Full Frame and Tilt-Wash Double-Hung Insert Windows	66%	0.31	0.27	66	5%	22%	61%	56°F
	Gliding Windows	66%	0.31	0.27	65	5%	22%	61%	56°F
	Circle and Quarter Circle Windows	66%	0.31	0.27	65	5%	22%	61%	56°F
	Woodwright® Double-Hung Full Frame and Woodwright Double-Hung Insert Windows	65%	0.31	0.27	66	5%	21%	61%	56°F
	Picture and Transom Windows	65%	0.31	0.27	65	5%	21%	61%	56°F
	Half Circle, Oval and Elliptical Windows, Frenchwood® Gliding and Hinged Inswing Patio Doors, Frenchwood Patio Door Sidelights and Transoms, Complementary Curved Top Springline™ and Arch Inswing Patio Doors	65%	0.31	0.27	65	5%	21%	61%	56°F
	Flexiframe®, Arch and Springline Windows	63%	0.31	0.27	65	4%	20%	61%	56°F
	Tilt-Wash Double-Hung Window with Factory Applied Energy Performance Panel	60%	0.33	0.29	69	5%	20%	71%	60°F
	Low-E4 SmartSun With HeatLock® Technology								
	Casement, Awning, Tilt-Wash Double-Hung Full Frame and Tilt-Wash Double-Hung Insert Windows	64%	0.31	0.27	64	5%	21%	46%	48°F
	Gliding Windows	64%	0.31	0.27	64	5%	21%	46%	48°F
	Circle & Quarter Circle Windows	64%	0.31	0.27	64	5%	21%	44%	47°F
	Woodwright Double-Hung Full Frame and Woodwright Double-Hung Insert Windows	63%	0.31	0.27	64	5%	21%	46%	48°F
	Picture and Transom Windows	63%	0.31	0.27	63	5%	21%	44%	47°F
	Half Circle, Oval and Elliptical Windows, Frenchwood Gliding and Hinged Inswing Patio Doors, Frenchwood Patio Door Sidelights and Transoms, Complementary Curved Top Springline and Arch Inswing Patio Doors	63%	0.31	0.27	64	5%	21%	46%	48°F
	Flexiframe, Arch and Springline Windows	61%	0.30	0.26	63	4%	20%	46%	48°F
	Tilt-Wash Double-Hung Window with Factory Applied Energy Performance Panel	59%	0.32	0.28	66	5%	19%	53%	52°F

	Andersen® 400 Series Products With Low-E4 Sun Glass	VT[1]	SC[2]	SHGC[3]	RHG[4]	Fading Tuv[5]	Fading Tdw[6]	%RH @ center[7]	IGST[8]
Dual-Pane	**Low-E4 Sun**								
	Casement, Awning, Tilt-Wash Double-Hung Full Frame and Tilt-Wash Double-Hung Insert Windows	39%	0.21	0.18	44	2%	13%	61%	56°F
	Gliding Windows	39%	0.20	0.18	44	2%	13%	61%	56°F
	Circle and Quarter Circle Windows	39%	0.20	0.18	43	2%	13%	61%	56°F
	Woodwright® Double-Hung Full Frame and Woodwright Double-Hung Insert Windows	39%	0.21	0.18	44	2%	13%	61%	56°F
	Picture and Transom Windows	39%	0.20	0.18	43	2%	13%	61%	56°F
	Half Circle, Oval and Elliptical Windows, Frenchwood® Gliding and Hinged Inswing Patio Doors, Frenchwood Patio Door Sidelights and Transoms, Complementary Curved Top Springline™ and Arch Inswing Patio Doors	39%	0.20	0.18	44	2%	13%	61%	56°F
	Flexiframe®, Arch and Springline Windows	38%	0.21	0.18	44	2%	12%	61%	56°F
	Tilt-Wash Double-Hung Window with Factory Applied Energy Performance Panel	36%	0.26	0.22	54	2%	12%	71%	60°F

