

Thermal Performance Data

Visions 3500 Casement Windows - Operating (9202)



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	
	North-Central	=0.30	>=0.42	
		<=0.30	<=0.40	
		<=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/ft2			

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

Visions 3500 Casement Windows - Operating (9202)



US ENERGY STAR V 6.0

CANADIAN ENERGY PERFORMANCE DATA



CANADA ENERGY STAR v 4.1

Grille Option	Glazing thickness	³NFRC Total Unit Calculations ⁴Glazing 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 Ls/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-303-00610-00001	0.42	0.51	0.53	45					2.39	0.6	0.08	17				
	3/4"	Insul Low-E	WEA-N-303-00740-00001	0.31	0.26	0.46	56					1.76	0.6	0.08	16				
	3/4"	Insul Low E w/Argon	WEA-N-303-00770-00001	0.28	0.26	0.46	60		Y			1.59	0.6	0.08	20	Y			
	3/4"	Passive Solar	WEA-N-303-00619-00001	0.31	0.45	0.51	57					1.76	0.6	0.08	27	Y			
	3/4"	Passive Solar w/Argon	WEA-N-303-00681-00001	0.28	0.45	0.51	60	Y				1.59	0.6	0.08	31	Y	Y		
	3/4"	Passive Solar Extreme	WEA-N-303-00622-00001	0.26	0.41	0.50	44	Y				1.48	0.6	0.08	31	Y	Y		
	3/4"	Passive Solar Extreme w/Argon	WEA-N-303-00684-00001	0.24	0.41	0.50	47	Y				1.36	0.6	0.08	34	Y	Y		
	3/4"	Zo-e-shield 5	WEA-N-303-00741-00001	0.30	0.19	0.40	56		Y	Y	Y		1.70	0.6	0.08	14			
	3/4"	Zo-e-shield 5 w/ Argon	WEA-N-303-00771-00001	0.27	0.19	0.40	60	Y	Y	Y	Y		1.53	0.6	0.08	17	Y		
	3/4"	Zo-e-shield 5 Extreme	WEA-N-303-00631-00001	0.26	0.18	0.41	45	Y	Y	Y	Y		1.48	0.6	0.08	18	Y		
	3/4"	Zo-e-shield 5 Extreme w/ Argon	WEA-N-303-00693-00001	0.24	0.18	0.41	48	Y	Y	Y	Y		1.36	0.6	0.08	20	Y	Y	
	3/4"	Zo-e-shield 6	WEA-N-303-00654-00001	0.30	0.18	0.41	58		Y	Y	Y		1.70	0.6	0.08	13			
	3/4"	Zo-e-shield 6 w/ Argon	WEA-N-303-00716-00001	0.27	0.18	0.41	62	Y	Y	Y	Y		1.53	0.6	0.08	17	Y		
	3/4"	Zo-e SafeGuard Certified	WEA-N-303-00660-00001	0.30	0.18	0.41	59		Y	Y	Y		1.70	0.6	0.08	13			
	3/4"	Zo-e SafeGuard Certified w/ Argon	WEA-N-303-00722-00001	0.27	0.18	0.41	62	Y	Y	Y	Y		1.53	0.6	0.08	17	Y		
	1"	Zo-e-shield 7	WEA-N-303-00664-00001	0.25	0.17	0.34	67	Y	Y	Y	Y		1.42	0.6	0.08	19	Y		
	1"	Zo-e-shield 7 w/ Argon	WEA-N-303-00726-00001	0.22	0.17	0.34	71	Y	Y	Y	Y		1.25	0.6	0.08	22	Y	Y	
	3/4"	Insul Low-E 240	WEA-N-303-00625-00001	0.31	0.18	0.26	57				Y		1.76	0.6	0.08	12			
