

Product Type / Popular Glazing Options	U-Factor (Center of Glass)	R-value (Center of Glass)	Total Unit R-value	NFRC Certified Values					Energy Star Qualified						
				NFRC CPD Number	Total Unit U-Factor	SHGC	VT	CR	Northern	North-Central	South-Central	Southern			
Double Hung															
WarmEdge Spacer															
Clear IGU	0.49	2.0	2.2	PGW-M-29	0.46	0.58	0.61	43							
Grilles (Width<1")	0.49	2.0	2.2		0.46	0.52	0.54	43							
Sculptured Grilles (Width>1")	0.49	2.0	2.2		0.46	0.46	0.48	43							
HP (Low E Argon IGU)	0.26	3.8	3.2		0.31	0.27	0.51	52							
Grilles (Width<1")	0.26	3.8	3.2		0.31	0.24	0.45	52							
Sculptured Grilles (Width>1")	0.26	3.8	3.2		0.31	0.22	0.40	52							
HP ^{SC} (Solar Cooling Low E Argon IGU)	0.25	4.0	3.2		0.31	0.20	0.40	52							
Grilles (<1")	0.25	4.0	3.2		0.31	0.18	0.36	52							
Sculptured Grilles (Width>1")	0.25	4.0	3.2		0.31	0.16	0.31	52							
HP2 (Double Low E Argon IGU)	0.25	4.0	3.3		0.30	0.25	0.43	52							
Grilles (Width<1")	0.25	4.0	3.3		0.30	0.22	0.39	52							
Sculptured Grilles (Width>1")	0.25	4.0	3.3		0.30	0.20	0.34	52							
HP2+ (Double Low E Argon IGU)	0.21	4.8	3.7		0.27	0.26	0.50	41							
Grilles (Width<1")	0.21	4.8	3.7		0.27	0.24	0.44	41							
Sculptured Grilles (Width>1")	0.21	4.8	3.7		0.27	0.21	0.39	41							
HP2Max (Triple Pane Double Low E Argon IGU)	0.18	5.6	4.0		0.25	0.23	0.40	64							
Grilles (Width<1")	0.18	5.6	4.0		0.25	0.21	0.35	64							
Sculptured Grilles (Width>1")	N/A	N/A	N/A		N/A	N/A	N/A	N/A	-	-	-	-			
HP3Max (Triple Pane Triple Low E Argon IGU)	0.16	6.3	4.5		0.22	0.21	0.38	53							
Grilles (Width<1")	0.16	6.3	4.3		0.23	0.19	0.34	53							
Sculptured Grilles (Width>1")	N/A	N/A	N/A		N/A	N/A	N/A	N/A	-	-	-	-			
Energy Package Option															
WarmEdge Spacer															
Clear IGU	0.49	2.0	2.2		PWG-M-32	0.45	0.58	0.61	43						
Grilles (Width<1")	0.49	2.0	2.2			0.45	0.52	0.54	43						
Sculptured Grilles (Width>1")	0.49	2.0	2.2			0.45	0.46	0.48	43						
Energy Package (Low E Argon IGU)	0.26	3.8	3.3			0.30	0.27	0.51	52						
Grilles (Width<1")	0.26	3.8	3.3			0.30	0.24	0.45	52						
Sculptured Grilles (Width>1")	0.26	3.8	3.3			0.30	0.22	0.40	52						
Energy Package ^{SC} (Solar Cooling Low E Argon IGU)	0.25	4.0	3.3			0.30	0.20	0.40	52						
Grilles (Width<1")	0.25	4.0	3.3			0.30	0.18	0.36	52						
Sculptured Grilles (Width>1")	0.25	4.0	3.3			0.30	0.16	0.31	52						
Energy Package Plus (Double Low E Argon IGU)	0.25	4.0	3.3			0.30	0.25	0.43	52						
Grilles (Width<1")	0.25	4.0	3.3	0.30		0.22	0.39	52							
Sculptured Grilles (Width>1")	0.25	4.0	3.3	0.30		0.20	0.34	52							
Energy Package 2Plus+ (Double Low E Argon IGU)	0.21	4.8	3.8	0.26		0.26	0.50	41							
Grilles (Width<1")	0.21	4.8	3.8	0.26		0.24	0.44	41							
Sculptured Grilles (Width>1")	0.21	4.8	3.8	0.26		0.21	0.39	41							
Energy Package 2Max (Triple Pane Double Low E Argon IGU)	0.18	5.6	4.2	0.24		0.23	0.40	66							
Grilles (Width<1")	0.18	5.6	4.2	0.24		0.21	0.35	66							
Sculptured Grilles (Width>1")	N/A	N/A	N/A	N/A		N/A	N/A	N/A	-	-	-	-			
Energy Package 3Max (Triple Pane Double Low E Argon IGU)	0.16	6.3	4.5	0.22		0.21	0.38	53							
Grilles (Width<1")	0.16	6.3	4.5	0.22		0.19	0.34	53							
Sculptured Grilles (Width>1")	N/A	N/A	N/A	N/A		N/A	N/A	N/A	-	-	-	-			
WarmEdge Plus+ Spacer															
Clear IGU	0.49	2.0	2.2	PWG-M-29		0.45	0.58	0.61	44						
Grilles (Width<1")	0.49	2.0	2.2			0.45	0.52	0.54	44						
Sculptured Grilles (Width>1")	0.49	2.0	2.2			0.45	0.46	0.48	44						
HP (Low E Argon IGU)	0.26	3.8	3.3			0.30	0.27	0.51	56						
Grilles (Width<1")	0.26	3.8	3.3			0.30	0.24	0.45	56						
Sculptured Grilles (Width>1")	0.26	3.8	3.3			0.30	0.22	0.40	56						
HP ^{SC} (Solar Cooling Low E Argon IGU)	0.25	4.0	3.4			0.29	0.20	0.40	57						
Grilles (<1")	0.25	4.0	3.4			0.29	0.18	0.36	57						
Sculptured Grilles (Width>1")	0.25	4.0	3.4			0.29	0.16	0.31	57						
HP2 (Double Low E Argon IGU)	0.25	4.0	3.4			0.29	0.25	0.43	57						
Grilles (Width<1")	0.25	4.0	3.4			0.29	0.22	0.39	57						
Sculptured Grilles (Width>1")	0.25	4.0	3.4		0.29	0.20	0.31	57							
HP2+ (Double Low E Argon IGU)	0.21	4.8	3.8		0.26	0.26	0.50	43							
Grilles (Width<1")	0.21	4.8	3.8		0.26	0.24	0.44	43							
Sculptured Grilles (Width>1")	0.21	4.8	3.8		0.26	0.21	0.39	43							
Energy Package Option															
WarmEdge Plus+ Spacer															
Clear IGU	0.49	2.0	2.3		PWG-M-32	0.44	0.58	0.61	44						
Grilles (Width<1")	0.49	2.0	2.3			0.44	0.52	0.54	44						
Sculptured Grilles (Width>1")	0.49	2.0	2.3			0.44	0.46	0.48	44						
Energy Package (Low E Argon IGU)	0.26	3.8	3.4			0.29	0.27	0.51	56						
Grilles (Width<1")	0.26	3.8	3.4			0.29	0.24	0.45	56						
Sculptured Grilles (Width>1")	0.26	3.8	3.4			0.29	0.22	0.40	56						
Energy Package ^{SC} (Solar Cooling Low E Argon IGU)	0.25	4.0	3.4			0.29	0.20	0.40	56						
Grilles (Width<1")	0.25	4.0	3.4			0.29	0.18	0.36	56						
Sculptured Grilles (Width>1")	0.25	4.0	3.4			0.29	0.16	0.31	56						
Energy Package Plus (Double Low E Argon IGU)	0.25	4.0	3.6			0.28	0.25	0.43	57						
Grilles (Width<1")	0.25	4.0	3.6			0.28	0.22	0.39	57						
Sculptured Grilles (Width>1")	0.25	4.0	3.6			0.28	0.20	0.34	57						
HP2+ (Double Low E Argon IGU)	0.21	4.8	4.0			0.25	0.26	0.50	44						
Grilles (Width<1")	0.21	4.8	4.0			0.25	0.24	0.44	44						
Sculptured Grilles (Width>1")	0.21	4.8	4.0			0.25	0.21	0.39	44						
R-5 Option															
HP3 _{MAX} (Triple Pane Triple Low E Argon IGU)	0.16	6.3	4.5	0.22		0.21	0.38	53							
Grilles (Width<1")	0.16	6.3	4.5	0.22		0.19	0.34	53							
Sculptured Grilles (Width>1")	N/A	N/A	N/A	N/A		N/A	N/A	N/A	-	-	-	-			

