



77 Highway 52 West
Steinbach, Manitoba
Canada
R5G 1B2

Manufacturer's Certification Statement

Pertaining to the
American Recovery and Reinvestment Act of 2009

C.P. Loewen Enterprises and Loewen Inc.

This Manufacturer's Certification Statement can be relied upon by taxpayers for verification that certain Loewen window and door products are eligible for the tax credits identified in the American Recovery and Reinvestment Act of 2009.

Manufacturer:

C.P. Loewen Enterprises
77 Highway 52 West
Steinbach, Manitoba Canada
R5G 1B2

Loewen (C.P. Loewen Enterprises and Loewen Inc.) certifies that the products illustrated on the following pages are eligible "Exterior Windows" and "Exterior Doors" as defined in the American Recovery and Reinvestment Act of 2009.

To assist in qualifying for the credit, a copy of this letter must be retained along with all receipts and the temporary NFRC label(s) indicating that the U-factor and Solar Heat Gain Coefficient (SHGC) is less than or equal to 0.30. Additional requirements can be found on the IRS website (www.irs.gov) and the Energy Star website (www.energystar.gov).

Under penalties of perjury, I declare that I have examined this certification statement, and to the best of my knowledge and belief, the facts are complete and accurate.

Jon Sawatzky
Product Marketing Manager

The information listed on this form is not intended as legal advice. Homeowners should consult a tax advisor for professional advice. Loewen (C.P. Loewen Enterprises and Loewen Inc.) disclaims any liability or responsibility regarding an individual's ability to obtain tax credits. Loewen strives to provide accurate information in a timely manner but disclaims liability for typographical errors listed on these pages and its website.

NFRC U-FACTOR AND SHGC/VT

Glazing Types listed include Standard and Custom configurations



Metal Clad Casement

	Glazing Type	Glass Thickness	Air Space			U-value	CR	No SDL		SDL with Internal Spacer			
								SHGC	VT	3/4"		1 1/8" & 2"	
										SHGC	VT	SHGC	VT
Heat-Smart (Thermal)	Insulating Low E 272 - CL	3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Thermal	0.30	56	0.28	0.48				
Heat-Smart X (Thermal)	Insulating Low E 366 - CL	3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Thermal	0.29	57	0.19	0.43				
	Insulating Low E 272 - CL - Low E 272	3mm / 3mm / 3mm (1/8")	12.5mm (1/2")	Air	Standard	0.24	61	0.24	0.38				
	Insulating Low E 272 - CL - Low E 272	3mm / 3mm / 3mm (1/8")	12.5mm (1/2")	Air	Standard	0.24	60			0.22	0.35	0.20	0.31
	Insulating Low E 272 - CL - Low E 272	3mm / 3mm / 3mm (1/8")	12.5mm (1/2")	Air	Thermal	0.22	67	0.24	0.38	0.22	0.35	0.20	0.31
	Insulating Low E 272 - CL - Low E 272	3mm / 3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Standard	0.22	62	0.24	0.38	0.22	0.35	0.20	0.31
	Insulating Low E 272 - CL - Low E 272	3mm / 3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Thermal	0.20	70	0.24	0.38	0.22	0.35	0.20	0.31
	Insulating Low E 366 - CL - Low E 366	3mm / 3mm / 3mm (1/8")	12.5mm (1/2")	Air	Standard	0.24	61	0.16	0.31	0.15	0.28	0.14	0.25
Heat-Smart XT	Insulating Low E 366 - CL - Low E 366	3mm / 3mm / 3mm (1/8")	12.5mm (1/2")	Air	Thermal	0.21	67	0.16	0.31	0.15	0.28	0.14	0.25
	Insulating Low E 366 - CL - Low E 366	3mm / 3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Standard	0.22	63	0.16	0.31	0.15	0.28	0.14	0.25
Heat-Smart XT	Insulating Low E 366 - CL - Low E 366	3mm / 3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Thermal	0.19	70	0.16	0.31	0.15	0.28	0.14	0.25

Non-Clad Casement

	Glazing Type	Glass Thickness	Air Space			U-value	CR	No SDL		SDL with Internal Spacer			
								SHGC	VT	3/4"		1 1/8" & 2"	
										SHGC	VT	SHGC	VT
Heat-Smart	Insulating Low E 272 - CL	3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Standard	0.30	54	0.28	0.48				
Heat-Smart (Thermal)	Insulating Low E 272 - CL	3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Thermal	0.29	57	0.28	0.48				
Heat-Smart (Thermal)	Insulating Low E 272 - CL	3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Thermal	0.30	57			0.25	0.43	0.23	0.39
Heat-Smart X	Insulating Low E 366 - CL	3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Standard	0.30	54	0.19	0.43				
Heat-Smart X (Thermal)	Insulating Low E 366 - CL	3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Thermal	0.28	58	0.19	0.43				
Heat-Smart X (Thermal)	Insulating Low E 366 - CL	3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Thermal	0.30	58			0.17	0.39	0.15	0.35
	Insulating Low E 272 - CL - Low E 272	3mm / 3mm / 3mm (1/8")	12.5mm (1/2")	Air	Standard	0.23	62	0.24	0.38	0.22	0.35	0.20	0.31
	Insulating Low E 272 - CL - Low E 272	3mm / 3mm / 3mm (1/8")	12.5mm (1/2")	Air	Thermal	0.21	68	0.24	0.38	0.22	0.35	0.20	0.31
	Insulating Low E 272 - CL - Low E 272	3mm / 3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Standard	0.21	64	0.24	0.38	0.22	0.35	0.20	0.31
	Insulating Low E 272 - CL - Low E 272	3mm / 3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Thermal	0.19	71	0.24	0.38	0.22	0.35	0.20	0.31
	Insulating Low E 366 - CL - Low E 366	3mm / 3mm / 3mm (1/8")	12.5mm (1/2")	Air	Standard	0.23	62	0.16	0.31	0.15	0.28	0.14	0.25
Heat-Smart XT	Insulating Low E 366 - CL - Low E 366	3mm / 3mm / 3mm (1/8")	12.5mm (1/2")	Air	Thermal	0.21	68	0.16	0.31	0.15	0.28	0.14	0.25
	Insulating Low E 366 - CL - Low E 366	3mm / 3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Standard	0.21	64	0.16	0.31	0.15	0.28	0.13	0.25
Heat-Smart XT	Insulating Low E 366 - CL - Low E 366	3mm / 3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Thermal	0.19	71	0.16	0.31	0.15	0.28	0.13	0.25

NFRC U-FACTOR AND SHGC/VT

Glazing Types listed include Standard and Custom configurations



Metal Clad Fixed Casement

	Glazing Type	Glass Thickness	Air Space			U-value	CR	No SDL		SDL with Internal Spacer			
								SHGC	VT	3/4"		1 1/8" & 2"	
										SHGC	VT	SHGC	VT
Heat-Smart (Thermal)	Insulating Low E 272 - CL	3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Thermal	0.30	56			0.29	0.50	0.26	0.44
Heat-Smart X	Insulating Low E 366 - CL	3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Standard	0.29	52	0.22	0.51				
Heat-Smart X	Insulating Low E 366 - CL	3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Standard	0.30	52			0.20	0.45	0.18	0.40
Heat-Smart X (Thermal)	Insulating Low E 366 - CL	3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Thermal	0.28	56	0.22	0.51				
Heat-Smart X (Thermal)	Insulating Low E 366 - CL	3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Thermal	0.29	56			0.20	0.45	0.18	0.40
	Insulating Low E 272 - CL - Low E 272	3mm / 3mm / 3mm (1/8")	12.5mm (1/2")	Air	Standard	0.21	61	0.28	0.45	0.25	0.40	0.23	0.35
	Insulating Low E 272 - CL - Low E 272	3mm / 3mm / 3mm (1/8")	12.5mm (1/2")	Air	Thermal	0.20	67	0.28	0.45	0.25	0.40	0.23	0.35
	Insulating Low E 272 - CL - Low E 272	3mm / 3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Standard	0.19	63	0.28	0.45	0.25	0.40	0.23	0.35
	Insulating Low E 272 - CL - Low E 272	3mm / 3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Thermal	0.17	70	0.28	0.45	0.25	0.40	0.23	0.35
	Insulating Low E 366 - CL - Low E 366	3mm / 3mm / 3mm (1/8")	12.5mm (1/2")	Air	Standard	0.21	61	0.19	0.36	0.17	0.32	0.16	0.29
Heat-Smart XT	Insulating Low E 366 - CL - Low E 366	3mm / 3mm / 3mm (1/8")	12.5mm (1/2")	Air	Thermal	0.20	67	0.19	0.36	0.17	0.32	0.16	0.29
	Insulating Low E 366 - CL - Low E 366	3mm / 3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Standard	0.18	63	0.19	0.36	0.17	0.32	0.15	0.29
Heat-Smart XT	Insulating Low E 366 - CL - Low E 366	3mm / 3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Thermal	0.17	70	0.19	0.36	0.17	0.32	0.15	0.29

