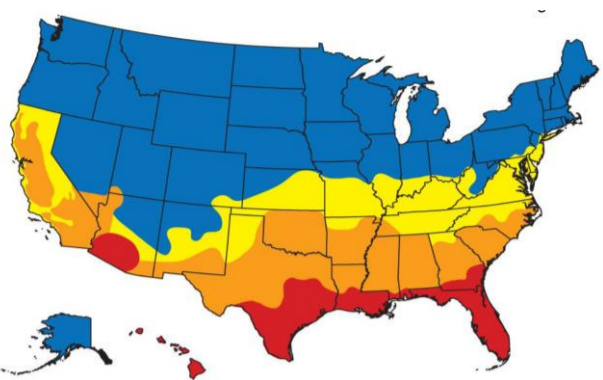


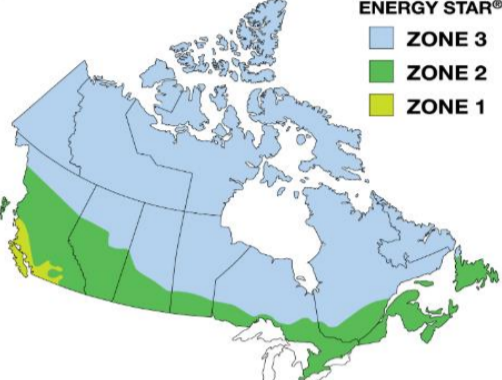
# Thermal Performance Data

Contemporary Bi-fold Windows (8623) - Standard sill

**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.

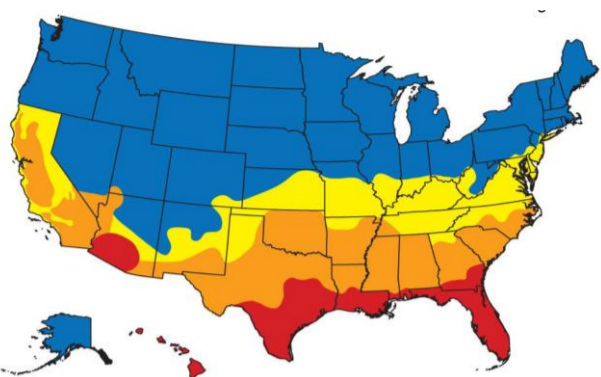
ENERGY PERFORMANCE DATA								ENERGY STAR		CANADIAN ENERGY PERFORMANCE DATA				ENERGY STAR					
Contemporary Bi-fold Windows (8623) - Standard sill								US ENERGY STAR V 6.0						CANADA ENERGY STAR v 4.1					
Grille Option	Glazing thickness	aNFRC Total Unit Calculations bGlazing Option	CPD #	U-Value	Solar Heat Gain Coefficient	Visible Light Transmittance	Condensation Resistance Rating	N	NC	SC	S	U-Value (metric)	Maximum Air Leakage L/s/m2	Air Infiltration/Exfiltration Average	Energy Rating	1	2	3	
No GIA or SDL	1"	Clear Insul	WEA-N-301-00243-00001	0.42	0.41	0.43	44					2.39	0.6	0.08	11				
	1"	Insul Low-E	WEA-N-301-00244-00001	0.34	0.23	0.37	53				Y	1.93	0.6	0.08	11				
	1"	Insul Low E w/Argon	WEA-N-301-00252-00001	0.32	0.22	0.37	55				Y	1.82	0.6	0.08	13				
	1"	Passive Solar	WEA-N-301-00246-00001	0.34	0.37	0.41	52					1.93	0.6	0.08	19				
	1"	Passive Solar w/Argon	WEA-N-301-00254-00001	0.32	0.37	0.41	55					1.82	0.6	0.08	21				
	1"	Passive Solar Extreme	WEA-N-301-00250-00001	0.30	0.33	0.40	42		Y				1.70	0.6	0.08	22			
	1"	Passive Solar Extreme w/Argon	WEA-N-301-00258-00001	0.29	0.33	0.40	45		Y				1.65	0.6	0.08	23			
	1"	Zo-e-shield 5	WEA-N-301-00245-00001	0.34	0.15	0.34	53					Y	1.93	0.6	0.08	6			
	1"	Zo-e-shield 5 w/ Argon	WEA-N-301-00253-00001	0.31	0.15	0.34	56					Y	1.76	0.6	0.08	10			
	1"	Zo-e-shield 5 Extreme	WEA-N-301-00249-00001	0.30	0.15	0.33	43		Y	Y	Y		1.70	0.6	0.08	11			
	1"	Zo-e-shield 5 Extreme w/ Argon	WEA-N-301-00257-00001	0.28	0.15	0.33	46		Y	Y	Y		1.59	0.6	0.08	14			
	1"	Zo-e-shield 6	WEA-N-301-00325-00001	0.33	0.15	0.33	52					Y	1.87	0.6	0.08	8			
	1"	Zo-e-shield 6 w/ Argon	WEA-N-301-00332-00001	0.31	0.15	0.33	55					Y	1.76	0.6	0.08	10			
	1"	Zo-e SafeGuard Certified	WEA-N-301-00328-00001	0.33	0.15	0.33	51					Y	1.87	0.6	0.08	8			
	1"	Zo-e SafeGuard Certified w/ Argon	WEA-N-301-00335-00001	0.31	0.15	0.33	56					Y	1.76	0.6	0.08	10			
	1"	Zo-e-shield 7	WEA-N-301-00307-00001	0.29	0.14	0.27	59		Y	Y	Y		1.65	0.6	0.08	12			
	1"	Zo-e-shield 7 w/ Argon	WEA-N-301-00311-00001	0.26	0.14	0.27	62	Y	Y	Y	Y		1.48	0.6	0.08	16			
	1"	Insul Low-E 240	WEA-N-301-00247-00001	0.34	0.14	0.21	52					Y	1.93	0.6	0.08	6			