Product Type / Popular Glazing Options	U-Factor (Center of Glass)	R-value (Center of Glass)	Total Unit R-value	NFRC Certified Values					Energy Star Qualified				
				NFRC CPD Number	Total Unit U-Factor	SHGC	VT	CR	Northern	North-Central	South-Central	Southern	
Picture													
WarmEdge Spacer													
Clear IGU	0.49	2.0	2.2	PWG-M-41	0.46	0.69	0.73	44					
Grilles (Width<1")	0.49	2.0	2.2		0.46	0.62	0.65	44					
Sculptured Grilles (Width>1")	0.49	2.0	2.2		0.46	0.56	0.58	44					
HP (Low E Argon IGU)	0.26	3.8	3.6		0.28	0.32	0.61	56	•	•	•	•	
Grilles (Width<1")	0.26	3.8	3.6		0.28	0.29	0.55	56	•	•	•	•	
Sculptured Grilles (Width>1")	0.26	3.8	3.6		0.28	0.26	0.49	56	•	•	•	•	
HP ^{SC} (Solar Cooling Low E Argon IGU)	0.26	3.8	3.6		0.28	0.24	0.48	57	•	•	•	•	
Grilles (<1")	0.26	3.8	3.6		0.28	0.22	0.43	57	•	•	•	•	
Sculptured Grilles (Width>1")	0.26	3.8	3.6		0.28	0.20	0.39	57	•	•	•	•	
HP2 (Double Low E Argon IGU)	0.26	3.8	3.6		0.28	0.30	0.52	57	•	•	•	•	
Grilles (Width<1")	0.26	3.8	3.6		0.28	0.27	0.47	57	•	•	•	•	
Sculptured Grilles (Width>1")	0.26	3.8	3.6		0.28	0.24	0.42	57	•	•	•	•	
HP2+ (Double Low E Argon IGU)	0.22	4.5	4.3		0.23	0.30	0.57	45	•	•	•	•	
Grilles (Width<1")	0.22	4.5	4.3		0.23	0.27	0.51	45	•	•	•	•	
Sculptured Grilles (Width>1")	0.22	4.5	4.3		0.23	0.24	0.45	45	•	•	•	•	
HP2Max (Triple Pane Double Low E Argon IGU)	0.17	5.9	5.3		0.19	0.28	0.47	66	•	•	•	•	
Grilles (Width<1")	0.17	5.9	4.8		0.21	0.25	0.43	66	•	•	•	•	
Sculptured Grilles (Width>1")	N/A	N/A	N/A		N/A	N/A	N/A	N/A	-	-	-	-	
HP3Max (Triple Pane Triple Low E Argon IGU)	0.14	7.1	5.9		0.17	0.23	0.44	55	•	•	•	•	
Grilles (Width<1")	0.14	7.1	5.6		0.18	0.21	0.39	55	•	•	•	•	
Sculptured Grilles (Width>1")	N/A	N/A	N/A		N/A	N/A	N/A	N/A	-	-	-	-	
WarmEdge Plus+ Spacer													
Clear IGU	0.49	2.0	2.2		PWG-M-41	0.46	0.69	0.73	44				
Grilles (Width<1")	0.49	2.0	2.2			0.46	0.62	0.65	44				
Sculptured Grilles (Width>1")	0.49	2.0	2.2			0.46	0.56	0.58	44				
HP (Low E Argon IGU)	0.26	3.8	3.6			0.28	0.32	0.61	56	•	•	•	•
Grilles (Width<1")	0.26	3.8	3.6			0.28	0.29	0.55	56	•	•	•	•
Sculptured Grilles (Width>1")	0.26	3.8	3.6			0.28	0.26	0.49	56	•	•	•	•
HP ^{SC} (Solar Cooling Low E Argon IGU)	0.26	3.8	3.6			0.28	0.24	0.48	56	•	•	•	•
Grilles (<1")	0.26	3.8	3.6			0.28	0.22	0.43	56	•	•	•	•
Sculptured Grilles (Width>1")	0.26	3.8	3.6			0.28	0.20	0.39	56	•	•	•	•
HP2 (Double Low E Argon IGU)	0.26	3.8	3.6			0.28	0.30	0.52	57	•	•	•	•
Grilles (Width<1")	0.26	3.8	3.6			0.28	0.27	0.47	57	•	•	•	•
Sculptured Grilles (Width>1")	0.26	3.8	3.6			0.28	0.24	0.42	57	•	•	•	•
HP2+ (Double Low E Argon IGU)	0.22	4.5	4.3			0.23	0.30	0.57	47	•	•	•	•
Grilles (Width<1")	0.22	4.5	4.3			0.23	0.27	0.51	47	•	•	•	•
Sculptured Grilles (Width>1")	0.22	4.5	4.3			0.23	0.24	0.45	47	•	•	•	•
R-5 Option													
HP3 _{MAX} (Triple Pane Triple Low E Argon IGU)	0.14	7.1	5.9	0.17		0.23	0.44	55	•	•	•	•	
Grilles (Width<1")	0.14	7.1	5.6	0.18		0.21	0.39	55	•	•	•	•	
Sculptured Grilles (Width>1")	N/A	N/A	N/A	N/A		N/A	N/A	N/A	-	-	-	-	
Architectural Shapes													
WarmEdge Spacer													
Clear IGU	0.48	2.1	2.1	PWG-M-151		0.47	0.68	0.71	43				
Grilles (Width<1")	0.48	2.1	2.1			0.47	0.61	0.63	43				
Sculptured Grilles (Width>1")	0.48	2.1	2.1			0.47	0.55	0.56	43				
HP (Low E Argon IGU)	0.26	3.8	3.6			0.28	0.31	0.60	57	•	•	•	•
Grilles (Width<1")	0.26	3.8	3.6			0.28	0.28	0.54	57	•	•	•	•
Sculptured Grilles (Width>1")	0.26	3.8	3.6			0.28	0.26	0.48	57	•	•	•	•
HP ^{SC} (Solar Cooling Low E Argon IGU)	0.25	4.0	3.6			0.28	0.24	0.47	58	•	•	•	•
Grilles (<1")	0.25	4.0	3.6			0.28	0.22	0.42	58	•	•	•	•
Sculptured Grilles (Width>1")	0.25	4.0	3.6			0.28	0.20	0.38	58	•	•	•	•
HP2 (Double Low E Argon IGU)	0.25	4.0	3.6			0.28	0.29	0.51	58	•	•	•	•
Grilles (Width<1")	0.25	4.0	3.6			0.28	0.27	0.46	58	•	•	•	•
Sculptured Grilles (Width>1")	0.25	4.0	3.6			0.28	0.24	0.41	58	•	•	•	•
HP2+ (Double Low E Argon IGU)	0.21	4.8	4.2			0.24	0.27	0.53	46	•	•	•	•
Grilles (Width<1")	0.21	4.8	4.2			0.24	0.24	0.48	46	•	•	•	•
Sculptured Grilles (Width>1")	0.21	4.8	4.2			0.24	0.22	0.43	46	•	•	•	•
HP2Max (Triple Pane Double Low E Argon IGU)	0.19	5.3	4.5			0.22	0.27	0.46	64	•	•	•	•
Grilles (Width<1")	0.19	5.3	4.3		0.23	0.25	0.42	64	•	•	•	•	
Sculptured Grilles (Width>1")	N/A	N/A	N/A		N/A	N/A	N/A	N/A	-	-	-	-	
HP3Max (Triple Pane Triple Low E Argon IGU)	0.17	5.9	5.0		0.20	0.21	0.38	52	•	•	•	•	
Grilles (Width<1")	0.17	5.9	4.8		0.21	0.19	0.34	52	•	•	•	•	
Sculptured Grilles (Width>1")	N/A	N/A	N/A		N/A	N/A	N/A	N/A	-	-	-	-	
R-5 Option													
HP3 _{MAX} (Triple Pane Triple Low E Argon IGU)	0.17	5.9	5.0		0.20	0.21	0.38	52	•	•	•	•	
Grilles (Width<1")	0.17	5.9	5.0		0.20	0.19	0.34	56	•	•	•	•	
Sculptured Grilles (Width>1")	N/A	N/A	N/A		N/A	N/A	N/A	N/A	-	-	-	-	