Non-Clad Fixed Casement

	Glazing Type	Glass Thickness	Air Space			U-value	CR	No SDL		SDL with Internal Spacer			
								SHGC	VT	3/4"		1 1/8" & 2"	
										SHGC	VT	SHGC	VT
Heat-Smart	Insulating Low E 272 - CL	3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Standard	0.30	53			0.29	0.50	0.26	0.44
Heat-Smart (Thermal)	Insulating Low E 272 - CL	3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Thermal	0.29	57			0.29	0.50	0.26	0.44
Heat-Smart X (Thermal)	Insulating Low E 366 - CL	3mm / 3mm (1/8")	12.5mm (1/2")	Air	Thermal	0.30	54	0.22	0.51				
Heat-Smart X	Insulating Low E 366 - CL	3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Standard	0.28	54	0.22	0.51				
Heat-Smart X	Insulating Low E 366 - CL	3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Standard	0.30	54			0.19	0.45	0.18	0.40
Heat-Smart X (Thermal)	Insulating Low E 366 - CL	3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Thermal	0.27	58	0.22	0.51				
Heat-Smart X (Thermal)	Insulating Low E 366 - CL	3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Thermal	0.29	58			0.19	0.45	0.18	0.40
	Insulating Low E 366 - LAM	3mm (1/8") / 7mm (9/32")	8mm (5/16")	Argon	Standard	0.30	52	0.22	0.49				
	Insulating Low E 272 - CL - Low E 272	3mm / 3mm / 3mm (1/8")	12.5mm (1/2")	Air	Standard	0.21	62	0.28	0.45	0.25	0.40	0.22	0.35
	Insulating Low E 272 - CL - Low E 272	3mm / 3mm / 3mm (1/8")	12.5mm (1/2")	Air	Thermal	0.19	68	0.28	0.45	0.25	0.40	0.23	0.35
	Insulating Low E 272 - CL - Low E 272	3mm / 3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Standard	0.18	64	0.28	0.45	0.25	0.40	0.22	0.35
	Insulating Low E 272 - CL - Low E 272	3mm / 3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Thermal	0.17	71	0.28	0.45	0.25	0.40	0.22	0.35
	Insulating Low E 366 - CL - Low E 366	3mm / 3mm / 3mm (1/8")	12.5mm (1/2")	Air	Standard	0.21	62	0.19	0.36	0.17	0.32	0.15	0.29
Heat-Smart XT	Insulating Low E 366 - CL - Low E 366	3mm / 3mm / 3mm (1/8")	12.5mm (1/2")	Air	Thermal	0.19	68	0.19	0.36	0.17	0.32	0.15	0.29
	Insulating Low E 366 - CL - Low E 366	3mm / 3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Standard	0.18	64	0.19	0.36	0.17	0.32	0.15	0.29
Heat-Smart XT	Insulating Low E 366 - CL - Low E 366	3mm / 3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Thermal	0.16	71	0.19	0.36	0.17	0.32	0.15	0.29

NFRC U-FACTOR AND SHGC/VT

Glazing Types listed include Standard and Custom configurations



Metal Clad Push Out Casement

	Glazing Type	Glass Thickness	Air Space			U-value	CR	No SDL		SDL with Internal Spacer			
			Width(s)	Gas Fill	Spacer Bar			SHGC	VT	3/4"		1 1/8" & 2"	
										SHGC	VT	SHGC	VT
Heat-Smart (Thermal)	Insulating Low E 272 - CL	3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Thermal	0.30	57	0.28	0.48				
Heat-Smart X (Thermal)	Insulating Low E 366 - CL	3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Thermal	0.30	57	0.19	0.43				
	Insulating Low E 272 - CL - Low E 272	3mm / 3mm / 3mm (1/8")	12.5mm (1/2")	Air	Standard	0.25	61	0.24	0.38	0.22	0.35	0.20	0.31
	Insulating Low E 272 - CL - Low E 272	3mm / 3mm / 3mm (1/8")	12.5mm (1/2")	Air	Thermal	0.22	68	0.24	0.38	0.22	0.35	0.20	0.31
	Insulating Low E 272 - CL - Low E 272	3mm / 3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Standard	0.22	63	0.24	0.38	0.22	0.35	0.20	0.31
	Insulating Low E 272 - CL - Low E 272	3mm / 3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Thermal	0.20	71	0.24	0.38	0.22	0.35	0.20	0.31
	Insulating Low E 366 - CL - Low E 366	3mm / 3mm / 3mm (1/8")	12.5mm (1/2")	Air	Standard	0.24	61	0.16	0.31	0.15	0.28	0.14	0.25
Heat-Smart XT	Insulating Low E 366 - CL - Low E 366	3mm / 3mm / 3mm (1/8")	12.5mm (1/2")	Air	Thermal	0.22	68	0.16	0.31	0.15	0.28	0.14	0.25
	Insulating Low E 366 - CL - Low E 366	3mm / 3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Standard	0.22	63	0.16	0.31	0.15	0.28	0.14	0.25
Heat-Smart XT	Insulating Low E 366 - CL - Low E 366	3mm / 3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Thermal	0.20	71	0.16	0.31	0.15	0.28	0.14	0.25

Non-Clad Push Out Casement

	Glazing Type	Glass Thickness	Air Space			U-value	CR	No SDL		SDL with Internal Spacer			
			Width(s)	Gas Fill	Spacer Bar			SHGC	VT	3/4"		1 1/8" & 2"	
										SHGC	VT	SHGC	VT
Heat-Smart (Thermal)	Insulating Low E 272 - CL	3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Thermal	0.29	58	0.28	0.48				
Heat-Smart X	Insulating Low E 366 - CL	3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Standard	0.30	54	0.19	0.43				
Heat-Smart X (Thermal)	Insulating Low E 366 - CL	3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Thermal	0.29	58	0.19	0.43				
Heat-Smart X (Thermal)	Insulating Low E 366 - CL	3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Thermal	0.30	58			0.17	0.39	0.15	0.35
	Insulating Low E 272 - CL - Low E 272	3mm / 3mm / 3mm (1/8")	12.5mm (1/2")	Air	Standard	0.23	62	0.24	0.38	0.22	0.35	0.20	0.31
	Insulating Low E 272 - CL - Low E 272	3mm / 3mm / 3mm (1/8")	12.5mm (1/2")	Air	Thermal	0.21	68	0.24	0.38	0.22	0.35	0.20	0.31
	Insulating Low E 272 - CL - Low E 272	3mm / 3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Standard	0.21	64	0.24	0.38	0.22	0.35	0.20	0.31
	Insulating Low E 272 - CL - Low E 272	3mm / 3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Thermal	0.19	71	0.24	0.38	0.22	0.35	0.20	0.31
	Insulating Low E 366 - CL - Low E 366	3mm / 3mm / 3mm (1/8")	12.5mm (1/2")	Air	Standard	0.23	62	0.16	0.31	0.15	0.28	0.14	0.25
Heat-Smart XT	Insulating Low E 366 - CL - Low E 366	3mm / 3mm / 3mm (1/8")	12.5mm (1/2")	Air	Thermal	0.21	68	0.16	0.31	0.15	0.28	0.14	0.25
	Insulating Low E 366 - CL - Low E 366	3mm / 3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Standard	0.21	64	0.16	0.31	0.15	0.28	0.13	0.25
Heat-Smart XT	Insulating Low E 366 - CL - Low E 366	3mm / 3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Thermal	0.19	71	0.16	0.31	0.15	0.28	0.13	0.25

NFRC U-FACTOR AND SHGC/VT

Glazing Types listed include Standard and Custom configurations



Metal Clad Awning

	Glazing Type	Glass Thickness	Air Space			U-value	CR	No SDL		SDL with Internal Spacer			
			Width(s)	Gas Fill	Spacer Bar			SHGC	VT	3/4"		1 1/8" & 2"	
										SHGC	VT	SHGC	VT
Heat-Smart (Thermal)	Insulating Low E 272 - CL	3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Thermal	0.30	55	0.28	0.48				
Heat-Smart X (Thermal)	Insulating Low E 366 - CL	3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Thermal	0.29	55	0.19	0.43				
Heat-Smart X (Thermal)	Insulating Low E 366 - CL	3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Thermal	0.30	55			0.17	0.39	0.16	0.35
	Insulating Low E 272 - CL - Low E 272	3mm / 3mm / 3mm (1/8")	12.5mm (1/2")	Air	Standard	0.24	61	0.24	0.38	0.22	0.34	0.20	0.31
	Insulating Low E 272 - CL - Low E 272	3mm / 3mm / 3mm (1/8")	12.5mm (1/2")	Air	Thermal	0.22	67	0.24	0.38	0.22	0.34	0.20	0.31
	Insulating Low E 272 - CL - Low E 272	3mm / 3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Standard	0.22	63	0.24	0.38	0.22	0.34	0.20	0.31
	Insulating Low E 272 - CL - Low E 272	3mm / 3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Thermal	0.20	70	0.24	0.38	0.22	0.34	0.20	0.31
	Insulating Low E 366 - CL - Low E 366	3mm / 3mm / 3mm (1/8")	12.5mm (1/2")	Air	Standard	0.24	61	0.16	0.31	0.15	0.28	0.14	0.25
Heat-Smart XT	Insulating Low E 366 - CL - Low E 366	3mm / 3mm / 3mm (1/8")	12.5mm (1/2")	Air	Thermal	0.21	67	0.16	0.31	0.15	0.28	0.14	0.25
	Insulating Low E 366 - CL - Low E 366	3mm / 3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Standard	0.22	63	0.16	0.31	0.15	0.28	0.14	0.25
Heat-Smart XT	Insulating Low E 366 - CL - Low E 366	3mm / 3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Thermal	0.19	70	0.16	0.31	0.15	0.28	0.14	0.25

Non-Clad Awning

	Glazing Type	Glass Thickness	Air Space			U-value	CR	No SDL		SDL with Internal Spacer			
			Width(s)	Gas Fill	Spacer Bar			SHGC	VT	3/4"		1 1/8" & 2"	
										SHGC	VT	SHGC	VT
Heat-Smart	Insulating Low E 272 - CL	3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Standard	0.30	53	0.28	0.48				
Heat-Smart (Thermal)	Insulating Low E 272 - CL	3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Thermal	0.29	56	0.28	0.48				
Heat-Smart (Thermal)	Insulating Low E 272 - CL	3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Thermal	0.30	56			0.25	0.43	0.23	0.39
Heat-Smart X	Insulating Low E 366 - CL	3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Standard	0.30	53	0.18	0.43				
Heat-Smart X (Thermal)	Insulating Low E 366 - CL	3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Thermal	0.28	56	0.18	0.43				
Heat-Smart X (Thermal)	Insulating Low E 366 - CL	3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Thermal	0.29	56			0.17	0.39	0.15	0.35
	Insulating Low E 272 - CL - Low E 272	3mm / 3mm / 3mm (1/8")	12.5mm (1/2")	Air	Standard	0.23	62	0.24	0.38	0.22	0.34	0.20	0.31
	Insulating Low E 272 - CL - Low E 272	3mm / 3mm / 3mm (1/8")	12.5mm (1/2")	Air	Thermal	0.21	68	0.24	0.38	0.22	0.34	0.20	0.31
	Insulating Low E 272 - CL - Low E 272	3mm / 3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Standard	0.21	64	0.24	0.38	0.22	0.34	0.20	0.31
	Insulating Low E 272 - CL - Low E 272	3mm / 3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Thermal	0.19	70	0.24	0.38	0.22	0.34	0.20	0.31
	Insulating Low E 366 - CL - Low E 366	3mm / 3mm / 3mm (1/8")	12.5mm (1/2")	Air	Standard	0.23	63	0.16	0.31	0.15	0.28	0.13	0.25
Heat-Smart XT	Insulating Low E 366 - CL - Low E 366	3mm / 3mm / 3mm (1/8")	12.5mm (1/2")	Air	Thermal	0.21	68	0.16	0.31	0.15	0.28	0.13	0.25
	Insulating Low E 366 - CL - Low E 366	3mm / 3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Standard	0.21	64	0.16	0.31	0.15	0.28	0.13	0.25
Heat-Smart XT	Insulating Low E 366 - CL - Low E 366	3mm / 3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Thermal	0.19	71	0.16	0.31	0.15	0.28	0.13	0.25