	1"	Insul Low-E 240 w/Argon	WEA-N-301-00255-00001	0.32	0.14	0.21	55					Y	1.82	0.6	0.08	8			
	1"	Insul Low-E 340	WEA-N-301-00248-00001	0.34	0.11	0.20	53					Y	1.93	0.6	0.08	4			
1"	Insul Low-E 340 w/Argon	WEA-N-301-00256-00001	0.31	0.10	0.20	56					Y	1.76	0.6	0.08	7				
1"	Bronze Low E	WEA-N-301-00244-00011	0.34	0.21	0.28	53					Y	1.93	0.6	0.08	10				
1"	Bronze Low E w/Argon	WEA-N-301-00252-00011	0.32	0.21	0.28	55					Y	1.82	0.6	0.08	12				
Less Than 1" GIA or SDL	1"	Clear Insul	WEA-N-301-00243-00002	0.42	0.35	0.36	44					2.39	0.6	0.08	8				
	1"	Insul Low-E	WEA-N-301-00244-00002	0.34	0.20	0.32	53				Y	1.93	0.6	0.08	9				
	1"	Insul Low E w/Argon	WEA-N-301-00252-00002	0.32	0.19	0.32	55				Y	1.82	0.6	0.08	11				
	1"	Passive Solar	WEA-N-301-00246-00002	0.34	0.31	0.35	52					1.93	0.6	0.08	15				
	1"	Passive Solar w/Argon	WEA-N-301-00254-00002	0.32	0.31	0.35	55					1.82	0.6	0.08	18				
	1"	Passive Solar Extreme	WEA-N-301-00250-00002	0.30	0.29	0.34	42		Y				1.70	0.6	0.08	19			
	1"	Passive Solar Extreme w/Argon	WEA-N-301-00258-00002	0.29	0.29	0.34	45		Y				1.65	0.6	0.08	20			
	1"	Zo-e-shield 5	WEA-N-301-00245-00002	0.34	0.13	0.28	53					Y	1.93	0.6	0.08	5			
	1"	Zo-e-shield 5 w/ Argon	WEA-N-301-00253-00002	0.31	0.13	0.28	56					Y	1.76	0.6	0.08	9			
	1"	Zo-e-shield 5 Extreme	WEA-N-301-00249-00002	0.30	0.13	0.28	43		Y	Y	Y		1.70	0.6	0.08	10			
	1"	Zo-e-shield 5 Extreme w/ Argon	WEA-N-301-00257-00002	0.28	0.13	0.28	46		Y	Y	Y		1.59	0.6	0.08	13			
	1"	Zo-e-shield 6	WEA-N-301-00325-00002	0.33	0.13	0.28	52					Y	1.87	0.6	0.08	6			
	1"	Zo-e-shield 6 w/ Argon	WEA-N-301-00332-00002	0.31	0.13	0.28	55					Y	1.76	0.6	0.08	9			
	1"	Zo-e SafeGuard Certified	WEA-N-301-00328-00002	0.33	0.13	0.28	51					Y	1.87	0.6	0.08	6			
	1"	Zo-e SafeGuard Certified w/ Argon	WEA-N-301-00335-00002	0.31	0.13	0.28	56					Y	1.76	0.6	0.08	9			
	1"	Zo-e-shield 7	WEA-N-301-00308-00001	0.29	0.12	0.23	59		Y	Y	Y		1.65	0.6	0.08	11			
	1"	Zo-e-shield 7 w/ Argon	WEA-N-301-00312-00001	0.27	0.12	0.23	62	Y	Y	Y	Y		1.53	0.6	0.08	13			
	1"	Insul Low-E 240	WEA-N-301-00247-00002	0.34	0.13	0.18	52					Y	1.93	0.6	0.08	5			
	1"	Insul Low-E 240 w/Argon	WEA-N-301-00255-00002	0.32	0.12	0.18	55					Y	1.82	0.6	0.08	7			
	1"	Insul Low-E 340	WEA-N-301-00248-00002	0.34	0.09	0.17	53					Y	1.93	0.6	0.08	3			
1"	Insul Low-E 340 w/Argon	WEA-N-301-00256-00002	0.31	0.09	0.17	56					Y	1.76	0.6	0.08	6				
1"	Bronze Low E	WEA-N-301-00244-00012	0.34	0.19	0.23	53					Y	1.93	0.6	0.08	9				