Product Type / Popular Glazing Options	U-Factor (Center of Glass)	R-value (Center of Glass)	Total Unit R-value	NFRC Certified Values				Energy Star Qualified				
				NFRC CPD Number	Total Unit U-Factor	SHGC	VT	CR	Northern	North-Central	South-Central	Southern
Caseмент												
WarmEdge Spacer												
Clear IGU	0.49	2.0	2.3		0.43	0.55	0.57	44				
Grilles (Width<1")	0.49	2.0	2.3		0.43	0.50	0.51	44				
Sculptured Grilles (Width>1")	0.49	2.0	2.3		0.43	0.45	0.46	44				
HP (Low E Argon IGU)	0.26	3.8	3.6		0.28	0.25	0.48	59	•	•	•	
Grilles (Width<1")	0.26	3.8	3.6		0.28	0.23	0.43	59	•	•	•	
Sculptured Grilles (Width>1")	0.26	3.8	3.6		0.28	0.21	0.39	59	•	•	•	
HP ^{SC} (Solar Cooling Low E Argon IGU)	0.25	4.0	3.6		0.28	0.19	0.37	59	•	•	•	
Grilles (<1")	0.25	4.0	3.6		0.28	0.18	0.34	59	•	•	•	
Sculptured Grilles (Width>1")	0.25	4.0	3.6		0.28	0.16	0.30	59	•	•	•	
HP2 (Double Low E Argon IGU)	0.25	4.0	3.6		0.28	0.24	0.40	59	•	•	•	
Grilles (Width<1")	0.25	4.0	3.6		0.28	0.22	0.37	59	•	•	•	
Sculptured Grilles (Width>1")	0.25	4.0	3.6		0.28	0.20	0.33	59	•	•	•	
HP2+ (Double Low E Argon IGU)	0.21	4.8	4.0		0.25	0.25	0.46	48	•	•	•	
Grilles (Width<1")	0.21	4.8	4.0		0.25	0.22	0.42	48	•	•	•	
Sculptured Grilles (Width>1")	0.21	4.8	4.0		0.25	0.20	0.38	48	•	•	•	
HP2Max (Triple Pane Double Low E Argon IGU)	0.18	5.6	4.3		0.23	0.22	0.37	66	•	•	•	
Grilles (Width<1")	0.18	5.6	4.3		0.23	0.20	0.33	66	•	•	•	
Sculptured Grilles (Width>1")	N/A	N/A	N/A		N/A	N/A	N/A	N/A	-	-	-	
HP3Max (Triple Pane Triple Low E Argon IGU)	0.16	6.3	5.0		0.20	0.19	0.36	56	•	•	•	
Grilles (Width<1")	0.16	6.3	4.8		0.21	0.18	0.33	56	•	•	•	
Sculptured Grilles (Width>1")	N/A	N/A	N/A		N/A	N/A	N/A	N/A	-	-	-	
Energy Package Option												
WarmEdge Spacer												
Clear IGU	0.49	2.0	2.3		0.43	0.55	0.57	44				
Grilles (Width<1")	0.49	2.0	2.3		0.43	0.50	0.51	44				
Sculptured Grilles (Width>1")	0.49	2.0	2.3		0.43	0.45	0.46	44				
Energy Package (Low E Argon IGU)	0.26	3.8	3.6		0.28	0.25	0.48	59	•	•	•	
Grilles (Width<1")	0.26	3.8	3.6		0.28	0.23	0.43	59	•	•	•	
Sculptured Grilles (Width>1")	0.26	3.8	3.6		0.28	0.21	0.39	59	•	•	•	
Energy Package ^{SC} (Solar Cooling Low E Argon IGU)	0.25	4.0	3.6		0.28	0.19	0.37	59	•	•	•	
Grilles (Width<1")	0.25	4.0	3.6		0.28	0.18	0.34	59	•	•	•	
Sculptured Grilles (Width>1")	0.25	4.0	3.6		0.28	0.16	0.30	59	•	•	•	
Energy Package Plus (Double Low E Argon IGU)	0.25	4.0	3.6		0.28	0.24	0.40	60	•	•	•	
Grilles (Width<1")	0.25	4.0	3.6		0.28	0.22	0.37	60	•	•	•	
Sculptured Grilles (Width>1")	0.25	4.0	3.6		0.28	0.20	0.33	60	•	•	•	
Energy Package 2Plus+ (Double Low E Argon IGU)	0.21	4.8	4.2		0.24	0.25	0.46	49	•	•	•	
Grilles (Width<1")	0.21	4.8	4.2		0.24	0.22	0.42	49	•	•	•	
Sculptured Grilles (Width>1")	0.21	4.8	4.2		0.24	0.20	0.38	49	•	•	•	
Energy Package 2Max (Triple Pane Double Low E Argon IGU)	0.18	5.6	4.5		0.22	0.22	0.37	66	•	•	•	
Grilles (Width<1")	0.18	5.6	4.3		0.23	0.20	0.33	66	•	•	•	
Sculptured Grilles (Width>1")	N/A	N/A	N/A		N/A	N/A	N/A	N/A	-	-	-	
Energy Package 3Max (Triple Pane Double Low E Argon IGU)	0.16	6.3	5.0		0.20	0.19	0.36	56	•	•	•	
Grilles (Width<1")	0.16	6.3	5.0		0.20	0.18	0.33	56	•	•	•	
Sculptured Grilles (Width>1")	N/A	N/A	N/A		N/A	N/A	N/A	N/A	-	-	-	
WarmEdge Plus+ Spacer												
Clear IGU	N/A	N/A	N/A		N/A	N/A	N/A	N/A	-	-	-	
Grilles (Width<1")	N/A	N/A	N/A		N/A	N/A	N/A	N/A	-	-	-	
Sculptured Grilles (Width>1")	N/A	N/A	N/A		N/A	N/A	N/A	N/A	-	-	-	
HP (Low E Argon IGU)	0.26	3.8	3.7		0.27	0.25	0.48	62	•	•	•	
Grilles (Width<1")	0.26	3.8	3.7		0.27	0.23	0.43	62	•	•	•	
Sculptured Grilles (Width>1")	0.26	3.8	3.7		0.27	0.21	0.39	62	•	•	•	
HP ^{SC} (Solar Cooling Low E Argon IGU)	0.25	4.0	3.7		0.27	0.19	0.37	62	•	•	•	
Grilles (<1")	0.25	4.0	3.7		0.27	0.18	0.34	62	•	•	•	
Sculptured Grilles (Width>1")	0.25	4.0	3.7		0.27	0.16	0.30	62	•	•	•	
HP2 (Double Low E Argon IGU)	0.25	4.0	3.7		0.27	0.24	0.40	63	•	•	•	
Grilles (Width<1")	0.25	4.0	3.7		0.27	0.22	0.37	63	•	•	•	
Sculptured Grilles (Width>1")	0.25	4.0	3.7		0.27	0.20	0.33	63	•	•	•	
HP2+ (Double Low E Argon IGU)	0.21	4.8	4.2		0.24	0.25	0.46	50	•	•	•	
Grilles (Width<1")	0.21	4.8	4.2		0.24	0.22	0.42	50	•	•	•	
Sculptured Grilles (Width>1")	0.21	4.8	4.2		0.24	0.20	0.38	50	•	•	•	
Energy Package Option												
WarmEdge Plus+ Spacer												
Clear IGU	N/A	N/A	N/A		N/A	N/A	N/A	N/A	-	-	-	
Grilles (Width<1")	N/A	N/A	N/A		N/A	N/A	N/A	N/A	-	-	-	
Sculptured Grilles (Width>1")	N/A	N/A	N/A		N/A	N/A	N/A	N/A	-	-	-	
Energy Package (Low E Argon IGU)	0.26	3.8	3.7		0.27	0.25	0.48	63	•	•	•	
Grilles (Width<1")	0.26	3.8	3.7		0.27	0.23	0.43	63	•	•	•	
Sculptured Grilles (Width>1")	0.26	3.8	3.7		0.27	0.21	0.39	63	•	•	•	
Energy Package ^{SC} (Solar Cooling Low E Argon IGU)	0.25	4.0	3.7		0.27	0.19	0.37	63	•	•	•	
Grilles (Width<1")	0.25	4.0	3.7		0.27	0.18	0.34	63	•	•	•	
Sculptured Grilles (Width>1")	0.25	4.0	3.7		0.27	0.16	0.30	63	•	•	•	
Energy Package Plus (Double Low E Argon IGU)	0.25	4.0	3.8		0.26	0.24	0.40	63	•	•	•	
Grilles (Width<1")	0.25	4.0	3.8		0.26	0.22	0.37	63	•	•	•	
Sculptured Grilles (Width>1")	0.25	4.0	3.8		0.26	0.20	0.33	63	•	•	•	
Energy Package 2Plus+ (Double Low E Argon IGU)	0.21	4.8	4.3		0.23	0.25	0.46	51	•	•	•	
Grilles (Width<1")	0.21	4.8	4.3		0.23	0.22	0.42	51	•	•	•	
Sculptured Grilles (Width>1")	0.21	4.8	4.3		0.23	0.20	0.38	51	•	•	•	
R-5 Option												
HP3 _{MAX} (Triple Pane Triple Low E Argon IGU)	0.16	6.3	4.8		0.21	0.19	0.36	56	•	•	•	
Grilles (Width<1")	0.16	6.3	4.8		0.21	0.18	0.33	56	•	•	•	
Sculptured Grilles (Width>1")	N/A	N/A	N/A		N/A	N/A	N/A	N/A	-	-	-	