NFRC U-FACTOR AND SHGC/VT

Glazing Types listed include Standard and Custom configurations



Metal Clad Push Out Awning

	Glazing Type	Glass Thickness	Air Space			U-value	CR	No SDL		SDL with Internal Spacer			
								SHGC	VT	3/4"		1 1/8" & 2"	
										SHGC	VT	SHGC	VT
Heat-Smart (Thermal)	Insulating Low E 272 - CL	3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Thermal	0.30	55	0.28	0.48				
Heat-Smart X (Thermal)	Insulating Low E 366 - CL	3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Thermal	0.30	56	0.19	0.43				
	Insulating Low E 272 - CL - Low E 272	3mm / 3mm / 3mm (1/8")	12.5mm (1/2")	Air	Standard	0.24	62	0.24	0.38	0.22	0.34	0.20	0.31
	Insulating Low E 272 - CL - Low E 272	3mm / 3mm / 3mm (1/8")	12.5mm (1/2")	Air	Thermal	0.22	68	0.24	0.38	0.22	0.34	0.20	0.31
	Insulating Low E 272 - CL - Low E 272	3mm / 3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Standard	0.22	64	0.24	0.38	0.22	0.34	0.20	0.31
	Insulating Low E 272 - CL - Low E 272	3mm / 3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Thermal	0.20	70	0.24	0.38	0.22	0.34	0.20	0.31
	Insulating Low E 366 - CL - Low E 366	3mm / 3mm / 3mm (1/8")	12.5mm (1/2")	Air	Standard	0.24	62	0.16	0.31	0.15	0.28	0.14	0.25
Heat-Smart XT	Insulating Low E 366 - CL - Low E 366	3mm / 3mm / 3mm (1/8")	12.5mm (1/2")	Air	Thermal	0.22	68	0.16	0.31	0.15	0.28	0.14	0.25
	Insulating Low E 366 - CL - Low E 366	3mm / 3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Standard	0.22	64	0.16	0.31	0.15	0.28	0.14	0.25
Heat-Smart XT	Insulating Low E 366 - CL - Low E 366	3mm / 3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Thermal	0.19	71	0.16	0.31	0.15	0.28	0.14	0.25

Non-Clad Push Out Awning

	Glazing Type	Glass Thickness	Air Space			U-value	CR	No SDL		SDL with Internal Spacer			
								SHGC	VT	3/4"		1 1/8" & 2"	
										SHGC	VT	SHGC	VT
Heat-Smart (Thermal)	Insulating Low E 272 - CL	3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Thermal	0.29	56	0.28	0.48				
Heat-Smart (Thermal)	Insulating Low E 272 - CL	3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Thermal	0.30	56			0.25	0.43	0.23	0.39
Heat-Smart X	Insulating Low E 366 - CL	3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Standard	0.30	53	0.18	0.43				
Heat-Smart X (Thermal)	Insulating Low E 366 - CL	3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Thermal	0.30	57			0.17	0.39	0.15	0.35
Heat-Smart X (Thermal)	Insulating Low E 366 - CL	3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Thermal	0.29	57	0.18	0.43				
	Insulating Low E 272 - CL - Low E 272	3mm / 3mm / 3mm (1/8")	12.5mm (1/2")	Air	Standard	0.23	62	0.24	0.38	0.22	0.34	0.20	0.31
	Insulating Low E 272 - CL - Low E 272	3mm / 3mm / 3mm (1/8")	12.5mm (1/2")	Air	Thermal	0.21	68	0.24	0.38	0.22	0.34	0.20	0.31
	Insulating Low E 272 - CL - Low E 272	3mm / 3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Standard	0.21	64	0.24	0.38	0.22	0.34	0.20	0.31
	Insulating Low E 272 - CL - Low E 272	3mm / 3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Thermal	0.19	70	0.24	0.38	0.22	0.34	0.20	0.31
	Insulating Low E 366 - CL - Low E 366	3mm / 3mm / 3mm (1/8")	12.5mm (1/2")	Air	Standard	0.23	63	0.16	0.31	0.15	0.28	0.13	0.25
Heat-Smart XT	Insulating Low E 366 - CL - Low E 366	3mm / 3mm / 3mm (1/8")	12.5mm (1/2")	Air	Thermal	0.21	68	0.16	0.31	0.15	0.28	0.13	0.25
	Insulating Low E 366 - CL - Low E 366	3mm / 3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Standard	0.21	64	0.16	0.31	0.15	0.28	0.13	0.25
Heat-Smart XT	Insulating Low E 366 - CL - Low E 366	3mm / 3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Thermal	0.19	71	0.16	0.31	0.15	0.28	0.13	0.25

NFRC U-FACTOR AND SHGC/VT

Glazing Types listed include Standard and Custom configurations



Metal Clad Picture

	Glazing Type	Glass Thickness	Air Space			U-value	CR	No SDL		SDL with Internal Spacer			
			Width(s)	Gas Fill	Spacer Bar			SHGC	VT	3/4"		1 1/8" & 2"	
										SHGC	VT	SHGC	VT
Heat-Smart (Thermal)	Insulating Low E 272 - CL	3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Thermal	0.30	55					0.29	0.49
Heat-Smart X	Insulating Low E 366 - CL	3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Standard	0.29	52	0.23	0.55				
Heat-Smart X (Thermal)	Insulating Low E 366 - CL	3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Thermal	0.27	56	0.23	0.55				
Heat-Smart X (Thermal)	Insulating Low E 366 - CL	3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Thermal	0.29	56			0.21	0.49	0.19	0.44
	Insulating Low E 272 - CL - Low E 272	3mm / 3mm / 3mm (1/8")	12.5mm (1/2")	Air	Standard	0.21	60	0.30	0.49	0.27	0.44	0.25	0.39
	Insulating Low E 272 - CL - Low E 272	3mm / 3mm / 3mm (1/8")	12.5mm (1/2")	Air	Thermal	0.20	67	0.30	0.49	0.27	0.44	0.25	0.39
	Insulating Low E 272 - CL - Low E 272	3mm / 3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Standard	0.18	62	0.30	0.49	0.27	0.44	0.25	0.39
	Insulating Low E 272 - CL - Low E 272	3mm / 3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Thermal	0.17	69	0.30	0.49	0.27	0.44	0.25	0.39
	Insulating Low E 366 - CL - Low E 366	3mm / 3mm / 3mm (1/8")	12.5mm (1/2")	Air	Standard	0.21	60	0.20	0.40	0.19	0.35	0.17	0.32
Heat-Smart XT	Insulating Low E 366 - CL - Low E 366	3mm / 3mm / 3mm (1/8")	12.5mm (1/2")	Air	Thermal	0.19	67	0.20	0.40	0.19	0.35	0.17	0.32
	Insulating Low E 366 - CL - Low E 366	3mm / 3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Standard	0.18	62	0.20	0.40	0.18	0.35	0.17	0.32
Heat-Smart XT	Insulating Low E 366 - CL - Low E 366	3mm / 3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Thermal	0.16	70	0.20	0.40	0.18	0.35	0.17	0.32

Non-Clad Picture

	Glazing Type	Glass Thickness	Air Space			U-value	CR	No SDL		SDL with Internal Spacer			
			Width(s)	Gas Fill	Spacer Bar			SHGC	VT	3/4"		1 1/8" & 2"	
										SHGC	VT	SHGC	VT
Heat-Smart	Insulating Low E 272 - CL	3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Standard	0.30	55					0.29	0.49
Heat-Smart (Thermal)	Insulating Low E 272 - CL	3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Thermal	0.29	58					0.29	0.49
Heat-Smart X (Thermal)	Insulating Low E 366 - CL	3mm / 3mm (1/8")	12.5mm (1/2")	Air	Thermal	0.30	55	0.24	0.55				
Heat-Smart X	Insulating Low E 366 - CL	3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Standard	0.27	56	0.23	0.55				
Heat-Smart X	Insulating Low E 366 - CL	3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Standard	0.29	56			0.21	0.49	0.19	0.44
Heat-Smart X (Thermal)	Insulating Low E 366 - CL	3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Thermal	0.26	59	0.23	0.55				
Heat-Smart X (Thermal)	Insulating Low E 366 - CL	3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Thermal	0.28	59			0.21	0.49	0.19	0.44
	Insulating Low E 366 - LAM	3mm (1/8") / 6.9mm (9/32")	8mm (5/16")	Argon	Standard	0.30	53	0.24	0.54				
	Insulating Low E 272 - CL - Low E 272	3mm / 3mm / 3mm (1/8")	12.5mm (1/2")	Air	Standard	0.20	64	0.30	0.49	0.27	0.44	0.25	0.39
	Insulating Low E 272 - CL - Low E 272	3mm / 3mm / 3mm (1/8")	12.5mm (1/2")	Air	Thermal	0.19	69	0.30	0.49	0.27	0.44	0.25	0.39
	Insulating Low E 272 - CL - Low E 272	3mm / 3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Standard	0.17	66	0.30	0.49	0.27	0.44	0.24	0.39
	Insulating Low E 272 - CL - Low E 272	3mm / 3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Thermal	0.16	72	0.30	0.49	0.27	0.44	0.24	0.39
	Insulating Low E 366 - CL - Low E 366	3mm / 3mm / 3mm (1/8")	12.5mm (1/2")	Air	Standard	0.20	64	0.20	0.40	0.18	0.35	0.17	0.32
Heat-Smart XT	Insulating Low E 366 - CL - Low E 366	3mm / 3mm / 3mm (1/8")	12.5mm (1/2")	Air	Thermal	0.18	70	0.20	0.40	0.18	0.35	0.17	0.32
	Insulating Low E 366 - CL - Low E 366	3mm / 3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Standard	0.17	66	0.20	0.40	0.18	0.35	0.17	0.32
Heat-Smart XT	Insulating Low E 366 - CL - Low E 366	3mm / 3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Thermal	0.15	73	0.20	0.40	0.18	0.35	0.17	0.32

