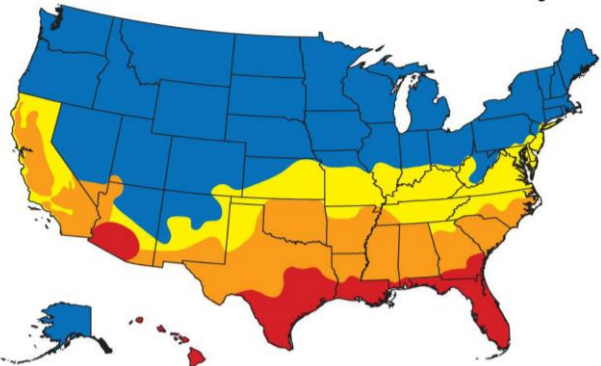


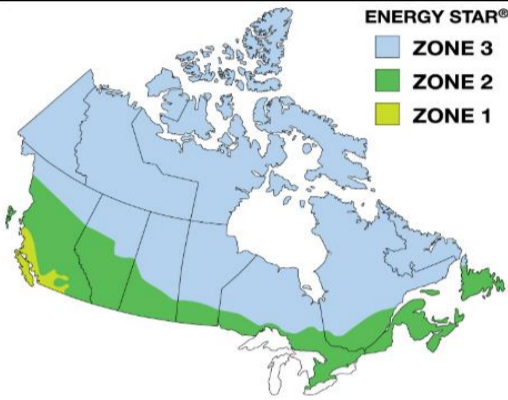
# Thermal Performance Data

Contemporary Casement Windows - Picture/Transom (8211)

**WEATHER SHIELD.**

**WINDOWS & DOORS**

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

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

## 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**.

<sup>a</sup> 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.

<sup>b</sup> Published values reflect 3mm/3mm glass lite thicknesses.