PWG-M-25

Product Type / Popular Glazing Options	U-Factor (Center of Glass)	R-value (Center of Glass)	Total Unit R-value	NFRC Certified Values					Energy Star Qualified			
				NFRC CPD Number	Total Unit U-Factor	SHGC	VT	CR	Northern	North-Central	South-Central	Southern
Fixed Casement												
WarmEdge Spacer												
Clear IGU	0.49	2.0	2.3		0.44	0.63	0.66	44				
Grilles (Width<1")	0.49	2.0	2.3		0.44	0.56	0.58	44				
Sculptured Grilles (Width>1")	0.49	2.0	2.3		0.44	0.50	0.52	44				
HP (Low E Argon IGU)	0.26	3.8	3.7		0.27	0.29	0.55	58	•	•	•	
Grilles (Width<1")	0.26	3.8	3.7		0.27	0.26	0.50	58	•	•	•	
Sculptured Grilles (Width>1")	0.26	3.8	3.7		0.27	0.24	0.44	58	•	•	•	
HP ^{SC} (Solar Cooling Low E Argon IGU)	0.25	4.0	3.7		0.27	0.22	0.44	58	•	•	•	
Grilles (<1")	0.25	4.0	3.7		0.27	0.20	0.39	58	•	•	•	
Sculptured Grilles (Width>1")	0.25	4.0	3.7		0.27	0.18	0.34	58	•	•	•	
HP2 (Double Low E Argon IGU)	0.25	4.0	3.7		0.27	0.27	0.47	59	•	•	•	
Grilles (Width<1")	0.25	4.0	3.7		0.27	0.25	0.42	59	•	•	•	
Sculptured Grilles (Width>1")	0.25	4.0	3.7		0.27	0.22	0.37	59	•	•	•	
HP2+ (Double Low E Argon IGU)	0.21	4.8	4.3		0.23	0.28	0.54	47	•	•	•	
Grilles (Width<1")	0.21	4.8	4.3		0.23	0.25	0.48	47	•	•	•	
Sculptured Grilles (Width>1")	0.21	4.8	4.3		0.23	0.23	0.42	47	•	•	•	
HP2Max (Triple Pane Double Low E Argon IGU)	0.18	5.6	4.8		0.21	0.25	0.43	65	•	•	•	
Grilles (Width<1")	0.18	5.6	4.8		0.21	0.23	0.38	65	•	•	•	
Sculptured Grilles (Width>1")	N/A	N/A	N/A		N/A	N/A	N/A	N/A	-	-	-	
HP3Max (Triple Pane Triple Low E Argon IGU)	0.17	5.9	5.3		0.19	0.22	0.41	53	•	•	•	
Grilles (Width<1")	0.17	5.9	5.0		0.20	0.20	0.37	53	•	•	•	
Sculptured Grilles (Width>1")	N/A	N/A	N/A		N/A	N/A	N/A	N/A	-	-	-	
Energy Package Option												
WarmEdge Spacer												
Clear IGU	0.49	2.0	2.3		0.44	0.58	0.61	44				
Grilles (Width<1")	0.49	2.0	2.3		0.44	0.52	0.55	44				
Sculptured Grilles (Width>1")	0.49	2.0	2.3		0.44	0.47	0.48	44				
Energy Package (Low E Argon IGU)	0.26	3.8	3.7		0.27	0.29	0.55	58	•	•	•	
Grilles (Width<1")	0.26	3.8	3.7		0.27	0.26	0.50	58	•	•	•	
Sculptured Grilles (Width>1")	0.26	3.8	3.7		0.27	0.24	0.44	58	•	•	•	
Energy Package ^{SC} (Solar Cooling Low E Argon IGU)	0.25	4.0	3.7		0.27	0.22	0.44	58	•	•	•	
Grilles (Width<1")	0.25	4.0	3.7		0.27	0.20	0.39	58	•	•	•	
Sculptured Grilles (Width>1")	0.25	4.0	3.7		0.27	0.18	0.34	58	•	•	•	
Energy Package Plus (Double Low E Argon IGU)	0.25	4.0	3.8		0.26	0.27	0.47	59	•	•	•	
Grilles (Width<1")	0.25	4.0	3.8		0.26	0.25	0.42	59	•	•	•	
Sculptured Grilles (Width>1")	0.25	4.0	3.8		0.26	0.22	0.37	59	•	•	•	
Energy Package 2Plus+ (Double Low E Argon IGU)	0.21	4.8	4.3		0.23	0.28	0.54	47	•	•	•	
Grilles (Width<1")	0.21	4.8	4.3		0.23	0.25	0.48	47	•	•	•	
Sculptured Grilles (Width>1")	0.21	4.8	4.3		0.23	0.23	0.42	47	•	•	•	
Energy Package 2Max (Triple Pane Double Low E Argon IGU)	0.18	5.6	5.0		0.20	0.20	0.43	65	•	•	•	
Grilles (Width<1")	0.18	5.6	4.8		0.21	0.23	0.38	65	•	•	•	
Sculptured Grilles (Width>1")	N/A	N/A	N/A		N/A	N/A	N/A	N/A	-	-	-	
Energy Package 3Max (Triple Pane Double Low E Argon IGU)	0.17	5.9	5.0		0.20	0.22	0.41	53	•	•	•	
Grilles (Width<1")	0.17	5.9	5.0		0.20	0.20	0.37	53	•	•	•	
Sculptured Grilles (Width>1")	N/A	N/A	N/A		N/A	N/A	N/A	N/A	-	-	-	
WarmEdge Plus+ Spacer												
Clear IGU	N/A	N/A	N/A		N/A	N/A	N/A	N/A	-	-	-	
Grilles (Width<1")	N/A	N/A	N/A		N/A	N/A	N/A	N/A	-	-	-	
Sculptured Grilles (Width>1")	N/A	N/A	N/A		N/A	N/A	N/A	N/A	-	-	-	
HP (Low E Argon IGU)	0.26	3.8	3.8		0.26	0.29	0.55	62	•	•	•	
Grilles (Width<1")	0.26	3.8	3.8		0.26	0.26	0.50	62	•	•	•	
Sculptured Grilles (Width>1")	0.26	3.8	3.8		0.26	0.24	0.44	62	•	•	•	
HP ^{SC} (Solar Cooling Low E Argon IGU)	0.25	4.0	3.8		0.26	0.22	0.44	62	•	•	•	
Grilles (<1")	0.25	4.0	3.8		0.26	0.20	0.39	62	•	•	•	
Sculptured Grilles (Width>1")	0.25	4.0	3.8		0.26	0.18	0.34	62	•	•	•	
HP2 (Double Low E Argon IGU)	0.25	4.0	3.8		0.26	0.27	0.47	63	•	•	•	
Grilles (Width<1")	0.25	4.0	3.8		0.26	0.25	0.42	63	•	•	•	
Sculptured Grilles (Width>1")	0.25	4.0	3.8		0.26	0.22	0.37	63	•	•	•	
HP2+ (Double Low E Argon IGU)	0.21	4.8	4.5		0.22	0.28	0.54	49	•	•	•	
Grilles (Width<1")	0.21	4.8	4.5		0.22	0.25	0.48	49	•	•	•	
Sculptured Grilles (Width>1")	0.21	4.8	4.5		0.22	0.23	0.42	49	•	•	•	
Energy Package Option												
WarmEdge Plus+ Spacer												
Clear IGU	N/A	N/A	N/A		N/A	N/A	N/A	N/A	-	-	-	
Grilles (Width<1")	N/A	N/A	N/A		N/A	N/A	N/A	N/A	-	-	-	
Sculptured Grilles (Width>1")	N/A	N/A	N/A		N/A	N/A	N/A	N/A	-	-	-	
Energy Package (Low E Argon IGU)	0.26	3.8	3.8		0.26	0.29	0.55	61	•	•	•	
Grilles (Width<1")	0.26	3.8	3.8		0.26	0.26	0.50	61	•	•	•	
Sculptured Grilles (Width>1")	0.26	3.8	3.8		0.26	0.24	0.44	61	•	•	•	
Energy Package ^{SC} (Solar Cooling Low E Argon IGU)	0.25	4.0	3.8		0.26	0.22	0.44	61	•	•	•	
Grilles (Width<1")	0.25	4.0	3.8		0.26	0.20	0.39	61	•	•	•	
Sculptured Grilles (Width>1")	0.25	4.0	3.8		0.26	0.18	0.34	61	•	•	•	
Energy Package Plus (Double Low E Argon IGU)	0.25	4.0	3.8		0.26	0.27	0.47	62	•	•	•	
Grilles (Width<1")	0.25	4.0	3.8		0.26	0.25	0.42	62	•	•	•	
Sculptured Grilles (Width>1")	0.25	4.0	3.8		0.26	0.22	0.37	62	•	•	•	
Energy Package 2Plus+ (Double Low E Argon IGU)	0.21	4.8	4.3		0.23	0.28	0.54	49	•	•	•	
Grilles (Width<1")	0.21	4.8	4.3		0.23	0.25	0.48	49	•	•	•	
Sculptured Grilles (Width>1")	0.21	4.8	4.3		0.23	0.23	0.42	49	•	•	•	
R-5 Option												
HP3 _{MAX} (Triple Pane Triple Low E Argon IGU)	0.16	6.3	5.0		0.20	0.22	0.42	54	•	•	•	
Grilles (Width<1")	0.16	6.3	5.0		0.20	0.20	0.37	54	•	•	•	
Sculptured Grilles (Width>1")	N/A	N/A	N/A		N/A	N/A	N/A	N/A	-	-	-	