NFRC U-FACTOR AND SHGC/VT

Glazing Types listed include Standard and Custom configurations



Non-Clad 2009 Double Hung

	Glazing Type	Glass Thickness	Air Space			U-value	CR	No SDL		SDL with Internal Spacer			
			Width(s)	Gas Fill	Spacer Bar			SHGC	VT	3/4"		1 1/8" & 2"	
										SHGC	VT	SHGC	VT
Heat-Smart (Thermal)	Insulating Low E 272 - CL	3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Thermal	0.30	54	0.29	0.50				
Heat-Smart X (Thermal)	Insulating Low E 366 - CL	3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Thermal	0.30	54	0.19	0.45				

Metal Clad 2009 Double Hung Fixed

	Glazing Type	Glass Thickness	Air Space			U-value	CR	No SDL		SDL with Internal Spacer			
			Width(s)	Gas Fill	Spacer Bar			SHGC	VT	3/4"		1 1/8" & 2"	
										SHGC	VT	SHGC	VT
Heat-Smart X (Thermal)	Insulating Low E 366 - CL	3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Thermal	0.30	57	0.20	0.47				
Heat-Smart X (Thermal)	Insulating Low E 366 - CL	4mm / 4mm (5/32")	10mm (13/32")	Argon	Thermal	0.30	55	0.21	0.47				

Non-Clad 2009 Double Hung Fixed

	Glazing Type	Glass Thickness	Air Space			U-value	CR	No SDL		SDL with Internal Spacer			
			Width(s)	Gas Fill	Spacer Bar			SHGC	VT	3/4"		1 1/8" & 2"	
										SHGC	VT	SHGC	VT
Heat-Smart	Insulating Low E 272 - CL	3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Standard	0.29	55	0.30	0.52				
Heat-Smart (Thermal)	Insulating Low E 272 - CL	3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Thermal	0.30	59			0.27	0.46	0.24	0.40
Heat-Smart (Thermal)	Insulating Low E 272 - CL	3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Thermal	0.28	59	0.30	0.52				
Heat-Smart X	Insulating Low E 366 - CL	3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Standard	0.30	56			0.18	0.41	0.16	0.36
Heat-Smart X	Insulating Low E 366 - CL	3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Standard	0.29	56	0.20	0.46				
Heat-Smart X (Thermal)	Insulating Low E 366 - CL	3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Thermal	0.29	60			0.18	0.41	0.16	0.36
Heat-Smart X (Thermal)	Insulating Low E 366 - CL	3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Thermal	0.28	60	0.20	0.46				
Heat-Smart	Insulating Low E 272 - CL	4mm / 4mm (5/32")	10mm (13/32")	Argon	Standard	0.30	53	0.30	0.51				
Heat-Smart (Thermal)	Insulating Low E 272 - CL	4mm / 4mm (5/32")	10mm (13/32")	Argon	Thermal	0.29	57	0.30	0.51				
Heat-Smart X	Insulating Low E 366 - CL	4mm / 4mm (5/32")	10mm (13/32")	Argon	Standard	0.30	53	0.20	0.46				
Heat-Smart X (Thermal)	Insulating Low E 366 - CL	4mm / 4mm (5/32")	10mm (13/32")	Argon	Thermal	0.28	58	0.20	0.46				

Metal Clad 2009 Double Hung Transom

	Glazing Type	Glass Thickness	Air Space			U-value	CR	No SDL		SDL with Internal Spacer			
			Width(s)	Gas Fill	Spacer Bar			SHGC	VT	3/4"		1 1/8" & 2"	
										SHGC	VT	SHGC	VT
Heat-Smart X	Insulating Low E 366 - CL	3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Standard	0.30	50	0.21	0.49				
Heat-Smart X (Thermal)	Insulating Low E 366 - CL	3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Thermal	0.29	56	0.21	0.49				
Heat-Smart X (Thermal)	Insulating Low E 366 - CL	4mm / 4mm (5/32")	10mm (13/32")	Argon	Thermal	0.30	54	0.22	0.49				

NFRC U-FACTOR AND SHGC/VT

Glazing Types listed include Standard and Custom configurations



Non-Clad 2009 Double Hung Transom

	Glazing Type	Glass Thickness	Air Space			U-value		No SDL		SDL with Internal Spacer					
								SHGC		VT		3/4"		1 1/8" & 2"	
								SHGC	VT	SHGC	VT	SHGC	VT		
Heat-Smart (Thermal)	Insulating Low E 272 - CL	3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Thermal	0.30	58			0.28	0.49	0.26	0.43		
Heat-Smart X	Insulating Low E 366 - CL	3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Standard	0.30	55			0.19	0.44	0.17	0.39		
Heat-Smart X	Insulating Low E 366 - CL	3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Standard	0.28	55	0.21	0.49						
Heat-Smart X (Thermal)	Insulating Low E 366 - CL	3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Thermal	0.29	59			0.19	0.44	0.17	0.39		
Heat-Smart X (Thermal)	Insulating Low E 366 - CL	3mm / 3mm (1/8")	12.5mm (1/2")	Argon	Thermal	0.27	59	0.21	0.49						
Heat-Smart X	Insulating Low E 366 - CL	4mm / 4mm (5/32")	10mm (13/32")	Argon	Standard	0.29	53	0.21	0.49						
Heat-Smart X (Thermal)	Insulating Low E 366 - CL	4mm / 4mm (5/32")	10mm (13/32")	Argon	Thermal	0.28	57	0.21	0.49						

Non-Clad Inswing French Door

	Glazing Type	Glass Thickness	Air Space			U-value		No SDL		SDL with Internal Spacer					
								SHGC		VT		3/4"		1 1/8" & 2"	
								SHGC	VT	SHGC	VT	SHGC	VT		
Heat-Smart X (Thermal)	Insulating Low E 366 - CL	4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Thermal	0.30	59.1	0.17	0.38						

Non-Clad Outswing French Door

	Glazing Type	Glass Thickness	Air Space			U-value		No SDL		SDL with Internal Spacer					
								SHGC		VT		3/4"		1 1/8" & 2"	
								SHGC	VT	SHGC	VT	SHGC	VT		
Heat-Smart X (Thermal)	Insulating Low E 366 - CL	4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Thermal	0.30	58.9	0.17	0.38						

Non-Clad French Door Transom

	Glazing Type	Glass Thickness	Air Space			U-value		No SDL		SDL with Internal Spacer					
								SHGC		VT		3/4"		1 1/8" & 2"	
								SHGC	VT	SHGC	VT	SHGC	VT		
Heat-Smart (Thermal)	Insulating Low E 272 - CL	4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Thermal	0.30	56.8	0.27	0.46	0.24	0.41	0.22	0.37		
Heat-Smart X (Thermal)	Insulating Low E 366 - CL	4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Thermal	0.29	57	0.18	0.41						
Heat-Smart X (Thermal)	Insulating Low E 366 - CL	4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Thermal	0.30	57			0.16	0.37	0.15	0.33		
	Insulating Low E 366 - LAM	4mm (5/32") / 6.9mm (9/32")	12.5mm (1/2")	Argon	Standard	0.30	56	0.18	0.41						
	Insulating Low E 366 - LAM	4mm (5/32") / 8mm (5/16")	12.5mm (1/2")	Argon	Standard	0.30	55.1	0.18	0.40						

NFRC U-FACTOR AND SHGC/VT

Glazing Types listed include Standard and Custom configurations



Metal Clad Patio

	Glazing Type	Glass Thickness	Air Space			U-value	CR	No SDL		SDL with Internal Spacer			
			Width(s)	Gas Fill	Spacer Bar			SHGC	VT	3/4"		1 1/8" & 2"	
										SHGC	VT	SHGC	VT
Heat-Smart X (Thermal)	Insulating Low E 366 - CL	4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Thermal	0.29	51.3	0.21	0.49				
	Insulating Low E 366 - LAM	4mm (5/32") / 10.4mm (13/32")	12.5mm (1/2")	Argon	Standard	0.30	47	0.21	0.48				
	Insulating Low E 366 - LAM	4mm (5/32") / 6.9mm (9/32")	12.5mm (1/2")	Argon	Standard	0.30	47	0.21	0.48				
	Insulating Low E 366 - LAM	4mm (5/32") / 8mm (5/16")	12.5mm (1/2")	Argon	Standard	0.30	46	0.21	0.47				
	Insulating Low E 272 - CL - Low E 272	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Air	Standard	0.24	54	0.27	0.43	0.24	0.38	0.21	0.33
	Insulating Low E 272 - CL - Low E 272	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Air	Thermal	0.22	63	0.27	0.43	0.24	0.38	0.21	0.33
	Insulating Low E 272 - CL - Low E 272	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Standard	0.21	55	0.27	0.43				
	Insulating Low E 272 - CL - Low E 272	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Standard	0.22	55			0.24	0.38	0.21	0.33
	Insulating Low E 272 - CL - Low E 272	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Thermal	0.19	66	0.27	0.43				
	Insulating Low E 272 - CL - Low E 272	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Thermal	0.20	66			0.24	0.38	0.21	0.33
	Insulating Low E 366-CL-Low E 179	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Standard	0.22	55	0.19	0.43	0.17	0.37	0.15	0.32
	Insulating Low E 366 - CL - Low E 366	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Air	Standard	0.23	54	0.18	0.35				
	Insulating Low E 366 - CL - Low E 366	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Air	Standard	0.24	54			0.16	0.31	0.15	0.27
Heat-Smart XT	Insulating Low E 366 - CL - Low E 366	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Air	Thermal	0.21	64	0.18	0.35				
Heat-Smart XT	Insulating Low E 366 - CL - Low E 366	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Air	Thermal	0.22	64			0.16	0.31	0.15	0.27
	Insulating Low E 366 - CL - Low E 366	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Standard	0.21	55	0.18	0.35	0.16	0.31	0.15	0.27
Heat-Smart XT	Insulating Low E 366 - CL - Low E 366	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Thermal	0.19	65.9	0.18	0.35	0.16	0.31	0.15	0.27