1"	Bronze Low E w/Argon	WEA-N-301-00252-00012	0.32	0.18	0.23	55					Y	1.82	0.6	0.08	10				
1" Or Over GIA or SDL	1"	Clear Insul	WEA-N-301-00243-00003	0.42	0.30	0.30	44					2.39	0.6	0.08	5				
	1"	Insul Low-E	WEA-N-301-00244-00003	0.34	0.17	0.26	53				Y	1.93	0.6	0.08	7				
	1"	Insul Low E w/Argon	WEA-N-301-00252-00003	0.32	0.17	0.26	55				Y	1.82	0.6	0.08	10				
	1"	Passive Solar	WEA-N-301-00246-00003	0.34	0.27	0.29	52					1.93	0.6	0.08	13				
	1"	Passive Solar w/Argon	WEA-N-301-00254-00003	0.32	0.27	0.29	55					1.82	0.6	0.08	16				
	1"	Passive Solar Extreme	WEA-N-301-00250-00003	0.30	0.24	0.28	42		Y	Y	Y		1.70	0.6	0.08	16			
	1"	Passive Solar Extreme w/Argon	WEA-N-301-00258-00003	0.29	0.24	0.28	45		Y	Y	Y		1.65	0.6	0.08	18			
	1"	Zo-e-shield 5	WEA-N-301-00245-00003	0.34	0.12	0.24	53					Y	1.93	0.6	0.08	5			
	1"	Zo-e-shield 5 w/ Argon	WEA-N-301-00253-00003	0.31	0.11	0.24	56					Y	1.76	0.6	0.08	8			
	1"	Zo-e-shield 5 Extreme	WEA-N-301-00249-00003	0.30	0.11	0.23	43		Y	Y	Y		1.70	0.6	0.08	9			
	1"	Zo-e-shield 5 Extreme w/ Argon	WEA-N-301-00257-00003	0.28	0.11	0.23	46		Y	Y	Y		1.59	0.6	0.08	11			
	1"	Zo-e-shield 6	WEA-N-301-00325-00003	0.33	0.11	0.23	52					Y	1.87	0.6	0.08	5			
	1"	Zo-e-shield 6 w/ Argon	WEA-N-301-00332-00003	0.31	0.11	0.23	55					Y	1.76	0.6	0.08	8			
	1"	Zo-e SafeGuard Certified	WEA-N-301-00328-00003	0.33	0.11	0.23	51					Y	1.87	0.6	0.08	5			
	1"	Zo-e SafeGuard Certified w/ Argon	WEA-N-301-00335-00003	0.31	0.11	0.23	56					Y	1.76	0.6	0.08	8			
	1"	Zo-e-shield 7	WEA-N-301-00308-00002	0.29	0.11	0.19	59		Y	Y	Y		1.65	0.6	0.08	10			
	1"	Zo-e-shield 7 w/ Argon	WEA-N-301-00312-00002	0.27	0.11	0.19	62	Y	Y	Y	Y		1.53	0.6	0.08	13			
	1"	Insul Low-E 240	WEA-N-301-00247-00003	0.34	0.11	0.15	52					Y	1.93	0.6	0.08	4			
	1"	Insul Low-E 240 w/Argon	WEA-N-301-00255-00003	0.32	0.11	0.15	55					Y	1.82	0.6	0.08	6			
	1"	Insul Low-E 340	WEA-N-301-00248-00003	0.34	0.08	0.14	53					Y	1.93	0.6	0.08	2			
1"	Insul Low-E 340 w/Argon	WEA-N-301-00256-00003	0.31	0.08	0.14	56					Y	1.76	0.6	0.08	6				
1"	Bronze Low E	WEA-N-301-00244-00013	0.34	0.16	0.19	53					Y	1.93	0.6	0.08	7				
1"	Bronze Low E w/Argon	WEA-N-301-00252-00013	0.32	0.16	0.19	55					Y	1.82	0.6	0.08	9				

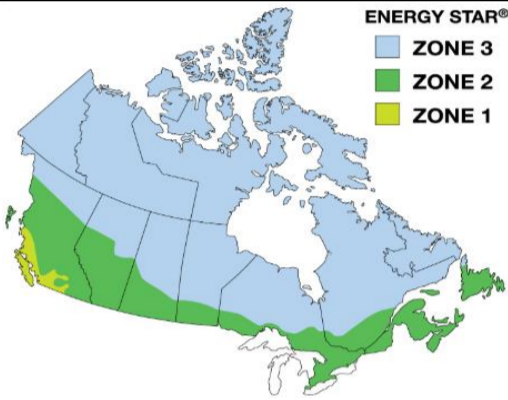
# Thermal Performance Data

Contemporary Bi-fold Windows (8623) - ADA sill

**WEATHER SHIELD.**

**WINDOWS & DOORS**

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/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**.

