

Thermal Performance Data

Visions 3500 Double Hung Windows (9108)
(non J-channel)



US Qualification Criteria	Climate Zone	U-Value	SHGC	
<p>As of January 2016</p>	Northern	≤ 0.27	Any	Prescriptive
		≤ 0.28	≥ 0.32	Equivalent Energy Performance
		≤ 0.29	≥ 0.37	
		≤ 0.30	≥ 0.42	
	North-Central	≤ 0.30	≤ 0.40	
	South-Central	≤ 0.30	≤ 0.25	
Southern	≤ 0.40	≤ 0.25		

Canadian Qualification Criteria	Climate Zone	U-Value	or	Energy Rating
<p>As of February 2015</p>	Zone 1	≤ 1.60		≥ 25
	Zone 2	≤ 1.40		≥ 29
	Zone 3	≤ 1.20		≥ 34
	Air Leakage ≤ 0.3 cfm/ft ²			

U-Value

A measurement of how much energy a material conducts. The lower the U-Value, the greater the insulating effect.

Solar Heat Gain Coefficient (SHGC)

Measures how well a window or door prevents heat from passing through it. The lower a window or door's SHGC, the less heat it allows to pass through it.

Visible Light Transmittance

The amount of light in the visible portion of the spectrum that passes through a glazing material.

Condensation Resistance Rating

Measures how well a window resists the formation of condensation on the inside surface. The higher the number the better resistance to condensation.

Energy Rating

A value demonstrating the balance between U-Value, SHGC and air leakage. The higher the number, the more efficient the product.

R-Value

A measurement of how much a material resists heat transfer. A higher R-Value means a greater insulating effect and a lower rate of heat flow out of the home. While **R-value** measures resistance to heat transfer, **U-value** measures the rate of heat transfer. In simple terms, **U-value** is the mathematical reciprocal of **R-value**; that is, $U = 1/R$ and $R = 1/U$.

^a Total Unit calculations are derived from computer simulations that are then verified by 3rd party testing in accordance with NFRC 100, NFRC 200, and NFRC 500.

^b Published values reflect 3mm/3mm glass lite thicknesses.