NFRC U-FACTOR AND SHGC/VT

Glazing Types listed include Standard and Custom configurations



Non-Clad Patio

	Glazing Type	Glass Thickness	Air Space			U-value	CR	No SDL		SDL with Internal Spacer			
			Width(s)	Gas Fill	Spacer Bar			SHGC	VT	3/4"		1 1/8" & 2"	
										SHGC	VT	SHGC	VT
Heat-Smart (Thermal)	Insulating Low E 272 - CL	4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Thermal	0.30	53.5			0.28	0.48	0.24	0.41
Heat-Smart X	Insulating Low E 366 - CL	4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Standard	0.29	48	0.21	0.49				
Heat-Smart X (Thermal)	Insulating Low E 366 - CL	4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Thermal	0.28	54	0.21	0.49				
Heat-Smart X (Thermal)	Insulating Low E 366 - CL	4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Thermal	0.30	54			0.19	0.43	0.17	0.37
	Insulating Low E 272-LAM	4mm (5/32") / 10.4mm (13/32")	12.5mm (1/2")	Argon	Standard	0.30	50			0.27	0.47	0.24	0.40
	Insulating Low E 366 - LAM	4mm (5/32") / 10.4mm (13/32")	12.5mm (1/2")	Argon	Standard	0.28	50	0.21	0.48				
	Insulating Low E 366 - LAM	4mm (5/32") / 10.4mm (13/32")	12.5mm (1/2")	Argon	Standard	0.30	50			0.19	0.42	0.16	0.36
	Insulating Low E 366 - LAM	4mm (5/32") / 6.8mm (9/32")	21mm (13/16")	Argon	Standard	0.30	49	0.21	0.48	0.19	0.42	0.16	0.36
	Insulating Low E 272-LAM	4mm (5/32") / 6.9mm (9/32")	12.5mm (1/2")	Argon	Standard	0.30	50			0.28	0.47	0.24	0.40
	Insulating Low E 366 - LAM	4mm (5/32") / 6.9mm (9/32")	12.5mm (1/2")	Argon	Standard	0.28	50	0.21	0.48				
	Insulating Low E 366 - LAM	4mm (5/32") / 6.9mm (9/32")	12.5mm (1/2")	Argon	Standard	0.30	50			0.19	0.42	0.16	0.36
	Insulating Low E 272-LAM	4mm (5/32") / 8mm (5/16")	12.5mm (1/2")	Argon	Standard	0.30	50			0.28	0.45	0.24	0.39
	Insulating Low E 366 - LAM	4mm (5/32") / 8mm (5/16")	12.5mm (1/2")	Argon	Standard	0.28	50	0.21	0.47				
	Insulating Low E 366 - LAM	4mm (5/32") / 8mm (5/16")	12.5mm (1/2")	Argon	Standard	0.30	50			0.19	0.41	0.17	0.35
	Insulating Low E 272 - CL - Low E 272	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Air	Standard	0.23	57	0.27	0.43	0.24	0.38	0.21	0.33
	Insulating Low E 272 - CL - Low E 272	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Air	Thermal	0.21	65	0.27	0.43				
	Insulating Low E 272 - CL - Low E 272	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Air	Thermal	0.22	65			0.24	0.38	0.21	0.33
	Insulating Low E 272 - CL - Low E 272	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Standard	0.20	58	0.27	0.43				
	Insulating Low E 272 - CL - Low E 272	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Standard	0.21	58			0.24	0.38	0.21	0.33
	Insulating Low E 272 - CL - Low E 272	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Thermal	0.19	68	0.27	0.43	0.24	0.38	0.21	0.33
	Insulating Low E 366-CL-Low E 179	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Standard	0.21	58	0.19	0.43	0.17	0.37	0.15	0.32
	Insulating Low E 366 - CL - Low E 366	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Air	Standard	0.22	57	0.18	0.35				
	Insulating Low E 366 - CL - Low E 366	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Air	Standard	0.23	57			0.16	0.31	0.15	0.27
Heat-Smart XT	Insulating Low E 366 - CL - Low E 366	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Air	Thermal	0.21	66	0.18	0.35	0.16	0.31	0.15	0.27
	Insulating Low E 366 - CL - Low E 366	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Standard	0.20	59	0.18	0.35				
	Insulating Low E 366 - CL - Low E 366	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Standard	0.20	58			0.16	0.31	0.14	0.27
Heat-Smart XT	Insulating Low E 366 - CL - Low E 366	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Thermal	0.18	68	0.18	0.35				
Heat-Smart XT	Insulating Low E 366 - CL - Low E 366	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Thermal	0.19	67.8			0.16	0.31	0.14	0.27

NFRC U-FACTOR AND SHGC/VT

Glazing Types listed include Standard and Custom configurations



Metal Clad Patio Fixed

	Glazing Type	Glass Thickness	Air Space			U-value	CR	No SDL		SDL with Internal Spacer			
			Width(s)	Gas Fill	Spacer Bar			SHGC	VT	3/4"		1 1/8" & 2"	
										SHGC	VT	SHGC	VT
Heat-Smart (Thermal)	Insulating Low E 272 - CL	4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Thermal	0.30	54.7	0.30	0.51				
Heat-Smart X	Insulating Low E 366 - CL	4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Standard	0.30	50	0.20	0.46				
Heat-Smart X (Thermal)	Insulating Low E 366 - CL	4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Thermal	0.29	55	0.20	0.46				
Heat-Smart X (Thermal)	Insulating Low E 366 - CL	4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Thermal	0.30	55			0.18	0.41	0.16	0.36
	Insulating Low E 272-LAM	4mm (5/32") / 10.4mm (13/32")	12.5mm (1/2")	Argon	Standard	0.30	50	0.29	0.50				
	Insulating Low E 366 - LAM	4mm (5/32") / 10.4mm (13/32")	12.5mm (1/2")	Argon	Standard	0.30	50	0.20	0.45				
	Insulating Low E 272-LAM	4mm (5/32") / 6.9mm (9/32")	12.5mm (1/2")	Argon	Standard	0.30	52	0.29	0.50				
	Insulating Low E 366 - LAM	4mm (5/32") / 6.9mm (9/32")	12.5mm (1/2")	Argon	Standard	0.30	52	0.20	0.45				
	Insulating Low E 272-LAM	4mm (5/32") / 8mm (5/16")	12.5mm (1/2")	Argon	Standard	0.30	51	0.29	0.49				
	Insulating Low E 366 - LAM	4mm (5/32") / 8mm (5/16")	12.5mm (1/2")	Argon	Standard	0.30	51	0.20	0.44				
	Insulating Low E 272 - CL - Low E 272	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Air	Standard	0.24	60	0.25	0.41				
	Insulating Low E 272 - CL - Low E 272	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Air	Standard	0.25	60			0.23	0.36	0.20	0.32
	Insulating Low E 272 - CL - Low E 272	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Air	Thermal	0.22	67	0.25	0.41				
	Insulating Low E 272 - CL - Low E 272	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Air	Thermal	0.23	67			0.23	0.36	0.20	0.32
	Insulating Low E 272 - CL - Low E 272	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Standard	0.22	61	0.25	0.41	0.23	0.36	0.20	0.32
	Insulating Low E 272 - CL - Low E 272	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Thermal	0.20	70	0.25	0.41	0.23	0.36	0.20	0.32
	Insulating Low E 366-CL-Low E 179	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Standard	0.22	61	0.18	0.40				
	Insulating Low E 366-CL-Low E 179	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Standard	0.23	61			0.16	0.36	0.15	0.31
	Insulating Low E 366 - CL - Low E 366	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Air	Standard	0.24	60	0.17	0.33	0.16	0.29	0.14	0.26
Heat-Smart XT	Insulating Low E 366 - CL - Low E 366	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Air	Thermal	0.22	68	0.17	0.33	0.16	0.29	0.14	0.26
	Insulating Low E 366 - CL - Low E 366	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Standard	0.22	62	0.17	0.33	0.16	0.29	0.14	0.26
Heat-Smart XT	Insulating Low E 366 - CL - Low E 366	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Thermal	0.20	69.8	0.17	0.33	0.16	0.29	0.14	0.26