<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.

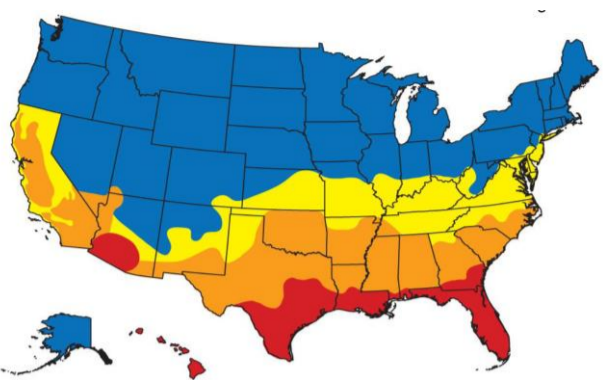
ENERGY PERFORMANCE DATA								ENERGY STAR		CANADIAN ENERGY PERFORMANCE DATA				ENERGY STAR				
Contemporary Bi-fold Windows (8623) - ADA sill								US ENERGY STAR V 6.0						CANADA ENERGY STAR v 4.1				
Grille Option	Glazing thickness	aNFRC Total Unit Calculations bGlazing Option	CPD #	U-Value	Solar Heat Gain Coefficient	Visible Light Transmittance	Condensation Resistance Rating	N	NC	SC	S	U-Value (metric)	Maximum Air Leakage L/s/m2	Air Infiltration/Exfiltration Average	Energy Rating	1	2	3
No GIA or SDL	1"	Clear Insul	WEA-N-301-00423-00001	0.42	0.41	0.43	44					2.39	0.6	0.08	11			
	1"	Insul Low-E	WEA-N-301-00424-00001	0.34	0.23	0.37	53				Y	1.93	0.6	0.08	11			
	1"	Insul Low E w/Argon	WEA-N-301-00432-00001	0.32	0.22	0.37	55				Y	1.82	0.6	0.08	13			
	1"	Passive Solar	WEA-N-301-00426-00001	0.34	0.37	0.41	52					1.93	0.6	0.08	19			
	1"	Passive Solar w/Argon	WEA-N-301-00434-00001	0.32	0.37	0.41	55					1.82	0.6	0.08	21			
	1"	Passive Solar Extreme	WEA-N-301-00430-00001	0.30	0.33	0.40	42		Y			1.70	0.6	0.08	22			
	1"	Passive Solar Extreme w/Argon	WEA-N-301-00438-00001	0.29	0.33	0.40	45		Y			1.65	0.6	0.08	23			
	1"	Zo-e-shield 5	WEA-N-301-00425-00001	0.34	0.15	0.34	53				Y	1.93	0.6	0.08	6			
	1"	Zo-e-shield 5 w/ Argon	WEA-N-301-00433-00001	0.31	0.15	0.34	56				Y	1.76	0.6	0.08	10			
	1"	Zo-e-shield 5 Extreme	WEA-N-301-00429-00001	0.30	0.15	0.33	43		Y	Y	Y	1.70	0.6	0.08	11			
	1"	Zo-e-shield 5 Extreme w/ Argon	WEA-N-301-00437-00001	0.28	0.15	0.33	46		Y	Y	Y	1.59	0.6	0.08	14			
	1"	Zo-e-shield 6	WEA-N-301-00505-00001	0.33	0.15	0.33	52				Y	1.87	0.6	0.08	8			
	1"	Zo-e-shield 6 w/ Argon	WEA-N-301-00512-00001	0.31	0.15	0.33	55				Y	1.76	0.6	0.08	10			
	1"	Zo-e SafeGuard Certified	WEA-N-301-00508-00001	0.33	0.15	0.33	51				Y	1.87	0.6	0.08	8			
	1"	Zo-e SafeGuard Certified w/ Argon	WEA-N-301-00515-00001	0.31	0.15	0.33	56				Y	1.76	0.6	0.08	10			
	1"	Zo-e-shield 7	WEA-N-301-00487-00001	0.29	0.14	0.27	59		Y	Y	Y	1.65	0.6	0.08	12			
	1"	Zo-e-shield 7 w/ Argon	WEA-N-301-00491-00001	0.26	0.14	0.27	62	Y	Y	Y	Y	1.48	0.6	0.08	16			
	1"	Insul Low-E 240	WEA-N-301-00427-00001	0.34	0.14	0.21	52				Y	1.93	0.6	0.08	6			
	1"	Insul Low-E 240 w/Argon	WEA-N-301-00435-00001	0.32	0.14	0.21	55				Y	1.82	0.6	0.08	8			
	1"	Insul Low-E 340	WEA-N-301-00428-00001	0.34	0.11	0.20	53				Y	1.93	0.6	0.08	4			
1"	Insul Low-E 340 w/Argon	WEA-N-301-00436-00001	0.31	0.10	0.20	56				Y	1.76	0.6	0.08	7				
1"	Bronze Low E	WEA-N-301-00424-00011	0.34	0.21	0.28	53				Y	1.93	0.6	0.08	10				
1"	Bronze Low E w/Argon	WEA-N-301-00432-00011	0.32	0.21	0.28	55				Y	1.82	0.6	0.08	12				