ENERGY PERFORMANCE DATA								ENERGY STAR		CANADIAN ENERGY PERFORMANCE DATA				ENERGY STAR				
Visions 3500 Double Hung Windows (9108)								US ENERGY STAR V 6.0						CANADA ENERGY STAR v 4.1				
Grille Option	Glazing thickness	aNFRC Total Unit Calculations bGlazing Option	CPD #	U-Value	Solar Heat Gain Coefficient	Visible Light Transmittance	Condensation Resistance Rating	US ENERGY STAR V 6.0				U-Value (metric)	Maximum Air Leakage L/s/m2	Air Infiltration/Exfiltration Average	Energy Rating	CANADA ENERGY STAR v 4.1		
								N	NC	SC	S					1	2	3
No GIA or SDL	3/4"	Clear Insul	WEA-N-289-00221-00001	0.45	0.59	0.62	45					2.56	0.6	0.26	18			
	3/4"	Insul Low-E	WEA-N-289-00222-00001	0.32	0.32	0.54	56					1.82	0.6	0.26	18			
	3/4"	Insul Low E w/Argon	WEA-N-289-00229-00001	0.28	0.31	0.54	60		Y			1.59	0.6	0.26	23	Y		
	3/4"	Passive Solar	WEA-N-289-00224-00001	0.32	0.52	0.60	56					1.82	0.6	0.26	30	Y	Y	
	3/4"	Passive Solar w/Argon	WEA-N-289-00231-00001	0.29	0.52	0.60	59	Y				1.65	0.6	0.26	33	Y	Y	
	3/4"	Zo-e-shield 5	WEA-N-289-00223-00001	0.31	0.21	0.49	57				Y	1.76	0.6	0.26	13			
	3/4"	Zo-e-shield 5 w/ Argon	WEA-N-289-00230-00001	0.28	0.21	0.49	60		Y	Y	Y	1.59	0.6	0.26	17	Y		
	3/4"	Zo-e-shield 5 Extreme	WEA-N-289-00227-00001	0.26	0.21	0.48	44	Y	Y	Y	Y	1.48	0.6	0.26	19	Y		
	3/4"	Zo-e-shield 5 Extreme w/ Argon	WEA-N-289-00234-00001	0.24	0.21	0.48	48	Y	Y	Y	Y	1.36	0.6	0.26	22	Y	Y	
	3/4"	Zo-e-shield 6	WEA-N-289-00292-00001	0.33	0.21	0.48	55				Y	1.87	0.6	0.26	11			
	3/4"	Zo-e-shield 6 w/ Argon	WEA-N-289-00304-00001	0.28	0.21	0.48	59		Y	Y	Y	1.59	0.6	0.26	17	Y		
	3/4"	Zo-e SafeGuard Certified	WEA-N-289-00298-00001	0.32	0.21	0.48	48				Y	1.82	0.6	0.26	12			
	3/4"	Zo-e SafeGuard Certified w/ Argon	WEA-N-289-00310-00001	0.28	0.21	0.48	59		Y	Y	Y	1.59	0.6	0.26	17	Y		
	3/4"	Insul Low-E 240	WEA-N-289-00225-00001	0.32	0.20	0.30	56				Y	1.82	0.6	0.26	11			
	3/4"	Insul Low-E 240 w/Argon	WEA-N-289-00232-00001	0.29	0.19	0.30	59		Y	Y	Y	1.65	0.6	0.26	14			
	3/4"	Insul Low-E 340	WEA-N-289-00226-00001	0.32	0.14	0.29	56				Y	1.82	0.6	0.26	8			
	3/4"	Insul Low-E 340 w/Argon	WEA-N-289-00233-00001	0.28	0.14	0.29	60		Y	Y	Y	1.59	0.6	0.26	13			
	3/4"	Bronze Low E	WEA-N-289-00222-00011	0.32	0.30	0.41	56					1.82	0.6	0.26	17			
3/4"	Bronze Low E w/Argon	WEA-N-289-00229-00011	0.28	0.30	0.41	60		Y			1.59	0.6	0.26	22	Y			
Less Than 1" GIA or SDL	3/4"	Clear Insul	WEA-N-289-00221-00002	0.45	0.53	0.55	45					2.56	0.6	0.26	14			
	3/4"	Insul Low-E	WEA-N-289-00222-00002	0.32	0.29	0.48	56					1.82	0.6	0.26	16			
	3/4"	Insul Low E w/Argon	WEA-N-289-00229-00002	0.28	0.28	0.48	60		Y			1.59	0.6	0.26	21	Y		
	3/4"	Passive Solar	WEA-N-289-00224-00002	0.32	0.46	0.53	56					1.82	0.6	0.26	26	Y		
	3/4"	Passive Solar w/Argon	WEA-N-289-00231-00002	0.29	0.47	0.53	59	Y				1.65	0.6	0.26	31	Y	Y	
	3/4"	Zo-e-shield 5	WEA-N-289-00223-00002	0.31	0.19	0.43	57				Y	1.76	0.6	0.26	12			
	3/4"	Zo-e-shield 5 w/ Argon	WEA-N-289-00230-00002	0.28	0.19	0.43	60		Y	Y	Y	1.59	0.6	0.26	16			