NFRC U-FACTOR AND SHGC/VT

Glazing Types listed include Standard and Custom configurations



Non-Clad Patio Fixed

	Glazing Type	Glass Thickness	Air Space			U-value	CR	No SDL		SDL with Internal Spacer			
			Width(s)	Gas Fill	Spacer Bar			SHGC	VT	3/4"		1 1/8" & 2"	
										SHGC	VT	SHGC	VT
Heat-Smart	Insulating Low E 272 - CL	4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Standard	0.30	52.9	0.30	0.51				
Heat-Smart (Thermal)	Insulating Low E 272 - CL	4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Thermal	0.29	57	0.30	0.51				
Heat-Smart (Thermal)	Insulating Low E 272 - CL	4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Thermal	0.30	57			0.27	0.45	0.24	0.40
Heat-Smart X	Insulating Low E 366 - CL	4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Standard	0.29	53	0.20	0.46				
Heat-Smart X (Thermal)	Insulating Low E 366 - CL	4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Thermal	0.28	57	0.20	0.46				
Heat-Smart X (Thermal)	Insulating Low E 366 - CL	4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Thermal	0.29	57			0.18	0.41	0.16	0.36
	Insulating Low E 272-LAM	4mm (5/32") / 10.4mm (13/32")	12.5mm (1/2")	Argon	Standard	0.29	54	0.29	0.50				
	Insulating Low E 272-LAM	4mm (5/32") / 10.4mm (13/32")	12.5mm (1/2")	Argon	Standard	0.30	54			0.26	0.44	0.23	0.39
	Insulating Low E 366 - LAM	4mm (5/32") / 10.4mm (13/32")	12.5mm (1/2")	Argon	Standard	0.29	54	0.20	0.45				
	Insulating Low E 366 - LAM	4mm (5/32") / 10.4mm (13/32")	12.5mm (1/2")	Argon	Standard	0.30	54			0.18	0.40	0.16	0.35
	Insulating Low E 366 - LAM	4mm (5/32") / 6.8mm (9/32")	21mm (13/16")	Argon	Standard	0.30	53	0.20	0.45	0.18	0.40	0.16	0.35
	Insulating Low E 272-LAM	4mm (5/32") / 6.9mm (9/32")	12.5mm (1/2")	Argon	Standard	0.29	55	0.29	0.50				
	Insulating Low E 272-LAM	4mm (5/32") / 6.9mm (9/32")	12.5mm (1/2")	Argon	Standard	0.30	55			0.26	0.44	0.23	0.39
	Insulating Low E 366 - LAM	4mm (5/32") / 6.9mm (9/32")	12.5mm (1/2")	Argon	Standard	0.29	55	0.20	0.45				
	Insulating Low E 366 - LAM	4mm (5/32") / 6.9mm (9/32")	12.5mm (1/2")	Argon	Standard	0.30	55			0.18	0.40	0.16	0.35
	Insulating Low E 272-LAM	4mm (5/32") / 8mm (5/16")	12.5mm (1/2")	Argon	Standard	0.29	54	0.29	0.49				
	Insulating Low E 272-LAM	4mm (5/32") / 8mm (5/16")	12.5mm (1/2")	Argon	Standard	0.30	54			0.26	0.43	0.23	0.38
	Insulating Low E 366 - LAM	4mm (5/32") / 8mm (5/16")	12.5mm (1/2")	Argon	Standard	0.29	55	0.20	0.44				
	Insulating Low E 366 - LAM	4mm (5/32") / 8mm (5/16")	12.5mm (1/2")	Argon	Standard	0.30	55			0.18	0.39	0.16	0.34
	Insulating Low E 272 - CL - Low E 272	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Air	Standard	0.23	62	0.25	0.41				
	Insulating Low E 272 - CL - Low E 272	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Air	Standard	0.24	63			0.23	0.36	0.20	0.32
	Insulating Low E 272 - CL - Low E 272	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Air	Thermal	0.22	69	0.25	0.41	0.23	0.36	0.20	0.32
	Insulating Low E 272 - CL - Low E 272	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Standard	0.21	64	0.25	0.41	0.23	0.36	0.20	0.32
	Insulating Low E 272 - CL - Low E 272	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Thermal	0.19	71	0.25	0.41				
	Insulating Low E 272 - CL - Low E 272	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Thermal	0.20	71			0.23	0.36	0.20	0.32
	Insulating Low E 366-CL-Low E 179	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Standard	0.21	64	0.18	0.40				
	Insulating Low E 366-CL-Low E 179	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Standard	0.22	64			0.16	0.36	0.15	0.31
	Insulating Low E 366 - CL - Low E 366	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Air	Standard	0.23	63	0.17	0.33	0.16	0.29	0.14	0.26
Heat-Smart XT	Insulating Low E 366 - CL - Low E 366	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Air	Thermal	0.21	70	0.17	0.33				
Heat-Smart XT	Insulating Low E 366 - CL - Low E 366	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Air	Thermal	0.22	70			0.16	0.29	0.14	0.26
	Insulating Low E 366 - CL - Low E 366	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Standard	0.21	65	0.17	0.33	0.16	0.29	0.14	0.26
Heat-Smart XT	Insulating Low E 366 - CL - Low E 366	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Thermal	0.19	71.1	0.17	0.33	0.16	0.29	0.14	0.26

NFRC U-FACTOR AND SHGC/VT

Glazing Types listed include Standard and Custom configurations



Metal Clad Patio Transom

	Glazing Type	Glass Thickness	Air Space			U-value	CR	No SDL		SDL with Internal Spacer			
			Width(s)	Gas Fill	Spacer Bar			SHGC	VT	3/4"		1 1/8" & 2"	
										SHGC	VT	SHGC	VT
Heat-Smart (Thermal)	Insulating Low E 272 - CL	4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Thermal	0.30	54.8	0.29	0.50				
Heat-Smart X (Thermal)	Insulating Low E 366 - CL	4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Thermal	0.30	55	0.20	0.45	0.18	0.40	0.16	0.36
	Insulating Low E 272 - CL - Low E 272	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Air	Standard	0.25	61	0.25	0.40	0.23	0.36	0.20	0.32
	Insulating Low E 272 - CL - Low E 272	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Air	Thermal	0.23	68	0.25	0.40	0.23	0.36	0.20	0.32
	Insulating Low E 272 - CL - Low E 272	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Standard	0.23	63	0.25	0.40	0.23	0.36	0.20	0.32
	Insulating Low E 272 - CL - Low E 272	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Thermal	0.20	71	0.25	0.40	0.23	0.36	0.20	0.32
	Insulating Low E 366-CL-Low E 179	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Standard	0.24	63	0.18	0.39	0.16	0.35	0.15	0.32
	Insulating Low E 366 - CL - Low E 366	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Air	Standard	0.25	62	0.17	0.32	0.16	0.29	0.14	0.26
Heat-Smart XT	Insulating Low E 366 - CL - Low E 366	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Air	Thermal	0.22	69	0.17	0.32	0.16	0.29	0.14	0.26
	Insulating Low E 366 - CL - Low E 366	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Standard	0.23	63	0.17	0.32	0.16	0.29	0.14	0.26
Heat-Smart XT	Insulating Low E 366 - CL - Low E 366	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Thermal	0.20	70.8	0.17	0.32	0.16	0.29	0.14	0.26

NFRC U-FACTOR AND SHGC/VT

Glazing Types listed include Standard and Custom configurations



Non-Clad Patio Transom

	Glazing Type	Glass Thickness	Air Space			U-value	CR	No SDL		SDL with Internal Spacer			
			Width(s)	Gas Fill	Spacer Bar			SHGC	VT	3/4"		1 1/8" & 2"	
										SHGC	VT	SHGC	VT
Heat-Smart (Thermal)	Insulating Low E 272 - CL	4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Thermal	0.29	56.6	0.29	0.50				
Heat-Smart (Thermal)	Insulating Low E 272 - CL	4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Thermal	0.30	57			0.26	0.45	0.24	0.40
Heat-Smart X	Insulating Low E 366 - CL	4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Standard	0.30	53	0.20	0.45				
Heat-Smart X (Thermal)	Insulating Low E 366 - CL	4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Thermal	0.29	57	0.20	0.45	0.18	0.41	0.16	0.36
	Insulating Low E 272-LAM	4mm (5/32") / 10.4mm (13/32")	12.5mm (1/2")	Argon	Standard	0.30	54	0.29	0.49	0.26	0.44	0.24	0.39
	Insulating Low E 366 - LAM	4mm (5/32") / 10.4mm (13/32")	12.5mm (1/2")	Argon	Standard	0.29	54	0.19	0.44				
	Insulating Low E 366 - LAM	4mm (5/32") / 10.4mm (13/32")	12.5mm (1/2")	Argon	Standard	0.30	54			0.18	0.40	0.16	0.36
	Insulating Low E 272-LAM	4mm (5/32") / 6.9mm (9/32")	12.5mm (1/2")	Argon	Standard	0.30	55	0.29	0.49				
	Insulating Low E 366 - LAM	4mm (5/32") / 6.9mm (9/32")	12.5mm (1/2")	Argon	Standard	0.29	55	0.19	0.44				
	Insulating Low E 366 - LAM	4mm (5/32") / 6.9mm (9/32")	12.5mm (1/2")	Argon	Standard	0.30	55			0.18	0.40	0.16	0.36
	Insulating Low E 272-LAM	4mm (5/32") / 8mm (5/16")	12.5mm (1/2")	Argon	Standard	0.30	54	0.29	0.48				
	Insulating Low E 366 - LAM	4mm (5/32") / 8mm (5/16")	12.5mm (1/2")	Argon	Standard	0.29	55	0.19	0.43				
	Insulating Low E 366 - LAM	4mm (5/32") / 8mm (5/16")	12.5mm (1/2")	Argon	Standard	0.30	55			0.18	0.39	0.16	0.35
	Insulating Low E 272 - CL - Low E 272	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Air	Standard	0.24	64	0.25	0.40	0.23	0.36	0.20	0.32
	Insulating Low E 272 - CL - Low E 272	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Air	Thermal	0.22	70	0.25	0.40	0.23	0.36	0.20	0.32
	Insulating Low E 272 - CL - Low E 272	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Standard	0.22	66	0.25	0.40	0.23	0.36	0.20	0.32
	Insulating Low E 272 - CL - Low E 272	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Thermal	0.19	72	0.25	0.40				
	Insulating Low E 272 - CL - Low E 272	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Thermal	0.20	72			0.23	0.36	0.20	0.32
	Insulating Low E 366-CL-Low E 179	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Standard	0.22	66	0.18	0.39	0.16	0.35	0.15	0.32
	Insulating Low E 366 - CL - Low E 366	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Air	Standard	0.24	64	0.17	0.32	0.16	0.29	0.14	0.26
Heat-Smart XT	Insulating Low E 366 - CL - Low E 366	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Air	Thermal	0.21	70	0.17	0.32				
Heat-Smart XT	Insulating Low E 366 - CL - Low E 366	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Air	Thermal	0.22	70			0.16	0.29	0.14	0.26
	Insulating Low E 366 - CL - Low E 366	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Standard	0.21	66	0.17	0.32	0.16	0.29	0.14	0.26
Heat-Smart XT	Insulating Low E 366 - CL - Low E 366	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Thermal	0.19	72.2	0.17	0.32	0.16	0.29	0.14	0.26

NFRC U-FACTOR AND SHGC/VT

Glazing Types listed include Standard and Custom configurations



Metal Clad French Patio

	Glazing Type	Glass Thickness	Air Space			U-value	CR	No SDL		SDL with Internal Spacer			
			Width(s)	Gas Fill	Spacer Bar			SHGC	VT	3/4"		1 1/8" & 2"	
										SHGC	VT	SHGC	VT
Heat-Smart (Thermal)	Insulating Low E 272 - CL	4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Thermal	0.30	54.6	0.26	0.45				
Heat-Smart X (Thermal)	Insulating Low E 366 - CL	4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Thermal	0.30	55	0.18	0.41				
	Insulating Low E 179-CL-Low E 179	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Air	Standard	0.27	58					0.27	0.32
Heat-Smart T	Insulating Low E 179-CL-Low E 179	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Air	Thermal	0.25	66					0.27	0.32
	Insulating Low E 179-CL-Low E 179	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Standard	0.25	60					0.27	0.32
Heat-Smart T	Insulating Low E 179-CL-Low E 179	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Thermal	0.23	66					0.27	0.32
	Insulating Low E 272 - CL - Low E 272	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Air	Standard	0.26	59	0.23	0.36	0.20	0.31	0.17	0.26
	Insulating Low E 272 - CL - Low E 272	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Air	Thermal	0.24	66	0.23	0.36	0.20	0.31	0.17	0.26
	Insulating Low E 272 - CL - Low E 272	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Standard	0.24	61	0.23	0.36	0.20	0.31	0.17	0.26
	Insulating Low E 272 - CL - Low E 272	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Thermal	0.22	66	0.23	0.36	0.20	0.31	0.17	0.26
	Insulating Low E 366-CL-Low E 179	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Standard	0.24	60	0.16	0.35				
	Insulating Low E 366-CL-Low E 179	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Standard	0.25	60			0.14	0.31	0.13	0.26
	Insulating Low E 366 - CL - Low E 366	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Air	Standard	0.26	59	0.16	0.29	0.14	0.25	0.12	0.21
Heat-Smart XT	Insulating Low E 366 - CL - Low E 366	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Air	Thermal	0.24	66	0.16	0.29	0.14	0.25	0.12	0.21
	Insulating Low E 366 - CL - Low E 366	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Standard	0.23	61	0.16	0.29				
	Insulating Low E 366 - CL - Low E 366	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Standard	0.24	61			0.14	0.25	0.12	0.21
Heat-Smart XT	Insulating Low E 366 - CL - Low E 366	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Thermal	0.21	66	0.16	0.29				
Heat-Smart XT	Insulating Low E 366 - CL - Low E 366	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Thermal	0.22	65.8			0.14	0.25	0.12	0.21