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Product Type / Popular Glazing Options	U-Factor (Center of Glass)	R-value (Center of Glass)	Total Unit R-value	NFRC Certified Values					Energy Star Qualified			
				NFRC CPD Number	Total Unit U-Factor	SHGC	VT	CR	Northern	North-Central	South-Central	Southern
Awning												
WarmEdge Spacer												
Clear IGU	0.49	2.0	2.3		0.43	0.54	0.56	43				
Grilles (Width<1")	0.49	2.0	2.3		0.43	0.49	0.51	43				
Sculptured Grilles (Width>1")	0.49	2.0	2.3		0.43	0.45	0.46	43				
HP (Low E Argon IGU)	0.26	3.8	3.6		0.28	0.25	0.48	55	•	•	•	
Grilles (Width<1")	0.26	3.8	3.6		0.28	0.23	0.43	55	•	•	•	
Sculptured Grilles (Width>1")	0.26	3.8	3.6		0.28	0.21	0.39	55	•	•	•	
HP ^{SC} (Solar Cooling Low E Argon IGU)	0.25	4.0	3.6		0.28	0.19	0.37	55	•	•	•	
Grilles (<1")	0.25	4.0	3.6		0.28	0.18	0.34	55	•	•	•	
Sculptured Grilles (Width>1")	0.25	4.0	3.6		0.28	0.16	0.30	55	•	•	•	
HP2 (Double Low E Argon IGU)	0.25	4.0	3.6		0.28	0.24	0.40	56	•	•	•	
Grilles (Width<1")	0.25	4.0	3.6		0.28	0.22	0.37	56	•	•	•	
Sculptured Grilles (Width>1")	0.25	4.0	3.6		0.28	0.20	0.33	56	•	•	•	
HP2+ (Double Low E Argon IGU)	0.21	4.8	4.0		0.25	0.25	0.46	45	•	•	•	
Grilles (Width<1")	0.21	4.8	4.0		0.25	0.22	0.42	45	•	•	•	
Sculptured Grilles (Width>1")	0.21	4.8	4.0		0.25	0.20	0.38	45	•	•	•	
HP2Max (Triple Pane Double Low E Argon IGU)	0.18	5.6	4.3		0.23	0.22	0.37	67	•	•	•	
Grilles (Width<1")	0.18	5.6	4.3		0.23	0.20	0.33	67	•	•	•	
Sculptured Grilles (Width>1")	N/A	N/A	N/A		N/A	N/A	N/A	N/A	-	-	-	
HP3Max (Triple Pane Triple Low E Argon IGU)	0.17	5.9	5.0		0.20	0.19	0.36	56	•	•	•	
Grilles (Width<1")	0.17	5.9	4.8		0.21	0.18	0.33	56	•	•	•	
Sculptured Grilles (Width>1")	N/A	N/A	N/A		N/A	N/A	N/A	N/A	-	-	-	
Energy Package Option												
WarmEdge Spacer												
Clear IGU	0.49	2.0	2.3		0.43	0.54	0.56	43				
Grilles (Width<1")	0.49	2.0	2.3		0.43	0.49	0.51	43				
Sculptured Grilles (Width>1")	0.49	2.0	2.3		0.43	0.45	0.46	43				
Energy Package (Low E Argon IGU)	0.26	3.8	3.6		0.28	0.25	0.48	55	•	•	•	
Grilles (Width<1")	0.26	3.8	3.6		0.28	0.23	0.43	55	•	•	•	
Sculptured Grilles (Width>1")	0.26	3.8	3.6		0.28	0.21	0.39	55	•	•	•	
Energy Package ^{SC} (Solar Cooling Low E Argon IGU)	0.25	4.0	3.6		0.28	0.19	0.37	55	•	•	•	
Grilles (Width<1")	0.25	4.0	3.6		0.28	0.18	0.34	55	•	•	•	
Sculptured Grilles (Width>1")	0.25	4.0	3.6		0.28	0.16	0.30	55	•	•	•	
Energy Package Plus (Double Low E Argon IGU)	0.25	4.0	3.6		0.28	0.24	0.40	57	•	•	•	
Grilles (Width<1")	0.25	4.0	3.6		0.28	0.22	0.37	57	•	•	•	
Sculptured Grilles (Width>1")	0.25	4.0	3.6		0.28	0.20	0.33	57	•	•	•	
Energy Package 2Plus+ (Double Low E Argon IGU)	0.21	4.8	4.2		0.24	0.25	0.46	46	•	•	•	
Grilles (Width<1")	0.21	4.8	4.2		0.24	0.22	0.42	46	•	•	•	
Sculptured Grilles (Width>1")	0.21	4.8	4.2		0.24	0.20	0.38	46	•	•	•	
Energy Package 2Max (Triple Pane Double Low E Argon IGU)	0.18	5.6	4.5		0.22	0.22	0.37	67	•	•	•	
Grilles (Width<1")	0.18	5.6	4.3		0.23	0.20	0.33	67	•	•	•	
Sculptured Grilles (Width>1")	N/A	N/A	N/A		N/A	N/A	N/A	N/A	-	-	-	
Energy Package 3Max (Triple Pane Double Low E Argon IGU)	0.17	5.9	5.0		0.20	0.19	0.36	57	•	•	•	
Grilles (Width<1")	0.17	5.9	5.0		0.20	0.18	0.33	57	•	•	•	
Sculptured Grilles (Width>1")	N/A	N/A	N/A		N/A	N/A	N/A	N/A	-	-	-	
WarmEdge Plus+ Spacer												
Clear IGU	N/A	N/A	N/A		N/A	N/A	N/A	N/A	-	-	-	
Grilles (Width<1")	N/A	N/A	N/A		N/A	N/A	N/A	N/A	-	-	-	
Sculptured Grilles (Width>1")	N/A	N/A	N/A		N/A	N/A	N/A	N/A	-	-	-	
HP (Low E Argon IGU)	0.26	3.8	3.7		0.27	0.25	0.48	62	•	•	•	
Grilles (Width<1")	0.26	3.8	3.7		0.27	0.23	0.43	62	•	•	•	
Sculptured Grilles (Width>1")	0.26	3.8	3.7		0.27	0.21	0.39	62	•	•	•	
HP ^{SC} (Solar Cooling Low E Argon IGU)	0.25	4.0	3.7		0.27	0.19	0.37	62	•	•	•	
Grilles (<1")	0.25	4.0	3.7		0.27	0.18	0.34	62	•	•	•	
Sculptured Grilles (Width>1")	0.25	4.0	3.7		0.27	0.16	0.30	62	•	•	•	
HP2 (Double Low E Argon IGU)	0.25	4.0	3.7		0.27	0.24	0.40	63	•	•	•	
Grilles (Width<1")	0.25	4.0	3.7		0.27	0.22	0.37	63	•	•	•	
Sculptured Grilles (Width>1")	0.25	4.0	3.7		0.27	0.20	0.33	63	•	•	•	
HP2+ (Double Low E Argon IGU)	0.21	4.8	4.2		0.24	0.25	0.46	47	•	•	•	
Grilles (Width<1")	0.21	4.8	4.2		0.24	0.22	0.42	47	•	•	•	
Sculptured Grilles (Width>1")	0.21	4.8	4.2		0.24	0.20	0.38	47	•	•	•	
Energy Package Option												
WarmEdge Plus+ Spacer												
Clear IGU	N/A	N/A	N/A		N/A	N/A	N/A	N/A	-	-	-	
Grilles (Width<1")	N/A	N/A	N/A		N/A	N/A	N/A	N/A	-	-	-	
Sculptured Grilles (Width>1")	N/A	N/A	N/A		N/A	N/A	N/A	N/A	-	-	-	
Energy Package (Low E Argon IGU)	0.26	3.8	3.7		0.27	0.25	0.48	58	•	•	•	
Grilles (Width<1")	0.26	3.8	3.7		0.27	0.23	0.43	58	•	•	•	
Sculptured Grilles (Width>1")	0.26	3.8	3.7		0.27	0.21	0.39	58	•	•	•	
Energy Package ^{SC} (Solar Cooling Low E Argon IGU)	0.25	4.0	3.7		0.27	0.19	0.37	58	•	•	•	
Grilles (Width<1")	0.25	4.0	3.7		0.27	0.18	0.34	58	•	•	•	
Sculptured Grilles (Width>1")	0.25	4.0	3.7		0.27	0.16	0.30	58	•	•	•	
Energy Package Plus (Double Low E Argon IGU)	0.25	4.0	3.8		0.26	0.24	0.40	60	•	•	•	
Grilles (Width<1")	0.25	4.0	3.8		0.26	0.22	0.37	60	•	•	•	
Sculptured Grilles (Width>1")	0.25	4.0	3.8		0.26	0.20	0.33	60	•	•	•	
Energy Package 2Plus+ (Double Low E Argon IGU)	0.21	4.8	4.3		0.23	0.25	0.46	47	•	•	•	
Grilles (Width<1")	0.21	4.8	4.3		0.23	0.22	0.42	47	•	•	•	
Sculptured Grilles (Width>1")	0.21	4.8	4.3		0.23	0.20	0.38	47	•	•	•	
R-5 Option												
HP3 _{MAX} (Triple Pane Triple Low E Argon IGU)	0.16	6.3	4.8		0.21	0.19	0.36	56	•	•	•	
Grilles (Width<1")	0.16	6.3	4.8		0.21	0.18	0.33	56	•	•	•	
Sculptured Grilles (Width>1")	N/A	N/A	N/A		N/A	N/A	N/A	N/A	-	-	-	