Less Than 1" GIA or SDL	1"	Clear Insul	WEA-N-301-00423-00002	0.42	0.35	0.36	44					2.39	0.6	0.08	8			
	1"	Insul Low-E	WEA-N-301-00424-00002	0.34	0.20	0.32	53				Y	1.93	0.6	0.08	9			
	1"	Insul Low E w/Argon	WEA-N-301-00432-00002	0.32	0.19	0.32	55				Y	1.82	0.6	0.08	11			
	1"	Passive Solar	WEA-N-301-00426-00002	0.34	0.31	0.35	52					1.93	0.6	0.08	15			
	1"	Passive Solar w/Argon	WEA-N-301-00434-00002	0.32	0.31	0.35	55					1.82	0.6	0.08	18			
	1"	Passive Solar Extreme	WEA-N-301-00430-00002	0.30	0.29	0.34	42		Y			1.70	0.6	0.08	19			
	1"	Passive Solar Extreme w/Argon	WEA-N-301-00438-00002	0.29	0.29	0.34	45		Y			1.65	0.6	0.08	20			
	1"	Zo-e-shield 5	WEA-N-301-00425-00002	0.34	0.13	0.28	53				Y	1.93	0.6	0.08	5			
	1"	Zo-e-shield 5 w/ Argon	WEA-N-301-00433-00002	0.31	0.13	0.28	56				Y	1.76	0.6	0.08	9			
	1"	Zo-e-shield 5 Extreme	WEA-N-301-00429-00002	0.30	0.13	0.28	43		Y	Y	Y	1.70	0.6	0.08	10			
	1"	Zo-e-shield 5 Extreme w/ Argon	WEA-N-301-00437-00002	0.28	0.13	0.28	46		Y	Y	Y	1.59	0.6	0.08	13			
	1"	Zo-e-shield 6	WEA-N-301-00505-00002	0.33	0.13	0.28	52				Y	1.87	0.6	0.08	6			
	1"	Zo-e-shield 6 w/ Argon	WEA-N-301-00512-00002	0.31	0.13	0.28	55				Y	1.76	0.6	0.08	9			
	1"	Zo-e SafeGuard Certified	WEA-N-301-00508-00002	0.33	0.13	0.28	51				Y	1.87	0.6	0.08	6			
	1"	Zo-e SafeGuard Certified w/ Argon	WEA-N-301-00515-00002	0.31	0.13	0.28	56				Y	1.76	0.6	0.08	9			
	1"	Zo-e-shield 7	WEA-N-301-00488-00001	0.29	0.12	0.23	59		Y	Y	Y	1.65	0.6	0.08	11			
	1"	Zo-e-shield 7 w/ Argon	WEA-N-301-00492-00001	0.27	0.12	0.23	62	Y	Y	Y	Y	1.53	0.6	0.08	13			
	1"	Insul Low-E 240	WEA-N-301-00427-00002	0.34	0.13	0.18	52				Y	1.93	0.6	0.08	5			
	1"	Insul Low-E 240 w/Argon	WEA-N-301-00435-00002	0.32	0.12	0.18	55				Y	1.82	0.6	0.08	7			
	1"	Insul Low-E 340	WEA-N-301-00428-00002	0.34	0.09	0.17	53				Y	1.93	0.6	0.08	3			
1"	Insul Low-E 340 w/Argon	WEA-N-301-00436-00002	0.31	0.09	0.17	56				Y	1.76	0.6	0.08	6				
1"	Bronze Low E	WEA-N-301-00424-00012	0.34	0.19	0.23	53				Y	1.93	0.6	0.08	9				
1"	Bronze Low E w/Argon	WEA-N-301-00432-00012	0.32	0.18	0.23	55				Y	1.82	0.6	0.08	10				
1" Or Over GIA or SDL	1"	Clear Insul	WEA-N-301-00423-00003	0.42	0.30	0.30	44					2.39	0.6	0.08	5			
	1"	Insul Low-E	WEA-N-301-00424-00003	0.34	0.17	0.26	53				Y	1.93	0.6	0.08	7			
	1"	Insul Low E w/Argon	WEA-N-301-00432-00003	0.32	0.17	0.26	55				Y	1.82	0.6	0.08	10			
	1"	Passive Solar	WEA-N-301-00426-00003	0.34	0.27	0.29	52					1.93	0.6	0.08	13			
	1"	Passive Solar w/Argon	WEA-N-301-00434-00003	0.32	0.27	0.29	55					1.82	0.6	0.08	16			
	1"	Passive Solar Extreme	WEA-N-301-00430-00003	0.30	0.24	0.28	42		Y	Y	Y	1.70	0.6	0.08	16			
	1"	Passive Solar Extreme w/Argon	WEA-N-301-00438-00003	0.29	0.24	0.28	45		Y	Y	Y	1.65	0.6	0.08	18			