NFRC U-FACTOR AND SHGC/VT

Glazing Types listed include Standard and Custom configurations



Non-Clad French Patio

	Glazing Type	Glass Thickness	Air Space			U-value	CR	No SDL		SDL with Internal Spacer			
			Width(s)	Gas Fill	Spacer Bar			SHGC	VT	3/4"		1 1/8" & 2"	
										SHGC	VT	SHGC	VT
Heat-Smart	Insulating Low E 272 - CL	4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Standard	0.30	52.6	0.26	0.45				
Heat-Smart (Thermal)	Insulating Low E 272 - CL	4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Thermal	0.29	57	0.26	0.45				
Heat-Smart (Thermal)	Insulating Low E 272 - CL	4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Thermal	0.30	57			0.23	0.39	0.20	0.33
Heat-Smart X	Insulating Low E 366 - CL	4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Standard	0.30	53	0.18	0.41				
Heat-Smart X (Thermal)	Insulating Low E 366 - CL	4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Thermal	0.29	57	0.18	0.41				
Heat-Smart X (Thermal)	Insulating Low E 366 - CL	4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Thermal	0.30	57			0.16	0.35	0.14	0.30
	Insulating Low E 272-LAM	4mm (5/32") / 10.4mm (13/32")	12.5mm (1/2")	Argon	Standard	0.29	53	0.26	0.44				
	Insulating Low E 366 - LAM	4mm (5/32") / 10.4mm (13/32")	12.5mm (1/2")	Argon	Standard	0.29	54	0.18	0.40				
	Insulating Low E 366 - LAM	4mm (5/32") / 10.4mm (13/32")	12.5mm (1/2")	Argon	Standard	0.30	54			0.16	0.34	0.14	0.29
	Insulating Low E 272-LAM	4mm (5/32") / 6.9mm (9/32")	12.5mm (1/2")	Argon	Standard	0.30	55	0.26	0.44				
	Insulating Low E 366 - LAM	4mm (5/32") / 6.9mm (9/32")	12.5mm (1/2")	Argon	Standard	0.29	55	0.18	0.40				
	Insulating Low E 366 - LAM	4mm (5/32") / 6.9mm (9/32")	12.5mm (1/2")	Argon	Standard	0.30	55			0.16	0.34	0.14	0.29
	Insulating Low E 272-LAM	4mm (5/32") / 8mm (5/16")	12.5mm (1/2")	Argon	Standard	0.30	54	0.26	0.43				
	Insulating Low E 366 - LAM	4mm (5/32") / 8mm (5/16")	12.5mm (1/2")	Argon	Standard	0.29	54	0.18	0.39				
	Insulating Low E 366 - LAM	4mm (5/32") / 8mm (5/16")	12.5mm (1/2")	Argon	Standard	0.30	54			0.16	0.33	0.14	0.28
	Insulating Low E 179-CL-Low E 179	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Air	Standard	0.26	61					0.27	0.32
Heat-Smart T	Insulating Low E 179-CL-Low E 179	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Air	Thermal	0.24	68					0.27	0.32
	Insulating Low E 179-CL-Low E 179	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Standard	0.24	63					0.27	0.32
Heat-Smart T	Insulating Low E 179-CL-Low E 179	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Thermal	0.22	68					0.27	0.32
	Insulating Low E 272 - CL - Low E 272	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Air	Standard	0.24	62	0.23	0.36				
	Insulating Low E 272 - CL - Low E 272	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Air	Standard	0.25	62			0.20	0.31	0.17	0.26
	Insulating Low E 272 - CL - Low E 272	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Air	Thermal	0.23	68	0.23	0.36	0.20	0.31	0.17	0.26
	Insulating Low E 272 - CL - Low E 272	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Standard	0.22	64	0.22	0.36				
	Insulating Low E 272 - CL - Low E 272	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Standard	0.23	64			0.20	0.31	0.17	0.26
	Insulating Low E 272 - CL - Low E 272	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Thermal	0.21	68	0.22	0.36	0.20	0.31	0.17	0.26
	Insulating Low E 366-CL-Low E 179	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Standard	0.23	64	0.16	0.35	0.14	0.31	0.13	0.26
	Insulating Low E 366 - CL - Low E 366	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Air	Standard	0.24	62	0.16	0.29				
	Insulating Low E 366 - CL - Low E 366	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Air	Standard	0.25	62			0.14	0.25	0.12	0.21
Heat-Smart XT	Insulating Low E 366 - CL - Low E 366	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Air	Thermal	0.23	68	0.16	0.29	0.14	0.25	0.12	0.21
	Insulating Low E 366 - CL - Low E 366	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Standard	0.22	64	0.15	0.29	0.14	0.25	0.12	0.21
Heat-Smart XT	Insulating Low E 366 - CL - Low E 366	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Thermal	0.20	68	0.15	0.29				
Heat-Smart XT	Insulating Low E 366 - CL - Low E 366	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Thermal	0.21	68.1			0.14	0.25	0.12	0.21

NFRC U-FACTOR AND SHGC/VT

Glazing Types listed include Standard and Custom configurations



Metal Clad French Patio Fixed

	Glazing Type	Glass Thickness	Air Space			U-value	CR	No SDL		SDL with Internal Spacer			
			Width(s)	Gas Fill	Spacer Bar			SHGC	VT	3/4"		1 1/8" & 2"	
										SHGC	VT	SHGC	VT
Heat-Smart (Thermal)	Insulating Low E 272 - CL	4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Thermal	0.30	55	0.24	0.41				
Heat-Smart X (Thermal)	Insulating Low E 366 - CL	4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Thermal	0.30	55	0.17	0.37				
	Insulating Low E 366 - LAM	4mm (5/32") / 10.4mm (13/32")	12.5mm (1/2")	Argon	Standard	0.30	51	0.16	0.36				
	Insulating Low E 366 - LAM	4mm (5/32") / 6.9mm (9/32")	12.5mm (1/2")	Argon	Standard	0.30	52	0.16	0.36				
	Insulating Low E 366 - LAM	4mm (5/32") / 8mm (5/16")	12.5mm (1/2")	Argon	Standard	0.30	52	0.16	0.35				
	Insulating Low E 179-CL-Low E 179	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Air	Standard	0.27	59			0.29	0.35	0.25	0.30
Heat-Smart T	Insulating Low E 179-CL-Low E 179	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Air	Thermal	0.26	67			0.29	0.35	0.25	0.30
	Insulating Low E 179-CL-Low E 179	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Standard	0.25	61			0.29	0.35	0.25	0.30
Heat-Smart T	Insulating Low E 179-CL-Low E 179	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Thermal	0.24	69			0.29	0.35	0.25	0.30
	Insulating Low E 272 - CL - Low E 272	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Air	Standard	0.26	60	0.21	0.33	0.19	0.29	0.16	0.25
	Insulating Low E 272 - CL - Low E 272	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Air	Thermal	0.24	68	0.21	0.33				
	Insulating Low E 272 - CL - Low E 272	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Air	Thermal	0.25	68			0.19	0.29	0.16	0.25
	Insulating Low E 272 - CL - Low E 272	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Standard	0.24	62	0.21	0.33	0.19	0.29	0.16	0.25
	Insulating Low E 272 - CL - Low E 272	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Thermal	0.22	69	0.21	0.33				
	Insulating Low E 272 - CL - Low E 272	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Thermal	0.23	69			0.19	0.29	0.16	0.25
	Insulating Low E 366-CL-Low E 179	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Standard	0.25	61	0.15	0.32	0.14	0.28	0.12	0.24
	Insulating Low E 366 - CL - Low E 366	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Air	Standard	0.26	60	0.15	0.27	0.13	0.23	0.12	0.20
Heat-Smart XT	Insulating Low E 366 - CL - Low E 366	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Air	Thermal	0.24	68	0.15	0.27	0.13	0.23	0.12	0.20
	Insulating Low E 366 - CL - Low E 366	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Standard	0.24	62	0.14	0.27	0.13	0.23	0.12	0.20
Heat-Smart XT	Insulating Low E 366 - CL - Low E 366	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Thermal	0.22	68.6	0.14	0.27	0.13	0.23	0.12	0.20

