

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	
		$= 0.30$	≥ 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 Casement Windows - Operating (9202)								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-303-00610-00001	0.42	0.51	0.53	45					2.39	0.6	0.08	17			
	3/4"	Insul Low-E	WEA-N-303-00613-00001	0.30	0.28	0.47	57		Y			1.70	0.6	0.08	19			
	3/4"	Insul Low E w/Argon	WEA-N-303-00675-00001	0.28	0.28	0.47	61		Y			1.59	0.6	0.08	21	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"	Zo-e-shield 5	WEA-N-303-00616-00001	0.30	0.19	0.42	58		Y	Y	Y	1.70	0.6	0.08	14			
	3/4"	Zo-e-shield 5 w/ Argon	WEA-N-303-00678-00001	0.27	0.18	0.42	61	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		
	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-303-00613-00002	0.30	0.25	0.42	57		Y	Y	Y	1.70	0.6	0.08	17			
	3/4"	Insul Low E w/Argon	WEA-N-303-00675-00002	0.28	0.25	0.42	61		Y	Y	Y	1.59	0.6	0.08	19	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"	Zo-e-shield 5	WEA-N-303-00616-00002	0.30	0.17	0.38	58		Y	Y	Y	1.70	0.6	0.08	12			
	3/4"	Zo-e-shield 5 w/ Argon	WEA-N-303-00678-00002	0.27	0.17	0.38	61	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		
	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-303-00613-00003	0.30	0.23	0.38	57		Y	Y	Y	1.70	0.6	0.08	16			
	3/4"	Insul Low E w/Argon	WEA-N-303-00675-00003	0.28	0.23	0.38	61		Y	Y	Y	1.59	0.6	0.08	18	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"	Zo-e-shield 5	WEA-N-303-00616-00003	0.30	0.16	0.34	58		Y	Y	Y	1.70	0.6	0.08	12			
	3/4"	Zo-e-shield 5 w/ Argon	WEA-N-303-00678-00003	0.27	0.15	0.34	61	Y	Y	Y	Y	1.53	0.6	0.08	15			
	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			
	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			
	3/4"	Bronze Low E	WEA-N-303-00613-00013	0.30	0.22	0.28	57		Y	Y	Y	1.70	0.6	0.08	15			
3/4"	Bronze Low E w/Argon	WEA-N-303-00675-00013	0.28	0.22	0.28	61		Y	Y	Y	1.59	0.6	0.08	18	Y			