	1"	Zo-e-shield 5	WEA-N-301-00425-00003	0.34	0.12	0.24	53				Y	1.93	0.6	0.08	5			
	1"	Zo-e-shield 5 w/ Argon	WEA-N-301-00433-00003	0.31	0.11	0.24	56				Y	1.76	0.6	0.08	8			
	1"	Zo-e-shield 5 Extreme	WEA-N-301-00429-00003	0.30	0.11	0.23	43		Y	Y	Y	1.70	0.6	0.08	9			
	1"	Zo-e-shield 5 Extreme w/ Argon	WEA-N-301-00437-00003	0.28	0.11	0.23	46		Y	Y	Y	1.59	0.6	0.08	11			
	1"	Zo-e-shield 6	WEA-N-301-00505-00003	0.33	0.11	0.23	52				Y	1.87	0.6	0.08	5			
	1"	Zo-e-shield 6 w/ Argon	WEA-N-301-00512-00003	0.31	0.11	0.23	55				Y	1.76	0.6	0.08	8			
	1"	Zo-e SafeGuard Certified	WEA-N-301-00508-00003	0.33	0.11	0.23	51				Y	1.87	0.6	0.08	5			
	1"	Zo-e SafeGuard Certified w/ Argon	WEA-N-301-00515-00003	0.31	0.11	0.23	56				Y	1.76	0.6	0.08	8			
	1"	Zo-e-shield 7	WEA-N-301-00488-00002	0.29	0.11	0.19	59		Y	Y	Y	1.65	0.6	0.08	10			
	1"	Zo-e-shield 7 w/ Argon	WEA-N-301-00492-00002	0.27	0.11	0.19	62	Y	Y	Y	Y	1.53	0.6	0.08	13			
	1"	Insul Low-E 240	WEA-N-301-00427-00003	0.34	0.11	0.15	52				Y	1.93	0.6	0.08	4			
	1"	Insul Low-E 240 w/Argon	WEA-N-301-00435-00003	0.32	0.11	0.15	55				Y	1.82	0.6	0.08	6			
	1"	Insul Low-E 340	WEA-N-301-00428-00003	0.34	0.08	0.14	53				Y	1.93	0.6	0.08	2			
1"	Insul Low-E 340 w/Argon	WEA-N-301-00436-00003	0.31	0.08	0.14	56				Y	1.76	0.6	0.08	6				
1"	Bronze Low E	WEA-N-301-00424-00013	0.34	0.16	0.19	53				Y	1.93	0.6	0.08	7				
1"	Bronze Low E w/Argon	WEA-N-301-00432-00013	0.32	0.16	0.19	55				Y	1.82	0.6	0.08	9				

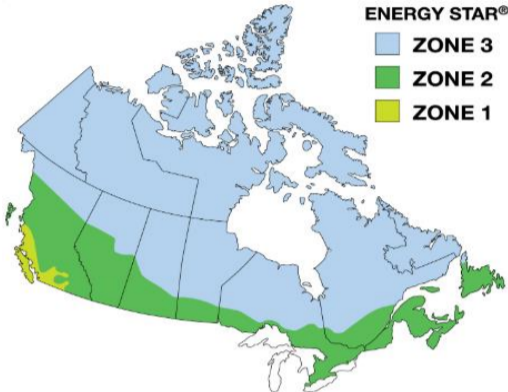
# Thermal Performance Data

Contemporary Bi-fold Windows (8623) - U-channel sill

**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								ENERGY STAR		CANADIAN ENERGY PERFORMANCE DATA				ENERGY STAR				
Contemporary Bi-fold Windows (8623) - U-channel sill								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	N	NC	SC	S	U-Value (metric)	Maximum Air Leakage L/s/m2	Air Infiltration/Exfiltration Average	Energy Rating	1	2	3
No GIA or SDL	1"	Clear Insul	WEA-N-301-00603-00001	0.42	0.41	0.43	46					2.39	0.6	0.08	11			
	1"	Insul Low-E	WEA-N-301-00604-00001	0.34	0.23	0.37	53				Y	1.93	0.6	0.08	11			
	1"	Insul Low E w/Argon	WEA-N-301-00612-00001	0.32	0.22	0.37	55				Y	1.82	0.6	0.08	13			
	1"	Passive Solar	WEA-N-301-00606-00001	0.34	0.37	0.41	52					1.93	0.6	0.08	19			
	1"	Passive Solar w/Argon	WEA-N-301-00614-00001	0.32	0.37	0.41	55					1.82	0.6	0.08	21			
	1"	Passive Solar Extreme	WEA-N-301-00610-00001	0.30	0.33	0.40	42		Y			1.70	0.6	0.08	22			
	1"	Passive Solar Extreme w/Argon	WEA-N-301-00618-00001	0.29	0.33	0.40	45		Y			1.65	0.6	0.08	23			
	1"	Zo-e-shield 5	WEA-N-301-00605-00001	0.33	0.15	0.34	53				Y	1.87	0.6	0.08	8			
	1"	Zo-e-shield 5 w/ Argon	WEA-N-301-00613-00001	0.31	0.15	0.34	56				Y	1.76	0.6	0.08	10			