NFRC U-FACTOR AND SHGC/VT

Glazing Types listed include Standard and Custom configurations



Non-Clad French Patio Fixed

	Glazing Type	Glass Thickness	Air Space			U-value	CR	No SDL		SDL with Internal Spacer			
			Width(s)	Gas Fill	Spacer Bar			SHGC	VT	3/4"		1 1/8" & 2"	
										SHGC	VT	SHGC	VT
Heat-Smart	Insulating Low E 272 - CL	4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Standard	0.30	52.8	0.25	0.41				
Heat-Smart (Thermal)	Insulating Low E 272 - CL	4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Thermal	0.29	57	0.25	0.41				
Heat-Smart (Thermal)	Insulating Low E 272 - CL	4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Thermal	0.30	57			0.22	0.36	0.19	0.31
Heat-Smart X	Insulating Low E 366 - CL	4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Standard	0.30	53	0.17	0.37				
Heat-Smart X (Thermal)	Insulating Low E 366 - CL	4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Thermal	0.29	58	0.17	0.37				
Heat-Smart X (Thermal)	Insulating Low E 366 - CL	4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Thermal	0.30	58			0.15	0.32	0.13	0.28
	Insulating Low E 272-LAM	4mm (5/32") / 10.4mm (13/32")	12.5mm (1/2")	Argon	Standard	0.30	54	0.24	0.40				
	Insulating Low E 366 - LAM	4mm (5/32") / 10.4mm (13/32")	12.5mm (1/2")	Argon	Standard	0.29	54	0.17	0.36				
	Insulating Low E 366 - LAM	4mm (5/32") / 10.4mm (13/32")	12.5mm (1/2")	Argon	Standard	0.30	54			0.15	0.32	0.13	0.27
	Insulating Low E 272-LAM	4mm (5/32") / 6.9mm (9/32")	12.5mm (1/2")	Argon	Standard	0.30	55	0.24	0.40				
	Insulating Low E 366 - LAM	4mm (5/32") / 6.9mm (9/32")	12.5mm (1/2")	Argon	Standard	0.29	55	0.17	0.36				
	Insulating Low E 366 - LAM	4mm (5/32") / 6.9mm (9/32")	12.5mm (1/2")	Argon	Standard	0.30	55			0.15	0.32	0.13	0.28
	Insulating Low E 272-LAM	4mm (5/32") / 8mm (5/16")	12.5mm (1/2")	Argon	Standard	0.30	54	0.24	0.39				
	Insulating Low E 366 - LAM	4mm (5/32") / 8mm (5/16")	12.5mm (1/2")	Argon	Standard	0.29	55	0.17	0.35				
	Insulating Low E 366 - LAM	4mm (5/32") / 8mm (5/16")	12.5mm (1/2")	Argon	Standard	0.30	55			0.15	0.31	0.13	0.27
	Insulating Low E 179-CL-Low E 179	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Air	Standard	0.26	62			0.29	0.35	0.25	0.30
Heat-Smart T	Insulating Low E 179-CL-Low E 179	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Air	Thermal	0.25	68			0.29	0.35	0.25	0.30
	Insulating Low E 179-CL-Low E 179	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Standard	0.24	64			0.29	0.35	0.26	0.30
Heat-Smart T	Insulating Low E 179-CL-Low E 179	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Thermal	0.23	69			0.29	0.35	0.26	0.30
	Insulating Low E 272 - CL - Low E 272	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Air	Standard	0.25	63	0.21	0.33	0.19	0.29	0.17	0.25
	Insulating Low E 272 - CL - Low E 272	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Air	Thermal	0.23	69	0.21	0.33				
	Insulating Low E 272 - CL - Low E 272	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Air	Thermal	0.24	69			0.19	0.29	0.17	0.25
	Insulating Low E 272 - CL - Low E 272	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Standard	0.23	65	0.21	0.33	0.19	0.29	0.17	0.25
	Insulating Low E 272 - CL - Low E 272	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Thermal	0.22	69	0.21	0.33	0.19	0.29	0.17	0.25
	Insulating Low E 366-CL-Low E 179	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Standard	0.24	64	0.15	0.32	0.14	0.28	0.12	0.24
	Insulating Low E 366 - CL - Low E 366	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Air	Standard	0.25	63	0.15	0.27	0.13	0.23	0.12	0.20
Heat-Smart XT	Insulating Low E 366 - CL - Low E 366	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Air	Thermal	0.23	69	0.15	0.27				
Heat-Smart XT	Insulating Low E 366 - CL - Low E 366	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Air	Thermal	0.24	69			0.13	0.23	0.12	0.20
	Insulating Low E 366 - CL - Low E 366	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Standard	0.23	65	0.15	0.27	0.13	0.23	0.12	0.20
Heat-Smart XT	Insulating Low E 366 - CL - Low E 366	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Thermal	0.21	69	0.15	0.27				
Heat-Smart XT	Insulating Low E 366 - CL - Low E 366	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Thermal	0.22	69.4			0.13	0.23	0.12	0.20

NFRC U-FACTOR AND SHGC/VT

Glazing Types listed include Standard and Custom configurations



Non-Clad French Patio Transom

	Glazing Type	Glass Thickness	Air Space			U-value	CR	No SDL		SDL with Internal Spacer			
			Width(s)	Gas Fill	Spacer Bar			SHGC	VT	3/4"		1 1/8" & 2"	
										SHGC	VT	SHGC	VT
Heat-Smart (Thermal)	Insulating Low E 272 - CL	4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Thermal	0.29	56.6	0.28	0.48				
Heat-Smart (Thermal)	Insulating Low E 272 - CL	4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Thermal	0.30	57			0.25	0.43	0.23	0.38
Heat-Smart X	Insulating Low E 366 - CL	4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Standard	0.30	53	0.19	0.43				
Heat-Smart X (Thermal)	Insulating Low E 366 - CL	4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Thermal	0.29	57	0.19	0.43	0.17	0.39	0.16	0.35
	Insulating Low E 272-LAM	4mm (5/32") / 10.4mm (13/32")	12.5mm (1/2")	Argon	Standard	0.30	54	0.28	0.47	0.25	0.42	0.23	0.38
	Insulating Low E 366 - LAM	4mm (5/32") / 10.4mm (13/32")	12.5mm (1/2")	Argon	Standard	0.29	54	0.19	0.42				
	Insulating Low E 366 - LAM	4mm (5/32") / 10.4mm (13/32")	12.5mm (1/2")	Argon	Standard	0.30	54			0.17	0.38	0.15	0.34
	Insulating Low E 272-LAM	4mm (5/32") / 6.9mm (9/32")	12.5mm (1/2")	Argon	Standard	0.30	55	0.28	0.47				
	Insulating Low E 366 - LAM	4mm (5/32") / 6.9mm (9/32")	12.5mm (1/2")	Argon	Standard	0.30	55	0.19	0.43	0.17	0.38	0.15	0.34
	Insulating Low E 272-LAM	4mm (5/32") / 8mm (5/16")	12.5mm (1/2")	Argon	Standard	0.30	54	0.28	0.46				
	Insulating Low E 366 - LAM	4mm (5/32") / 8mm (5/16")	12.5mm (1/2")	Argon	Standard	0.30	55	0.19	0.41	0.17	0.37	0.15	0.33
	Insulating Low E 179-CL-Low E 179	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Air	Standard	0.26	63					0.30	0.37
Heat-Smart T	Insulating Low E 179-CL-Low E 179	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Air	Thermal	0.23	68					0.30	0.37
	Insulating Low E 179-CL-Low E 179	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Standard	0.23	65					0.30	0.37
Heat-Smart T	Insulating Low E 179-CL-Low E 179	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Thermal	0.21	71					0.30	0.37
	Insulating Low E 272 - CL - Low E 272	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Air	Standard	0.24	64	0.24	0.38				
	Insulating Low E 272 - CL - Low E 272	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Air	Standard	0.25	64			0.22	0.34	0.20	0.31
	Insulating Low E 272 - CL - Low E 272	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Air	Thermal	0.22	70	0.24	0.38	0.22	0.34	0.20	0.31
	Insulating Low E 272 - CL - Low E 272	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Standard	0.22	66	0.24	0.38	0.22	0.34	0.20	0.31
	Insulating Low E 272 - CL - Low E 272	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Thermal	0.20	71	0.24	0.38	0.22	0.34	0.20	0.31
	Insulating Low E 366-CL-Low E 179	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Standard	0.23	66	0.17	0.38	0.16	0.34	0.14	0.30
	Insulating Low E 366 - CL - Low E 366	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Air	Standard	0.24	64	0.16	0.31	0.15	0.28	0.14	0.25
Heat-Smart XT	Insulating Low E 366 - CL - Low E 366	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Air	Thermal	0.22	70	0.16	0.31	0.15	0.28	0.14	0.25
	Insulating Low E 366 - CL - Low E 366	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Standard	0.22	66	0.16	0.31	0.15	0.28	0.14	0.25
Heat-Smart XT	Insulating Low E 366 - CL - Low E 366	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Thermal	0.19	72	0.16	0.31				
Heat-Smart XT	Insulating Low E 366 - CL - Low E 366	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Thermal	0.20	71.5			0.15	0.28	0.14	0.25

NFRC U-FACTOR AND SHGC/VT

Glazing Types listed include Standard and Custom configurations



Metal Clad French Patio Transom

	Glazing Type	Glass Thickness	Air Space			U-value	CR	No SDL		SDL with Internal Spacer			
			Width(s)	Gas Fill	Spacer Bar			SHGC	VT	3/4"		1 1/8" & 2"	
										SHGC	VT	SHGC	VT
Heat-Smart (Thermal)	Insulating Low E 272 - CL	4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Thermal	0.30	54.6	0.28	0.48				
Heat-Smart X (Thermal)	Insulating Low E 366 - CL	4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Thermal	0.30	55	0.19	0.43				
	Insulating Low E 272 - CL - Low E 272	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Air	Standard	0.26	61	0.24	0.38	0.22	0.34	0.20	0.31
	Insulating Low E 272 - CL - Low E 272	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Air	Thermal	0.23	68	0.24	0.38	0.22	0.34	0.20	0.31
	Insulating Low E 272 - CL - Low E 272	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Standard	0.24	63	0.24	0.38	0.22	0.34	0.20	0.31
	Insulating Low E 272 - CL - Low E 272	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Thermal	0.21	70	0.24	0.38	0.22	0.34	0.20	0.31
	Insulating Low E 366-CL-Low E 179	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Standard	0.24	63	0.17	0.38	0.16	0.34	0.14	0.30
	Insulating Low E 366 - CL - Low E 366	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Air	Standard	0.25	61	0.17	0.31				
	Insulating Low E 366 - CL - Low E 366	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Air	Standard	0.26	61			0.15	0.28	0.14	0.25
Heat-Smart XT	Insulating Low E 366 - CL - Low E 366	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Air	Thermal	0.23	69	0.17	0.31	0.15	0.28	0.14	0.25
	Insulating Low E 366 - CL - Low E 366	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Standard	0.23	63	0.16	0.31	0.15	0.28	0.14	0.25
Heat-Smart XT	Insulating Low E 366 - CL - Low E 366	4mm / 4mm / 4mm (5/32")	12.5mm (1/2")	Argon	Thermal	0.20	70	0.16	0.31	0.15	0.28	0.14	0.25