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• Based on NFRC testing/simulation conditions using Windows v7.4.6.0 and NFRC validated spectral data. 0°F outside temperature, 70°F inside temperature and a 15 mph wind.
1) Visible Transmittance (VT) measures how much light comes through the glass. The higher the value, from 0 to 1, the more daylight the glass lets in. Visible Transmittance is measured over the 380 to 760 nanometer portion of the solar spectrum. 2) Shading Coefficient (SC) defines the amount of heat gain through the glass compared to a single lite0 of clear $^{1}/_{8}$" (3) glass. 3) Solar Heat Gain Coefficient (SHGC) defines the fraction of solar radiation admitted through the glass directly transmitted, as well as absorbed and subsequently released inward. The lower the value, the less heat is transmitted through the product. 4) Relative Heat Gain (RHG) is the amount of heat gain through a glazing incorporating U-Factor and Solar Heat Gain Coefficient. 5) Transmission Ultra-Violet Energy (Tuv). The transmission of short-wave energy in the 300-380 nanometer portion of the solar spectrum. The energy can cause fabric fading. 6) Transmission Damage Function (Tdw). The transmission of UV and visible light energy in the 300-600 nanometer portion of the solar spectrum. The value includes both the UV and visible light energy that can cause fabric fading. This rating has also been referred to as the Krochmann Damage Function. This rating better predicts fading potential than UV transmission alone. The lower the Damage Function rating, the less transmission of short-wave energy through the glass that can potentially cause fabric fading. Fabric type is also a key component of fading potential. 7) Percent relative humidity before condensation occurs at the center of glass, taken using center of glass temperature. 8) Inside glass surface temperatures are taken at the center of glass.
• This data is accurate as of October 2023. Due to ongoing product changes, updated test results or new industry standards, this data may change over time. Contact your Andersen supplier for current performance information or upgrade options.
• Contact your Andersen supplier for center of glass performance data on windows with patterned glass, tempered glass and products ordered with capillary breather tubes.

Center of Glass Performance Data – Dual-Pane *(continued)*

For current performance information, please visit **andersenwindows.com**.

	Andersen® 400 Series Products With Low-E4 PassiveSun Glass	VT[1]	SC[2]	SHGC[3]	RHG[4]	Fading Tuv[5]	Fading Tdw[6]	%RH @ center[7]	IGST[8]
Dual-Pane	**Low-E4 PassiveSun**								
	Casement, Awning, Tilt-Wash Double-Hung Full Frame and Tilt-Wash Double-Hung Insert Windows	80%	0.80	0.70	164	31%	43%	59%	55°F
	Gliding Windows	80%	0.80	0.70	164	31%	43%	59%	55°F
	Circle and Quarter Circle Windows	80%	0.80	0.70	164	31%	43%	59%	55°F
	Woodwright® Double-Hung Full Frame and Woodwright Double-Hung Insert Windows	79%	0.79	0.69	161	29%	42%	59%	55°F
	Picture and Transom Windows	79%	0.79	0.69	161	29%	42%	59%	55°F
	Half Circle, Oval and Elliptical Windows, Frenchwood® Gliding and Hinged Inswing Patio Doors, Frenchwood Patio Door Sidelights and Transoms, Complementary Curved Top Springline™ and Arch Inswing Patio Doors	79%	0.79	0.69	161	29%	42%	59%	55°F
	Flexiframe®, Arch and Springline Windows	77%	0.74	0.64	151	24%	38%	59%	55°F
	Tilt-Wash Double-Hung Window with Factory Applied Energy Performance Panel	74%	0.73	0.63	148	27%	39%	68%	59°F
	Low-E4 PassiveSun With HeatLock® Technology								
	Casement, Awning, Tilt-Wash Double-Hung Full Frame and Tilt-Wash Double-Hung Insert Windows	78%	0.73	0.63	148	29%	42%	42%	46°F
	Gliding Windows	78%	0.73	0.63	149	29%	42%	42%	46°F
	Circle & Quarter Circle Windows	78%	0.73	0.64	149	29%	42%	42%	46°F
	Woodwright Double-Hung Full Frame and Woodwright Double-Hung Insert Windows	77%	0.72	0.62	146	27%	40%	42%	46°F
	Picture and Transom Windows	77%	0.72	0.62	146	27%	40%	42%	46°F
	Half Circle, Oval and Elliptical Windows, Frenchwood Gliding and Hinged Inswing Patio Doors, Frenchwood Patio Door Sidelights and Transoms, Complementary Curved Top Springline and Arch Inswing Patio Doors	77%	0.72	0.62	146	27%	40%	42%	46°F
	Flexiframe, Arch and Springline Windows	75%	0.67	0.58	136	23%	37%	44%	47°F
	Tilt-Wash Double-Hung Window with Factory Applied Energy Performance Panel	72%	0.67	0.58	137	25%	38%	51%	51°F

Center of Glass Performance Data – Triple-Pane

For current performance information, please visit **andersenwindows.com**.