	1"	Zo-e-shield 5 Extreme	WEA-N-301-00609-00001	0.30	0.15	0.33	43		Y	Y	Y	1.70	0.6	0.08	11			
	1"	Zo-e-shield 5 Extreme w/ Argon	WEA-N-301-00617-00001	0.28	0.15	0.33	46		Y	Y	Y	1.59	0.6	0.08	14			
	1"	Zo-e-shield 6	WEA-N-301-00685-00001	0.33	0.15	0.33	52				Y	1.87	0.6	0.08	8			
	1"	Zo-e-shield 6 w/ Argon	WEA-N-301-00692-00001	0.31	0.15	0.33	55				Y	1.76	0.6	0.08	10			
	1"	Zo-e SafeGuard Certified	WEA-N-301-00688-00001	0.33	0.15	0.33	51				Y	1.87	0.6	0.08	8			
	1"	Zo-e SafeGuard Certified w/ Argon	WEA-N-301-00695-00001	0.31	0.15	0.33	56				Y	1.76	0.6	0.08	10			
	1"	Zo-e-shield 7	WEA-N-301-00667-00001	0.29	0.14	0.27	59		Y	Y	Y	1.65	0.6	0.08	12			
	1"	Zo-e-shield 7 w/ Argon	WEA-N-301-00671-00001	0.26	0.14	0.27	62	Y	Y	Y	Y	1.48	0.6	0.08	16			
	1"	Insul Low-E 240	WEA-N-301-00607-00001	0.34	0.14	0.21	52				Y	1.93	0.6	0.08	6			
	1"	Insul Low-E 240 w/Argon	WEA-N-301-00615-00001	0.32	0.14	0.21	55				Y	1.82	0.6	0.08	8			
	1"	Insul Low-E 340	WEA-N-301-00608-00001	0.34	0.11	0.20	53				Y	1.93	0.6	0.08	4			
1"	Insul Low-E 340 w/Argon	WEA-N-301-00616-00001	0.31	0.10	0.20	56				Y	1.76	0.6	0.08	7				
1"	Bronze Low E	WEA-N-301-00604-00011	0.34	0.21	0.28	53				Y	1.93	0.6	0.08	10				
1"	Bronze Low E w/Argon	WEA-N-301-00612-00011	0.32	0.21	0.28	55				Y	1.82	0.6	0.08	12				
Less Than 1" GIA or SDL	1"	Clear Insul	WEA-N-301-00603-00002	0.42	0.35	0.36	46					2.39	0.6	0.08	8			
	1"	Insul Low-E	WEA-N-301-00604-00002	0.34	0.20	0.32	53				Y	1.93	0.6	0.08	9			
	1"	Insul Low E w/Argon	WEA-N-301-00612-00002	0.32	0.19	0.32	55				Y	1.82	0.6	0.08	11			
	1"	Passive Solar	WEA-N-301-00606-00002	0.34	0.31	0.35	52					1.93	0.6	0.08	15			
	1"	Passive Solar w/Argon	WEA-N-301-00614-00002	0.32	0.31	0.35	55					1.82	0.6	0.08	18			
	1"	Passive Solar Extreme	WEA-N-301-00610-00002	0.30	0.29	0.34	42		Y			1.70	0.6	0.08	19			
	1"	Passive Solar Extreme w/Argon	WEA-N-301-00618-00002	0.29	0.29	0.34	45		Y			1.65	0.6	0.08	20			
	1"	Zo-e-shield 5	WEA-N-301-00605-00002	0.33	0.13	0.28	53				Y	1.87	0.6	0.08	6			
	1"	Zo-e-shield 5 w/ Argon	WEA-N-301-00613-00002	0.31	0.13	0.28	56				Y	1.76	0.6	0.08	9			
	1"	Zo-e-shield 5 Extreme	WEA-N-301-00609-00002	0.30	0.13	0.28	43		Y	Y	Y	1.70	0.6	0.08	10			
	1"	Zo-e-shield 5 Extreme w/ Argon	WEA-N-301-00617-00002	0.28	0.13	0.28	46		Y	Y	Y	1.59	0.6	0.08	13			
	1"	Zo-e-shield 6	WEA-N-301-00685-00002	0.33	0.13	0.28	52				Y	1.87	0.6	0.08	6			
	1"	Zo-e-shield 6 w/ Argon	WEA-N-301-00692-00002	0.31	0.13	0.28	55				Y	1.76	0.6	0.08	9			
	1"	Zo-e SafeGuard Certified	WEA-N-301-00688-00002	0.33	0.13	0.28	51				Y	1.87	0.6	0.08	6			
	1"	Zo-e SafeGuard Certified w/ Argon	WEA-N-301-00695-00002	0.31	0.13	0.28	56				Y	1.76	0.6	0.08	9			
	1"	Zo-e-shield 7	WEA-N-301-00668-00001	0.29	0.12	0.23	59		Y	Y	Y	1.65	0.6	0.08	11			