	3/4"	Insul Low-E 240 w/Argon	WEA-N-303-00687-00001	0.28	0.17	0.26	60		Y	Y	Y		1.59	0.6	0.08	15			
	3/4"	Insul Low-E 340	WEA-N-303-00628-00001	0.30	0.13	0.25	58		Y	Y	Y		1.70	0.6	0.08	10			
3/4"	Insul Low-E 340 w/Argon	WEA-N-303-00690-00001	0.27	0.12	0.25	61	Y	Y	Y	Y		1.53	0.6	0.08	13				
3/4"	Bronze Low E	WEA-N-303-00613-00011	0.30	0.26	0.34	57		Y				1.70	0.6	0.08	18				
3/4"	Bronze Low E w/Argon	WEA-N-303-00675-00011	0.28	0.26	0.34	61		Y				1.59	0.6	0.08	20	Y			
Less Than 1" GIA or SDL	3/4"	Clear Insul	WEA-N-303-00610-00002	0.42	0.46	0.48	45					2.39	0.6	0.08	14				
	3/4"	Insul Low-E	WEA-N-303-00740-00002	0.31	0.24	0.41	56				Y		1.76	0.6	0.08	15			
	3/4"	Insul Low E w/Argon	WEA-N-303-00770-00002	0.28	0.23	0.41	60		Y	Y	Y		1.59	0.6	0.08	18	Y		
	3/4"	Passive Solar	WEA-N-303-00619-00002	0.31	0.41	0.46	57					1.76	0.6	0.08	25				
	3/4"	Passive Solar w/Argon	WEA-N-303-00681-00002	0.28	0.41	0.46	60	Y				1.59	0.6	0.08	29	Y			
	3/4"	Passive Solar Extreme	WEA-N-303-00622-00002	0.26	0.37	0.45	44	Y	Y			1.48	0.6	0.08	29	Y			
	3/4"	Passive Solar Extreme w/Argon	WEA-N-303-00684-00002	0.24	0.37	0.45	47	Y	Y			1.36	0.6	0.08	31	Y	Y		
	3/4"	Zo-e-shield 5	WEA-N-303-00741-00002	0.30	0.17	0.36	56		Y	Y	Y		1.70	0.6	0.08	12			
	3/4"	Zo-e-shield 5 w/ Argon	WEA-N-303-00771-00002	0.27	0.17	0.36	60	Y	Y	Y	Y		1.53	0.6	0.08	16	Y		
	3/4"	Zo-e-shield 5 Extreme	WEA-N-303-00631-00002	0.26	0.17	0.37	45	Y	Y	Y	Y		1.48	0.6	0.08	17	Y		
	3/4"	Zo-e-shield 5 Extreme w/ Argon	WEA-N-303-00693-00002	0.24	0.17	0.37	48	Y	Y	Y	Y		1.36	0.6	0.08	20	Y		
	3/4"	Zo-e-shield 6	WEA-N-303-00654-00002	0.30	0.17	0.37	58		Y	Y	Y		1.70	0.6	0.08	12			
	3/4"	Zo-e-shield 6 w/ Argon	WEA-N-303-00716-00002	0.27	0.17	0.37	62	Y	Y	Y	Y		1.53	0.6	0.08	16	Y		
	3/4"	Zo-e SafeGuard Certified	WEA-N-303-00660-00002	0.30	0.17	0.37	59		Y	Y	Y		1.70	0.6	0.08	12			
	3/4"	Zo-e SafeGuard Certified w/ Argon	WEA-N-303-00722-00002	0.27	0.17	0.37	62	Y	Y	Y	Y		1.53	0.6	0.08	16	Y		
	1"	Zo-e-shield 7	WEA-N-303-00665-00001	0.25	0.16	0.30	67	Y	Y	Y	Y		1.42	0.6	0.08	18	Y		
	1"	Zo-e-shield 7 w/ Argon	WEA-N-303-00727-00001	0.22	0.15	0.30	71	Y	Y	Y	Y		1.25	0.6	0.08	21	Y	Y	
	3/4"	Insul Low-E 240	WEA-N-303-00625-00002	0.31	0.16	0.23	57				Y		1.76	0.6	0.08	11			
	3/4"	Insul Low-E 240 w/Argon	WEA-N-303-00687-00002	0.28	0.16	0.23	60		Y	Y	Y		1.59	0.6	0.08	14			
	3/4"	Insul Low-E 340	WEA-N-303-00628-00002	0.30	0.12	0.23	58		Y	Y	Y		1.70	0.6	0.08	10			