PWG-M-26

Product Type / Popular Glazing Options	U-Factor (Center of Glass)	R-value (Center of Glass)	Total Unit R-value	NFRC Certified Values					Energy Star Qualified							
				NFRC CPD Number	Total Unit U-Factor	SHGC	VT	CR	Northern	North-Central	South-Central	Southern				
Premium Sliding Patio Door (CMPD)																
WarmEdge Spacer																
Clear IGU	0.49	2.0	2.3	PWG-M-45	0.43	0.52	0.56	44								
Grilles (Width<1")	0.49	2.0	2.3		0.43	0.45	0.48	44								
Sculptured Grilles (Width>1")	0.49	2.0	2.3		0.43	0.39	0.41	44								
HP (Low E Argon IGU)	0.26	3.8	3.4		0.29	0.22	0.44	57	•	•	•	•				
Grilles (Width<1")	0.26	3.8	3.4		0.29	0.20	0.38	57	•	•	•	•				
Sculptured Grilles (Width>1")	0.26	3.8	3.4		0.29	0.17	0.32	57	•	•	•	•				
HP ^{SC} (Solar Cooling Low E Argon IGU)	0.26	3.8	3.4		0.29	0.19	0.37	57	•	•	•	•				
Grilles (<1")	0.26	3.8	3.4		0.29	0.19	0.32	57	•	•	•	•				
Sculptured Grilles (Width>1")	0.26	3.8	3.4		0.29	0.15	0.28	57	•	•	•	•				
HP2 (Double Low E Argon IGU)	0.26	3.8	3.6		0.28	0.21	0.34	58	•	•	•	•				
Grilles (Width<1")	0.26	3.8	3.6		0.28	0.19	0.29	58	•	•	•	•				
Sculptured Grilles (Width>1")	0.26	3.8	3.6		0.28	0.16	0.25	58	•	•	•	•				
HP2+ (Double Low E Argon IGU)	0.21	4.8	4.0		0.25	0.22	0.42	47	•	•	•	•				
Grilles (Width<1")	0.21	4.8	4.0		0.25	0.19	0.37	47	•	•	•	•				
Sculptured Grilles (Width>1")	0.21	4.8	4.0		0.25	0.17	0.31	47	•	•	•	•				
HP2Max (Triple Pane, Double Low E Argon IGU)	0.17	5.9	4.5		0.22	0.19	0.31	64	•	•	•	•				
Grilles (Width<1")	0.17	5.9	4.3		0.23	0.17	0.27	64	•	•	•	•				
Sculptured Grilles (Width>1")	N/A	N/A	N/A		N/A	N/A	N/A	N/A	-	-	-	-				
HP3Max (Triple Pane Triple Low E Argon IGU)	0.17	5.9	5.0		0.20	0.17	0.30	55	•	•	•	•				
Grilles (Width<1")	0.17	5.9	4.8		0.21	0.15	0.26	55	•	•	•	•				
Sculptured Grilles (Width>1")	N/A	N/A	N/A		N/A	N/A	N/A	N/A	-	-	-	-				
WarmEdge Plus+ Spacer																
Clear IGU	N/A	N/A	N/A			N/A	N/A	N/A	N/A	-	-	-	-			
Grilles (Width<1")	N/A	N/A	N/A			N/A	N/A	N/A	N/A	-	-	-	-			
Sculptured Grilles (Width>1")	N/A	N/A	N/A			N/A	N/A	N/A	N/A	-	-	-	-			
HP (Low E Argon IGU)	0.26	3.8	3.4			0.29	0.27	0.49	57	•	•	•	•			
Grilles (Width<1")	0.26	3.8	3.4			0.29	0.23	0.43	57	•	•	•	•			
Sculptured Grilles (Width>1")	0.26	3.8	3.4			0.29	0.17	0.32	57	•	•	•	•			
HP ^{SC} (Solar Cooling Low E Argon IGU)	0.26	3.8	3.6			0.28	0.22	0.44	61	•	•	•	•			
Grilles (<1")	0.26	3.8	3.6			0.28	0.20	0.38	61	•	•	•	•			
Sculptured Grilles (Width>1")	0.26	3.8	3.6		0.28	0.15	0.28	61	•	•	•	•				
HP2 (Double Low E Argon IGU)	0.26	3.8	3.7		0.27	0.21	0.34	62	•	•	•	•				
Grilles (Width<1")	0.26	3.8	3.7		0.27	0.19	0.29	62	•	•	•	•				
Sculptured Grilles (Width>1")	0.26	3.8	3.7		0.27	0.16	0.25	62	•	•	•	•				
HP2+ (Double Low E Argon IGU)	0.21	4.8	4.2		0.24	0.22	0.42	51	•	•	•	•				
Grilles (Width<1")	0.21	4.8	4.2		0.24	0.19	0.37	51	•	•	•	•				
Sculptured Grilles (Width>1")	0.21	4.8	4.2		0.24	0.17	0.31	51	•	•	•	•				
R-5 Option																
HP3 _{MAX} (Triple Pane Triple Low E Argon IGU)	0.16	6.3	5.0		0.20	0.17	0.30	55	•	•	•	•				
Grilles (Width<1")	0.16	6.3	4.8		0.21	0.15	0.26	55	•	•	•	•				
Sculptured Grilles (Width>1")	N/A	N/A	N/A		N/A	N/A	N/A	N/A	-	-	-	-				

-Option does NOT meet ENERGY STAR zone requirements for 2011 federal energy tax credit.
 -DS w/ grilles option does NOT meet ENERGY STAR zone requirements for 2011 federal energy tax credit.
 -Option is Energy Star Qualified per zone.

NFRC (National Fenestration Rating Council)

CPD - Certified Product Directory
 SHGC - Solar Heat Gain Coefficient
 VT - Visible Light Transmission
 CR - Condensation Resistance

U-Factor - Rate of Heat Loss
 R-Value - Resistance to Heat Flow



Footnotes: Total unit values: Single strength glass for all dual & triple pane windows.
 Total unit values: Double strength glass for all dual & triple pane Patio Doors, Picture Windows and Architectural Shapes.