	3/4"	Zo-e-shield 5 Extreme	WEA-N-289-00227-00002	0.26	0.19	0.42	44	Y	Y	Y	Y	1.48	0.6	0.26	18	Y		
	3/4"	Zo-e-shield 5 Extreme w/ Argon	WEA-N-289-00234-00002	0.24	0.19	0.42	48	Y	Y	Y	Y	1.36	0.6	0.26	21	Y	Y	
	3/4"	Zo-e-shield 6	WEA-N-289-00293-00001	0.34	0.19	0.43	55				Y	1.93	0.6	0.26	8			
	3/4"	Zo-e-shield 6 w/ Argon	WEA-N-289-00305-00001	0.30	0.19	0.43	59		Y	Y	Y	1.70	0.6	0.26	13			
	3/4"	Zo-e SafeGuard Certified	WEA-N-289-00299-00001	0.34	0.19	0.42	48				Y	1.93	0.6	0.26	8			
	3/4"	Zo-e SafeGuard Certified w/ Argon	WEA-N-289-00311-00001	0.29	0.19	0.42	59		Y	Y	Y	1.65	0.6	0.26	14			
	3/4"	Insul Low-E 240	WEA-N-289-00225-00002	0.32	0.18	0.27	56				Y	1.82	0.6	0.26	10			
	3/4"	Insul Low-E 240 w/Argon	WEA-N-289-00232-00002	0.29	0.18	0.27	59		Y	Y	Y	1.65	0.6	0.26	14			
	3/4"	Insul Low-E 340	WEA-N-289-00226-00002	0.32	0.13	0.26	56				Y	1.82	0.6	0.26	7			
	3/4"	Insul Low-E 340 w/Argon	WEA-N-289-00233-00002	0.28	0.13	0.26	60		Y	Y	Y	1.59	0.6	0.26	12			
	3/4"	Bronze Low E	WEA-N-289-00222-00012	0.32	0.27	0.36	56					1.82	0.6	0.26	15			
3/4"	Bronze Low E w/Argon	WEA-N-289-00229-00012	0.28	0.27	0.36	60		Y			1.59	0.6	0.26	20	Y			
1" Or Over GIA or SDL	3/4"	Clear Insul	WEA-N-289-00221-00003	0.45	0.47	0.49	45					2.56	0.6	0.26	11			
	3/4"	Insul Low-E	WEA-N-289-00222-00003	0.32	0.26	0.43	56					1.82	0.6	0.26	15			
	3/4"	Insul Low E w/Argon	WEA-N-289-00229-00003	0.28	0.25	0.43	60		Y	Y	Y	1.59	0.6	0.26	19	Y		
	3/4"	Passive Solar	WEA-N-289-00224-00003	0.32	0.41	0.47	56					1.82	0.6	0.26	23			
	3/4"	Passive Solar w/Argon	WEA-N-289-00231-00003	0.29	0.41	0.47	59	Y				1.65	0.6	0.26	27	Y		
	3/4"	Zo-e-shield 5	WEA-N-289-00223-00003	0.31	0.17	0.38	57				Y	1.76	0.6	0.26	11			
	3/4"	Zo-e-shield 5 w/ Argon	WEA-N-289-00230-00003	0.28	0.17	0.38	60		Y	Y	Y	1.59	0.6	0.26	14			
	3/4"	Zo-e-shield 5 Extreme	WEA-N-289-00227-00003	0.26	0.17	0.37	44	Y	Y	Y	Y	1.48	0.6	0.26	17	Y		
	3/4"	Zo-e-shield 5 Extreme w/ Argon	WEA-N-289-00234-00003	0.24	0.17	0.37	48	Y	Y	Y	Y	1.36	0.6	0.26	20	Y		
	3/4"	Zo-e-shield 6	WEA-N-289-00293-00002	0.34	0.17	0.38	55				Y	1.93	0.6	0.26	7			
	3/4"	Zo-e-shield 6 w/ Argon	WEA-N-289-00305-00002	0.30	0.17	0.38	59		Y	Y	Y	1.70	0.6	0.26	12			
	3/4"	Zo-e SafeGuard Certified	WEA-N-289-00299-00002	0.34	0.17	0.38	48				Y	1.93	0.6	0.26	7			
	3/4"	Zo-e SafeGuard Certified w/ Argon	WEA-N-289-00311-00002	0.29	0.17	0.38	59		Y	Y	Y	1.65	0.6	0.26	13			
	3/4"	Insul Low-E 240	WEA-N-289-00225-00003	0.32	0.16	0.24	56				Y	1.82	0.6	0.26	9			
	3/4"	Insul Low-E 240 w/Argon	WEA-N-289-00232-00003	0.29	0.16	0.24	59		Y	Y	Y	1.65	0.6	0.26	13			
	3/4"	Insul Low-E 340	WEA-N-289-00226-00003	0.32	0.12	0.23	56				Y	1.82	0.6	0.26	7			
	3/4"	Insul Low-E 340 w/Argon	WEA-N-289-00233-00003	0.28	0.11	0.23	60		Y	Y	Y	1.59	0.6	0.26	11			
	3/4"	Bronze Low E	WEA-N-289-00222-00013	0.32	0.24	0.32	56				Y	1.82	0.6	0.26	13			
3/4"	Bronze Low E w/Argon	WEA-N-289-00229-00013	0.28	0.24	0.32	60		Y	Y	Y	1.59	0.6	0.26	19	Y			