3/4"	Insul Low-E 340 w/Argon	WEA-N-303-00690-00002	0.27	0.11	0.23	61	Y	Y	Y	Y		1.53	0.6	0.08	13				
3/4"	Bronze Low E	WEA-N-303-00613-00012	0.30	0.24	0.31	57		Y	Y	Y		1.70	0.6	0.08	16				
3/4"	Bronze Low E w/Argon	WEA-N-303-00675-00012	0.28	0.24	0.31	61		Y	Y	Y		1.59	0.6	0.08	19	Y			
1" Or Over GIA or SDL	3/4"	Clear Insul	WEA-N-303-00610-00003	0.42	0.42	0.43	45					2.39	0.6	0.08	12				
	3/4"	Insul Low-E	WEA-N-303-00740-00003	0.31	0.21	0.37	56				Y		1.76	0.6	0.08	13			
	3/4"	Insul Low E w/Argon	WEA-N-303-00770-00003	0.28	0.21	0.37	60		Y	Y	Y		1.59	0.6	0.08	17	Y		
	3/4"	Passive Solar	WEA-N-303-00619-00003	0.31	0.37	0.42	57					1.76	0.6	0.08	23				
	3/4"	Passive Solar w/Argon	WEA-N-303-00681-00003	0.28	0.37	0.42	60	Y	Y			1.59	0.6	0.08	26	Y			
	3/4"	Passive Solar Extreme	WEA-N-303-00622-00003	0.26	0.34	0.41	44	Y	Y			1.48	0.6	0.08	27	Y			
	3/4"	Passive Solar Extreme w/Argon	WEA-N-303-00684-00003	0.24	0.34	0.41	47	Y	Y			1.36	0.6	0.08	30	Y	Y		
	3/4"	Zo-e-shield 5	WEA-N-303-00741-00003	0.30	0.16	0.33	56		Y	Y	Y		1.70	0.6	0.08	12			
	3/4"	Zo-e-shield 5 w/ Argon	WEA-N-303-00771-00003	0.27	0.16	0.33	60	Y	Y	Y	Y		1.53	0.6	0.08	16			
	3/4"	Zo-e-shield 5 Extreme	WEA-N-303-00631-00003	0.26	0.15	0.33	45	Y	Y	Y	Y		1.48	0.6	0.08	16	Y		
	3/4"	Zo-e-shield 5 Extreme w/ Argon	WEA-N-303-00693-00003	0.24	0.15	0.33	48	Y	Y	Y	Y		1.36	0.6	0.08	19	Y		
	3/4"	Zo-e-shield 6	WEA-N-303-00654-00003	0.30	0.15	0.33	58		Y	Y	Y		1.70	0.6	0.08	11			
	3/4"	Zo-e-shield 6 w/ Argon	WEA-N-303-00716-00003	0.27	0.15	0.33	62	Y	Y	Y	Y		1.53	0.6	0.08	15			
	3/4"	Zo-e SafeGuard Certified	WEA-N-303-00660-00003	0.30	0.15	0.33	59		Y	Y	Y		1.70	0.6	0.08	11			
	3/4"	Zo-e SafeGuard Certified w/ Argon	WEA-N-303-00722-00003	0.27	0.15	0.33	62	Y	Y	Y	Y		1.53	0.6	0.08	15			
	1"	Zo-e-shield 7	WEA-N-303-00665-00002	0.25	0.14	0.27	67	Y	Y	Y	Y		1.42	0.6	0.08	17	Y		
	1"	Zo-e-shield 7 w/ Argon	WEA-N-303-00727-00002	0.22	0.14	0.27	71	Y	Y	Y	Y		1.25	0.6	0.08	21	Y	Y	
	3/4"	Insul Low-E 240	WEA-N-303-00625-00003	0.31	0.15	0.21	57				Y		1.76	0.6	0.08	10			
	3/4"	Insul Low-E 240 w/Argon	WEA-N-303-00687-00003	0.28	0.14	0.21	60		Y	Y	Y		1.59	0.6	0.08	13			
	3/4"	Insul Low-E 340	WEA-N-303-00628-00003	0.30	0.11	0.20	58		Y	Y	Y		1.70	0.6	0.08	9			
3/4"	Insul Low-E 340 w/Argon	WEA-N-303-00690-00003	0.27	0.10	0.20	61	Y	Y	Y	Y		1.53	0.6	0.08	12			</	