	Andersen® 400 Series Products With Low-E4 Glass	VT[1]	SC[2]	SHGC[3]	RHG[4]	Fading Tuv[5]	Fading Tdw[6]	%RH @ center[7]	IGST[8]
Triple-Pane	**Low-E4**								
	Frenchwood® Gliding and Hinged Inswing Patio Doors, Frenchwood Patio Door Sidelights and Transoms	66%	0.44	0.38	92	14%	30%	63%	57°F
	Low-E4 Enhanced								
	Frenchwood® Gliding and Hinged Inswing Patio Doors, Frenchwood Patio Door Sidelights and Transoms	63%	0.43	0.37	88	8%	24%	71%	60°F
	Low-E4 Enhanced With HeatLock® Technology								
	Frenchwood® Gliding and Hinged Inswing Patio Doors, Frenchwood Patio Door Sidelights and Transoms	62%	0.41	0.36	84	8%	23%	55%	53°F

	Andersen® 400 Series Products With Low-E4 SmartSun™ Glass	VT[1]	SC[2]	SHGC[3]	RHG[4]	Fading Tuv[5]	Fading Tdw[6]	%RH @ center[7]	IGST[8]
Triple-Pane	**Low-E4 SmartSun**								
	Frenchwood® Gliding and Hinged Inswing Patio Doors, Frenchwood Patio Door Sidelights and Transoms	59%	0.29	0.25	62	4%	19%	66%	58°F
	Low-E4 SmartSun Enhanced								
	Frenchwood® Gliding and Hinged Inswing Patio Doors, Frenchwood Patio Door Sidelights and Transoms	57%	0.28	0.25	59	2%	16%	71%	60°F
	Low-E4 SmartSun Enhanced With HeatLock® Technology								
	Frenchwood® Gliding and Hinged Inswing Patio Doors, Frenchwood Patio Door Sidelights and Transoms	56%	0.27	0.24	57	2%	16%	55%	53°F

• Based on NFRC testing/simulation conditions using Windows v7.4.6.0 and NFRC validated spectral data. 0°F outside temperature, 70°F inside temperature and a 15 mph wind.
1) Visible Transmittance (VT) measures how much light comes through the glass. The higher the value, from 0 to 1, the more daylight the glass lets in. Visible Transmittance is measured over the 380 to 760 nanometer portion of the solar spectrum. 2) Shading Coefficient (SC) defines the amount of heat gain through the glass compared to a single lite0 of clear $^{1}/_{8}$" (3) glass. 3) Solar Heat Gain Coefficient (SHGC) defines the fraction of solar radiation admitted through the glass directly transmitted, as well as absorbed and subsequently released inward. The lower the value, the less heat is transmitted through the product. 4) Relative Heat Gain (RHG) is the amount of heat gain through a glazing incorporating U-Factor and Solar Heat Gain Coefficient. 5) Transmission Ultra-Violet Energy (Tuv). The transmission of short-wave energy in the 300-380 nanometer portion of the solar spectrum. The energy can cause fabric fading. 6) Transmission Damage Function (Tdw). The transmission of UV and visible light energy in the 300-600 nanometer portion of the solar spectrum. The value includes both the UV and visible light energy that can cause fabric fading. This rating has also been referred to as the Krochmann Damage Function. This rating better predicts fading potential than UV transmission alone. The lower the Damage Function rating, the less transmission of short-wave energy through the glass that can potentially cause fabric fading. Fabric type is also a key component of fading potential. 7) Percent relative humidity before condensation occurs at the center of glass, taken using center of glass temperature. 8) Inside glass surface temperatures are taken at the center of glass.
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• Contact your Andersen supplier for center of glass performance data on windows with patterned glass, tempered glass and products ordered with capillary breather tubes.