	1"	Zo-e-shield 7 w/ Argon	WEA-N-301-00672-00001	0.27	0.12	0.23	62	Y	Y	Y	Y	1.53	0.6	0.08	13			
	1"	Insul Low-E 240	WEA-N-301-00607-00002	0.34	0.13	0.18	52				Y	1.93	0.6	0.08	5			
	1"	Insul Low-E 240 w/Argon	WEA-N-301-00615-00002	0.32	0.12	0.18	55				Y	1.82	0.6	0.08	7			
	1"	Insul Low-E 340	WEA-N-301-00608-00002	0.34	0.09	0.17	53				Y	1.93	0.6	0.08	3			
1"	Insul Low-E 340 w/Argon	WEA-N-301-00616-00002	0.31	0.09	0.17	56				Y	1.76	0.6	0.08	6				
1"	Bronze Low E	WEA-N-301-00604-00012	0.34	0.19	0.23	53				Y	1.93	0.6	0.08	9				
1"	Bronze Low E w/Argon	WEA-N-301-00612-00012	0.32	0.18	0.23	55				Y	1.82	0.6	0.08	10				
1" Or Over GIA or SDL	1"	Clear Insul	WEA-N-301-00603-00003	0.42	0.30	0.30	46					2.39	0.6	0.08	5			
	1"	Insul Low-E	WEA-N-301-00604-00003	0.34	0.17	0.26	53				Y	1.93	0.6	0.08	7			
	1"	Insul Low E w/Argon	WEA-N-301-00612-00003	0.32	0.17	0.26	55				Y	1.82	0.6	0.08	10			
	1"	Passive Solar	WEA-N-301-00606-00003	0.34	0.27	0.29	52					1.93	0.6	0.08	13			
	1"	Passive Solar w/Argon	WEA-N-301-00614-00003	0.32	0.27	0.29	55					1.82	0.6	0.08	16			
	1"	Passive Solar Extreme	WEA-N-301-00610-00003	0.30	0.24	0.28	42		Y	Y	Y	1.70	0.6	0.08	16			
	1"	Passive Solar Extreme w/Argon	WEA-N-301-00618-00003	0.29	0.24	0.28	45		Y	Y	Y	1.65	0.6	0.08	18			
	1"	Zo-e-shield 5	WEA-N-301-00605-00003	0.33	0.12	0.24	53				Y	1.87	0.6	0.08	6			
	1"	Zo-e-shield 5 w/ Argon	WEA-N-301-00613-00003	0.31	0.11	0.24	56				Y	1.76	0.6	0.08	8			
	1"	Zo-e-shield 5 Extreme	WEA-N-301-00609-00003	0.30	0.11	0.23	43		Y	Y	Y	1.70	0.6	0.08	9			
	1"	Zo-e-shield 5 Extreme w/ Argon	WEA-N-301-00617-00003	0.28	0.11	0.23	46		Y	Y	Y	1.59	0.6	0.08	11			
	1"	Zo-e-shield 6	WEA-N-301-00685-00003	0.33	0.11	0.23	52				Y	1.87	0.6	0.08	5			
	1"	Zo-e-shield 6 w/ Argon	WEA-N-301-00692-00003	0.31	0.11	0.23	55				Y	1.76	0.6	0.08	8			
	1"	Zo-e SafeGuard Certified	WEA-N-301-00688-00003	0.33	0.11	0.23	51				Y	1.87	0.6	0.08	5			
	1"	Zo-e SafeGuard Certified w/ Argon	WEA-N-301-00695-00003	0.31	0.11	0.23	56				Y	1.76	0.6	0.08	8			
	1"	Zo-e-shield 7	WEA-N-301-00668-00002	0.29	0.11	0.19	59		Y	Y	Y	1.65	0.6	0.08	10			
	1"	Zo-e-shield 7 w/ Argon	WEA-N-301-00672-00002	0.27	0.11	0.19	62	Y	Y	Y	Y	1.53	0.6	0.08	13			
	1"	Insul Low-E 240	WEA-N-301-00607-00003	0.34	0.11	0.15	52				Y	1.93	0.6	0.08	4			
	1"	Insul Low-E 240 w/Argon	WEA-N-301-00615-00003	0.32	0.11	0.15	55				Y	1.82	0.6	0.08	6			
	1"	Insul Low-E 340	WEA-N-301-00608-00003	0.34	0.08	0.14	53				Y	1.93	0.6	0.08	2			
1"	Insul Low-E 340 w/Argon	WEA-N-301-00616-00003	0.31	0.08	0.14	56				Y	1.76	0.6	0.08	6				
1"	Bronze Low E	WEA-N-301-00604-00013	0.34	0.16	0.19	53				Y	1.93	0.6	0.08	7				
1"	Bronze Low E w/Argon	WEA-N-301-00612-00013	0.32	0.16	0.19	55				Y	1.82	0.6	0.08	9				