Product Type / Popular Glazing Options	U-Factor (Center of Glass)	R-value (Center of Glass)	Total Unit R-value	NFRC Certified Values				Energy Star Qualified						
				NFRC CPD Number	Total Unit U-Factor	SHGC	VT	CR	Northern	North-Central	South-Central	Southern		
Double Hung														
Warm Edge Spacer														
Clear IGU	0.49	2.0	2.1	PWG-M-28	0.47	0.60	0.63	43						
Grilles (Width<1")	0.49	2.0	2.1		0.47	0.53	0.56	43						
Sculptured Grilles (Width>1")	0.49	2.0	2.1		0.47	0.48	0.49	43						
HP (Low E Argon IGU)	0.26	3.8	3.2		0.31	0.28	0.53	53	•	•	•	•		
Grilles (Width<1")	0.26	3.8	3.2		0.31	0.25	0.47	53	•	•	•	•		
Sculptured Grilles (Width>1")	0.26	3.8	3.2		0.31	0.22	0.41	53	•	•	•	•		
HP ^{SC} (Solar Cooling Low E Argon IGU)	0.25	4.0	3.2		0.31	0.21	0.41	53	•	•	•	•		
Grilles (Width<1")	0.25	4.0	3.2		0.31	0.19	0.37	53	•	•	•	•		
Sculptured Grilles (Width>1")	0.25	4.0	3.2		0.31	0.17	0.33	53	•	•	•	•		
HP2 (Double Low E Argon IGU)	0.25	4.0	3.2		0.31	0.26	0.45	54	•	•	•	•		
Grilles (Width<1")	0.25	4.0	3.2		0.31	0.23	0.40	54	•	•	•	•		
Sculptured Grilles (Width>1")	0.25	4.0	3.2		0.31	0.21	0.35	54	•	•	•	•		
HP2+ (Double Low E Argon IGU)	0.21	4.8	3.7		0.27	0.27	0.51	44	•	•	•	•		
Grilles (Width<1")	0.21	4.8	3.7		0.27	0.24	0.45	44	•	•	•	•		
Sculptured Grilles (Width>1")	0.21	4.8	3.7		0.27	0.22	0.40	44	•	•	•	•		
HP2Max (Triple Pane Double Low E Argon IGU)	0.18	5.6	3.8		0.26	0.23	0.39	62	•	•	•	•		
Grilles (Width<1")	0.18	5.6	3.7		0.27	0.21	0.35	62	•	•	•	•		
Sculptured Grilles (Width>1")	N/A	N/A	N/A		N/A	N/A	N/A	N/A	-	-	-	-		
HP3Max (Triple Pane Triple Low E Argon IGU)	0.16	6.3	4.3		0.23	0.21	0.40	53	•	•	•	•		
Grilles (Width<1")	0.16	6.3	4.3		0.23	0.19	0.35	53	•	•	•	•		
Sculptured Grilles (Width>1")	N/A	N/A	N/A		N/A	N/A	N/A	N/A	-	-	-	-		
Warm Edge Plus+ Spacer														
Clear IGU	N/A	N/A	N/A			N/A	N/A	N/A	N/A	-	-	-	-	
Grilles (Width<1")	N/A	N/A	N/A			N/A	N/A	N/A	N/A	-	-	-	-	
Sculptured Grilles (Width>1")	N/A	N/A	N/A			N/A	N/A	N/A	N/A	-	-	-	-	
HP (Low E Argon IGU)	0.26	3.8	3.3			0.30	0.28	0.53	56	•	•	•	•	
Grilles (Width<1")	0.26	3.8	3.3			0.30	0.25	0.47	56	•	•	•	•	
Sculptured Grilles (Width>1")	0.26	3.8	3.3			0.30	0.22	0.41	56	•	•	•	•	
HP ^{SC} (Solar Cooling Low E Argon IGU)	0.25	4.0	3.3			0.30	0.21	0.41	56	•	•	•	•	
Grilles (Width<1")	0.25	4.0	3.3			0.30	0.19	0.37	56	•	•	•	•	
Sculptured Grilles (Width>1")	0.25	4.0	3.3			0.30	0.17	0.33	56	•	•	•	•	
HP2 (Double Low E Argon IGU)	0.25	4.0	3.3			0.30	0.26	0.45	57	•	•	•	•	
Grilles (Width<1")	0.25	4.0	3.3			0.30	0.23	0.40	57	•	•	•	•	
Sculptured Grilles (Width>1")	0.25	4.0	3.3			0.30	0.21	0.35	57	•	•	•	•	
HP2+ (Double Low E Argon IGU)	0.21	4.8	3.8			0.26	0.27	0.51	46	•	•	•	•	
Grilles (Width<1")	0.21	4.8	3.8			0.26	0.24	0.45	46	•	•	•	•	
Sculptured Grilles (Width>1")	0.21	4.8	3.8			0.26	0.22	0.40	46	•	•	•	•	
Frame R-Core Up-Grade														
WarmEdge Spacer														
Clear IGU	0.49	2.0	2.2		PWG-M-29	0.46	0.58	0.61	43					
Grilles (Width<1")	0.49	2.0	2.2			0.46	0.52	0.54	43					
Sculptured Grilles (Width>1")	0.49	2.0	2.2			0.46	0.46	0.48	43					
HP (Low E Argon IGU)	0.26	3.8	3.2			0.31	0.27	0.51	52	•	•	•	•	
Grilles (Width<1")	0.26	3.8	3.2			0.31	0.24	0.45	52	•	•	•	•	
Sculptured Grilles (Width>1")	0.26	3.8	3.2			0.31	0.22	0.40	52	•	•	•	•	
HP ^{SC} (Solar Cooling Low E Argon IGU)	0.25	4.0	3.2	0.31		0.20	0.40	52	•	•	•	•		
Grilles (<1")	0.25	4.0	3.2	0.31		0.18	0.36	52	•	•	•	•		
Sculptured Grilles (Width>1")	0.25	4.0	3.2	0.31		0.16	0.31	52	•	•	•	•		
HP2 (Double Low E Argon IGU)	0.25	4.0	3.3	0.30		0.25	0.43	52	•	•	•	•		
Grilles (Width<1")	0.25	4.0	3.3	0.30		0.22	0.39	52	•	•	•	•		
Sculptured Grilles (Width>1")	0.25	4.0	3.3	0.30		0.20	0.34	52	•	•	•	•		
HP2+ (Double Low E Argon IGU)	0.21	4.8	3.7	0.27		0.26	0.50	44	•	•	•	•		
Grilles (Width<1")	0.21	4.8	3.7	0.27		0.24	0.44	44	•	•	•	•		
Sculptured Grilles (Width>1")	0.21	4.8	3.7	0.27		0.21	0.39	44	•	•	•	•		
HP2Max (Triple Pane Double Low E Argon IGU)	0.18	5.6	4.0	0.25		0.23	0.40	64	•	•	•	•		
Grilles (Width<1")	0.18	5.6	4.0	0.25		0.21	0.35	64	•	•	•	•		
Sculptured Grilles (Width>1")	N/A	N/A	N/A	N/A		N/A	N/A	N/A	-	-	-	-		
HP3Max (Triple Pane Triple Low E Argon IGU)	0.16	6.3	4.5	0.22		0.21	0.38	53	•	•	•	•		
Grilles (Width<1")	0.16	6.3	4.3	0.23		0.19	0.34	53	•	•	•	•		
Sculptured Grilles (Width>1")	N/A	N/A	N/A	N/A		N/A	N/A	N/A	-	-	-	-		
WarmEdge Plus+ Spacer														
Clear IGU	0.49	2.0	2.2			0.45	0.58	0.61	44					
Grilles (Width<1")	0.49	2.0	2.2			0.45	0.52	0.54	44					
Sculptured Grilles (Width>1")	0.49	2.0	2.2			0.45	0.46	0.48	44					
HP (Low E Argon IGU)	0.26	3.8	3.3			0.30	0.27	0.51	56	•	•	•	•	
Grilles (Width<1")	0.26	3.8	3.3			0.30	0.24	0.45	56	•	•	•	•	
Sculptured Grilles (Width>1")	0.26	3.8	3.3			0.30	0.22	0.40	56	•	•	•	•	
HP ^{SC} (Solar Cooling Low E Argon IGU)	0.25	4.0	3.4			0.29	0.20	0.40	57	•	•	•	•	
Grilles (<1")	0.25	4.0	3.4			0.29	0.18	0.36	57	•	•	•	•	
Sculptured Grilles (Width>1")	0.25	4.0	3.4			0.29	0.16	0.31	57	•	•	•	•	
HP2 (Double Low E Argon IGU)	0.25	4.0	3.4			0.29	0.25	0.43	57	•	•	•	•	
Grilles (Width<1")	0.25	4.0	3.4			0.29	0.22	0.39	57	•	•	•	•	
Sculptured Grilles (Width>1")	0.25	4.0	3.4			0.29	0.20	0.31	57	•	•	•	•	
HP2+ (Double Low E Argon IGU)	0.21	4.8	3.8			0.26	0.26	0.50	44	•	•	•	•	
Grilles (Width<1")	0.21	4.8	3.8			0.26	0.24	0.44	44	•	•	•	•	
Sculptured Grilles (Width>1")	0.21	4.8	3.8			0.26	0.21	0.39	44	•	•	•	•	
R-5 Option														
HP3 _{MAX} (Triple Pane Triple Low E Argon IGU)	0.16	6.3	4.6	PWG-M-32		0.22	0.21	0.38	53	•	•	•	•	
Grilles (Width<1")	0.16	6.3	4.6			0.22	0.19	0.34	53	•	•	•	•	
Sculptured Grilles (Width>1")	N/A	N/A	N/A			N/A	N/A	N/A	N/A	-	-	-	-	