ENERGY PERFORMANCE DATA														CANADIAN ENERGY PERFORMANCE DATA					
Contemporary Casement Windows - Picture/Transom (8211)														ENERGY STAR					
Grille Option	Glazing thickness	<sup>a</sup> NFRC Total Unit Calculations <sup>b</sup> Glazing 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-285-01026-00001	0.46	0.62	0.65	43					2.61	0.6	0.05	19				
	3/4"	Insul Low-E	WEA-N-285-01027-00001	0.32	0.33	0.57	54					1.82	0.6	0.05	19				
	3/4"	Insul Low E w/Argon	WEA-N-285-01028-00001	0.28	0.33	0.57	57	Y	Y			1.59	0.6	0.05	24	Y			
	3/4"	Passive Solar	WEA-N-285-01033-00001	0.33	0.55	0.63	54					1.87	0.6	0.05	31	Y	Y		
	3/4"	Passive Solar w/Argon	WEA-N-285-01034-00001	0.29	0.55	0.63	57	Y				1.65	0.6	0.05	36	Y	Y	Y	
	3/4"	Passive Solar Extreme	WEA-N-285-01035-00001	0.27	0.50	0.61	41	Y				1.53	0.6	0.05	35	Y	Y	Y	
	3/4"	Passive Solar Extreme w/Argon	WEA-N-285-01036-00001	0.25	0.50	0.61	45	Y				1.42	0.6	0.05	38	Y	Y	Y	
	3/4"	Zo-e-shield 5	WEA-N-285-01029-00001	0.31	0.22	0.51	54				Y		1.76	0.6	0.05	14			
	3/4"	Zo-e-shield 5 w/ Argon	WEA-N-285-01030-00001	0.28	0.22	0.51	58		Y	Y	Y		1.59	0.6	0.05	18	Y		
	3/4"	Zo-e-shield 5 Extreme	WEA-N-285-01031-00001	0.26	0.22	0.50	42	Y	Y	Y	Y		1.48	0.6	0.05	20	Y		
	3/4"	Zo-e-shield 5 Extreme w/ Argon	WEA-N-285-01032-00001	0.24	0.22	0.50	46	Y	Y	Y	Y		1.36	0.6	0.05	23	Y	Y	
	3/4"	Zo-e-shield 6	WEA-N-285-01047-00001	0.33	0.22	0.50	52				Y		1.87	0.6	0.05	12			
	3/4"	Zo-e-shield 6 w/ Argon	WEA-N-285-01049-00001	0.28	0.22	0.50	55		Y	Y	Y		1.59	0.6	0.05	18	Y		
	3/4"	Zo-e SafeGuard Certified	WEA-N-285-01063-00001	0.32	0.22	0.50	47				Y		1.82	0.6	0.05	13			
	3/4"	Zo-e SafeGuard Certified w/ Argon	WEA-N-285-01065-00001	0.28	0.22	0.50	56		Y	Y	Y		1.59	0.6	0.05	18	Y		
	1"	Zo-e-shield 7	WEA-N-285-01067-00001	0.25	0.20	0.41	63	Y	Y	Y	Y		1.42	0.6	0.05	20	Y		
	1"	Zo-e-shield 7 w/ Argon	WEA-N-285-01069-00001	0.21	0.20	0.41	67	Y	Y	Y	Y		1.19	0.6	0.05	25	Y	Y	Y
	3/4"	Insul Low-E 240	WEA-N-285-01037-00001	0.32	0.21	0.32	53				Y		1.82	0.6	0.05	12			
	3/4"	Insul Low-E 240 w/Argon	WEA-N-285-01038-00001	0.29	0.20	0.32	57		Y	Y	Y		1.65	0.6	0.05	15			
	3/4"	Insul Low-E 340	WEA-N-285-01039-00001	0.32	0.15	0.31	54				Y		1.82	0.6	0.05	9			
3/4"	Insul Low-E 340 w/Argon	WEA-N-285-01040-00001	0.28	0.15	0.31	58		Y	Y	Y		1.59	0.6	0.05	14				
3/4"	Bronze Low E	WEA-N-285-01027-00011	0.32	0.32	0.43	54						1.82	0.6	0.05	19				
3/4"	Bronze Low E w/Argon	WEA-N-285-01028-00011	0.28	0.32	0.43	57	Y	Y				1.59	0.6	0.05	24	Y			
Less Than 1" GIA or SDL	3/4"	Clear Insul	WEA-N-285-01026-00002	0.46	0.56	0.58	43					2.61	0.6	0.05	15				
	3/4"	Insul Low-E	WEA-N-285-01027-00002	0.32	0.30	0.51	54					1.82	0.6	0.05	17				
	3/4"	Insul Low E w/Argon	WEA-N-285-01028-00002	0.28	0.30	0.51	57		Y			1.59	0.6	0.05	22	Y			
	3/4"	Passive Solar	WEA-N-285-01033-00002	0.33	0.49	0.56	54					1.87	0.6	0.05	27	Y			
	3/4"	Passive Solar w/Argon	WEA-N-285-01034-00002	0.29	0.49	0.56	57	Y				1.65	0.6	0.05	32	Y	Y		
	3/4"	Passive Solar Extreme	WEA-N-285-01035-00002	0.27	0.45	0.55	41	Y				1.53	0.6	0.05	32	Y	Y		
	3/4"	Passive Solar Extreme w/Argon	WEA-N-285-01036-00002	0.25	0.45	0.55	45	Y				1.42	0.6	0.05	35	Y	Y	Y	
	3/4"	Zo-e-shield 5	WEA-N-285-01029-00002	0.31	0.20	0.46	54				Y		1.76	0.6	0.05	13			
	3/4"	Zo-e-shield 5 w/ Argon	WEA-N-285-01030-00002	0.28	0.20	0.46	58		Y	Y	Y		1.59	0.6	0.05	17	Y		
	3/4"	Zo-e-shield 5 Extreme	WEA-N-285-01031-00002	0.26	0.20	0.45	42	Y	Y	Y	Y		1.48	0.6	0.05	19	Y		
	3/4"	Zo-e-shield 5 Extreme w/ Argon	WEA-N-285-01032-00002	0.24	0.20	0.45	46	Y	Y	Y	Y		1.36	0.6	0.05	22	Y	Y	
	3/4"	Zo-e-shield 6	WEA-N-285-01048-00001	0.35	0.20	0.45	52				Y		1.99	0.6	0.05	8			
	3/4"	Zo-e-shield 6 w/ Argon	WEA-N-285-01050-00001	0.30	0.20	0.45	55		Y	Y	Y		1.70	0.6	0.05	14			
	3/4"	Zo-e SafeGuard Certified	WEA-N-285-01064-00001	0.35	0.20	0.45	47				Y		1.99	0.6	0.05	8			
	3/4"	Zo-e SafeGuard Certified w/ Argon	WEA-N-285-01066-00001	0.30	0.20	0.45	56		Y	Y	Y		1.70	0.6	0.05	14			
	1"	Zo-e-shield 7	WEA-N-285-01068-00001	0.25	0.19	0.37	63	Y	Y	Y	Y		1.42	0.6	0.05	20	Y		
	1"	Zo-e-shield 7 w/ Argon	WEA-N-285-01070-00001	0.21	0.18	0.37	67	Y	Y	Y	Y		1.19	0.6	0.05	24	Y	Y	Y
	3/4"	Insul Low-E 240	WEA-N-285-01037-00002	0.32	0.19	0.28	53				Y		1.82	0.6	0.05	11			
	3/4"	Insul Low-E 240 w/Argon	WEA-N-285-01038-00002	0.29	0.19	0.28	57		Y	Y	Y		1.65	0.6	0.05	15			
	3/4"	Insul Low-E 340	WEA-N-285-01039-00002	0.32	0.14	0.28	54				Y		1.82	0.6	0.05	8			
3/4"	Insul Low-E 340 w/Argon	WEA-N-285-01040-00002	0.28	0.13	0.28	58		Y	Y	Y		1.59	0.6	0.05	13				
3/4"	Bronze Low E	WEA-N-285-01027-00012	0.32	0.29	0.38	54						1.82	0.6	0.05	17				
3/4"	Bronze Low E w/Argon	WEA-N-285-01028-00012	0.28	0.29	0.38	57		Y				1.59	0.6	0.05	22	Y			
1" Or Over GIA or SDL	3/4"	Clear Insul	WEA-N-285-01026-00003	0.46	0.50	0.52	43					2.61	0.6	0.05	12				
	3/4"	Insul Low-E	WEA-N-285-01027-00003	0.32	0.27	0.45	54					1.82	0.6	0.05	16				
	3/4"	Insul Low E w/Argon	WEA-N-285-01028-00003	0.28	0.27	0.45	57		Y			1.59	0.6	0.05	21	Y			
	3/4"	Passive Solar	WEA-N-285-01033-00003	0.33	0.44	0.50	54					1.87	0.6	0.05	24				
	3/4"	Passive Solar w/Argon	WEA-N-285-01034-00003	0.29	0.44	0.50	57	Y				1.65	0.6	0.05	29	Y	Y		
	3/4"	Passive Solar Extreme	WEA-N-285-01035-00003	0.27	0.40	0.49	41	Y	Y			1.53	0.6	0.05	29	Y	Y		
	3/4"	Passive Solar Extreme w/Argon	WEA-N-285-01036-00003	0.25	0.40	0.49	45	Y	Y			1.42	0.6	0.05	32	Y	Y		
	3/4"	Zo-e-shield 5	WEA-N-285-01029-00003	0.31	0.18	0.41	54				Y		1.76	0.6	0.05	12			
	3/4"	Zo-e-shield 5 w/ Argon	WEA-N-285-01030-00003	0.28	0.18	0.41	58		Y	Y	Y		1.59	0.6	0.05	15			
	3/4"	Zo-e-shield 5 Extreme	WEA-N-285-01031-00003	0.26	0.18	0.40	42	Y	Y	Y	Y		1.48	0.6	0.05	18	Y		
	3/4"	Zo-e-shield 5 Extreme w/ Argon	WEA-N-285-01032-00003	0.24	0.18	0.40	46	Y	Y	Y	Y		1.36	0.6	0.05	21	Y	Y	
	3/4"	Zo-e-shield 6	WEA-N-285-01048-00002	0.35	0.18	0.40	52				Y		1.99	0.6	0.05	7			
	3/4"	Zo-e-shield 6 w/ Argon	WEA-N-285-01050-00002	0.30	0.18	0.40	55		Y	Y	Y		1.70	0.6	0.05	13			
	3/4"	Zo-e SafeGuard Certified	WEA-N-285-01064-00002	0.35	0.18	0.39	47				Y		1.99	0.6	0.05	7			
	3/4"	Zo-e SafeGuard Certified w/ Argon	WEA-N-285-01066-00002	0.30	0.18	0.39	56		Y	Y	Y		1.70	0.6	0.05	13			
	1"	Zo-e-shield 7	WEA-N-285-01068-00002	0.25	0.17	0.32	63	Y	Y	Y	Y		1.42	0.6	0.05	19	Y		
	1"	Zo-e-shield 7 w/ Argon	WEA-N-285-01070-00002	0.21	0.17	0.32	67	Y	Y	Y	Y		1.19	0.6	0.05	24	Y	Y	
	3/4"	Insul Low-E 240	WEA-N-285-01037-00003	0.32	0.17	0.25	53				Y		1.82	0.6	0.05	10			
	3/4"	Insul Low-E 240 w/Argon	WEA-N-285-01038-00003	0.29	0.17	0.25	57		Y	Y	Y		1.65	0.6	0.05	14			
	3/4"	Insul Low-E 340	WEA-N-285-01039-00003	0.32	0.13	0.24	54				Y		1.82	0.6	0.05	8			
3/4"	Insul Low-E 340 w/Argon	WEA-N-285-01040-00003	0.28	0.12	0.24	58		Y	Y	Y		1.59	0.6	0.05	12				
3/4"	Bronze Low E	WEA-N-285-01027-00013	0.32	0.26	0.34	54						1.82	0.6	0.05	15				
3/4"	Bronze Low E w/Argon	WEA-N-285-01028-00013	0.28	0.26	0.34	57		Y				1.59	0.6	0.05	20	Y			