Product Type / Popular Glazing Options	U-Factor (Center of Glass)	R-value (Center of Glass)	Total Unit R-value	NFRF Certified Values					Energy Star Qualified						
				NFRF CPD Number	Total Unit U-Factor	SHGC	VT	CR	Northern	North-Central	South-Central	Southern			
Slider															
Warm Edge Spacer															
Clear IGU	0.49	2.0	2.1	PGW-M-36	0.47	0.58	0.59	42							
Grilles (Width<1")	0.49	2.0	2.1		0.47	0.51	0.53	42							
Sculptured Grilles (Width>1")	0.49	2.0	2.1		0.47	0.46	0.47	42							
HP (Low E Argon IGU)	0.26	3.8	3.1		0.32	0.26	0.50	54							
Grilles (Width<1")	0.26	3.8	3.1		0.32	0.24	0.45	54							
Sculptured Grilles (Width>1")	0.26	3.8	3.1		0.32	0.21	0.39	54							
HP ^{SC} (Solar Cooling Low E Argon IGU)	0.25	4.0	3.1		0.32	0.20	0.39	54							
Grilles (Width<1")	0.25	4.0	3.1		0.32	0.18	0.35	54							
Sculptured Grilles (Width>1")	0.25	4.0	3.1		0.32	0.16	0.31	54							
HP2 (Double Low E Argon IGU)	0.25	4.0	3.2		0.31	0.25	0.43	55							
Grilles (Width<1")	0.25	4.0	3.2		0.31	0.22	0.38	55							
Sculptured Grilles (Width>1")	0.25	4.0	3.2		0.31	0.20	0.33	55							
HP2+ (Double Low E Argon IGU)	0.21	4.8	3.6		0.28	0.26	0.49	45							
Grilles (Width<1")	0.21	4.8	3.6		0.28	0.23	0.43	45							
Sculptured Grilles (Width>1")	0.21	4.8	3.6		0.28	0.21	0.38	45							
HP2Max (Triple Pane Double Low E Argon IGU)	0.18	5.6	3.8		0.26	0.23	0.39	61							
Grilles (Width<1")	0.18	5.6	3.8		0.26	0.21	0.35	61							
Sculptured Grilles (Width>1")	N/A	N/A	N/A		N/A	N/A	N/A	N/A	-	-	-				
HP3Max (Triple Pane Triple Low E Argon IGU)	0.16	6.3	4.3		0.23	0.20	0.38	52							
Grilles (Width<1")	0.16	6.3	4.2		0.24	0.18	0.34	52							
Sculptured Grilles (Width>1")	N/A	N/A	N/A		N/A	N/A	N/A	N/A	-	-	-				
Warm Edge Plus+ Spacer															
Clear IGU	N/A	N/A	N/A		N/A	N/A	N/A	N/A	N/A	-	-	-			
Grilles (Width<1")	N/A	N/A	N/A		N/A	N/A	N/A	N/A	N/A	-	-	-			
Sculptured Grilles (Width>1")	N/A	N/A	N/A		N/A	N/A	N/A	N/A	N/A	-	-	-			
HP (Low E Argon IGU)	0.26	3.8	3.3		0.30	0.26	0.50	59							
Grilles (Width<1")	0.26	3.8	3.3		0.30	0.24	0.45	59							
Sculptured Grilles (Width>1")	0.26	3.8	3.3		0.30	0.21	0.39	59							
HP ^{SC} (Solar Cooling Low E Argon IGU)	0.25	4.0	3.3		0.30	0.20	0.39	59							
Grilles (Width<1")	0.25	4.0	3.3		0.30	0.18	0.35	59							
Sculptured Grilles (Width>1")	0.25	4.0	3.3		0.30	0.16	0.31	59							
HP2 (Double Low E Argon IGU)	0.25	4.0	3.3		0.30	0.25	0.43	55							
Grilles (Width<1")	0.25	4.0	3.3		0.30	0.22	0.38	55							
Sculptured Grilles (Width>1")	0.25	4.0	3.3		0.30	0.20	0.33	55							
HP2+ (Double Low E Argon IGU)	0.21	4.8	3.7		0.27	0.26	0.49	48							
Grilles (Width<1")	0.21	4.8	3.7		0.27	0.23	0.43	48							
Sculptured Grilles (Width>1")	0.21	4.8	3.7		0.27	0.21	0.38	48							
Frame R-Core Up-Grade															
WarmEdge Spacer															
Clear IGU	0.49	2.0	2.2		PGW-M-38	0.46	0.57	0.59	42						
Grilles (Width<1")	0.49	2.0	2.2			0.46	0.51	0.53	42						
Sculptured Grilles (Width>1")	0.49	2.0	2.2			0.46	0.45	0.46	42						
HP (Low E Argon IGU)	0.26	3.8	3.3			0.30	0.26	0.50	54						
Grilles (Width<1")	0.26	3.8	3.3			0.30	0.24	0.45	54						
Sculptured Grilles (Width>1")	0.26	3.8	3.3			0.30	0.21	0.39	54						
HP ^{SC} (Solar Cooling Low E Argon IGU)	0.25	4.0	3.3			0.30	0.20	0.39	54						
Grilles (<1")	0.25	4.0	3.3			0.30	0.18	0.35	54						
Sculptured Grilles (Width>1")	0.25	4.0	3.3			0.30	0.16	0.31	54						
HP2 (Double Low E Argon IGU)	0.25	4.0	3.3			0.30	0.25	0.43	55						
Grilles (Width<1")	0.25	4.0	3.3			0.30	0.22	0.38	55						
Sculptured Grilles (Width>1")	0.25	4.0	3.3			0.30	0.20	0.33	55						
HP2+ (Double Low E Argon IGU)	0.21	4.8	3.8			0.26	0.26	0.49	45						
Grilles (Width<1")	0.21	4.8	3.8			0.26	0.23	0.43	45						
Sculptured Grilles (Width>1")	0.21	4.8	3.8			0.26	0.21	0.38	45						
HP2Max (Triple Pane Double Low E Argon IGU)	0.18	5.6	4.2			0.24	0.23	0.39	61						
Grilles (Width<1")	0.18	5.6	4.0			0.25	0.21	0.35	61						
Sculptured Grilles (Width>1")	N/A	N/A	N/A			N/A	N/A	N/A	N/A	-	-	-			
HP3Max (Triple Pane Triple Low E Argon IGU)	0.16	6.3	4.5			0.22	0.20	0.38	52						
Grilles (Width<1")	0.16	6.3	4.5			0.22	0.18	0.34	52						
Sculptured Grilles (Width>1")	N/A	N/A	N/A			N/A	N/A	N/A	N/A	-	-	-			
WarmEdge Plus+ Spacer															
Clear IGU	N/A	N/A	N/A			N/A	N/A	N/A	N/A	N/A	-	-	-		
Grilles (Width<1")	N/A	N/A	N/A			N/A	N/A	N/A	N/A	N/A	-	-	-		
Sculptured Grilles (Width>1")	N/A	N/A	N/A			N/A	N/A	N/A	N/A	N/A	-	-	-		
HP (Low E Argon IGU)	0.26	3.8	3.4			0.29	0.26	0.50	59						
Grilles (Width<1")	0.26	3.8	3.4			0.29	0.24	0.45	59						
Sculptured Grilles (Width>1")	0.26	3.8	3.4			0.29	0.21	0.39	59						
HP ^{SC} (Solar Cooling Low E Argon IGU)	0.25	4.0	3.4			0.29	0.20	0.39	59						
Grilles (<1")	0.25	4.0	3.4			0.29	0.18	0.35	59						
Sculptured Grilles (Width>1")	0.25	4.0	3.4			0.29	0.16	0.31	59						
HP2 (Double Low E Argon IGU)	0.25	4.0	3.6			0.28	0.25	0.43	60						
Grilles (Width<1")	0.25	4.0	3.6			0.28	0.22	0.38	60						
Sculptured Grilles (Width>1")	0.25	4.0	3.6			0.28	0.20	0.33	60						
HP2+ (Double Low E Argon IGU)	0.21	4.8	4.0			0.25	0.26	0.49	48						
Grilles (Width<1")	0.21	4.8	4.0			0.25	0.23	0.43	48						
Sculptured Grilles (Width>1")	0.21	4.8	4.0			0.25	0.21	0.38	48						
R-5 Option															
HP3 _{MAX} (Triple Pane Triple Low E Argon IGU)	0.16	6.3	4.8			PGW-M-37	0.21	0.20	0.38	52					
Grilles (Width<1")	0.16	6.3	4.8				0.21	0.18	0.34	52					
Sculptured Grilles (Width>1")	N/A	N/A	N/A				N/A	N/A	N/A	N/A	-	-	-		

Product Type / Popular Glazing Options	U-Factor (Center of Glass)	R-value (Center of Glass)	Total Unit R-value	NFRC Certified Values					Energy Star Qualified									
				NFRC CPD Number	Total Unit U-Factor	SHGC	VT	CR	Northern	North-Central	South-Central	Southern						
Picture																		
Warm Edge Spacer																		
Clear IGU	0.49	2.0	2.1	PWG-M-42	0.48	0.69	0.73	44										
Grilles (Width<1")	0.49	2.0	2.1		0.48	0.62	0.65	44										
Sculptured Grilles (Width>1")	0.49	2.0	2.1		0.48	0.56	0.58	44										
HP(Low E Argon IGU)	0.26	3.8	3.4		0.30	0.32	0.61	57	•	•	•	•						
Grilles (Width<1")	0.26	3.8	3.4		0.30	0.29	0.55	57	•	•	•	•						
Sculptured Grilles (Width>1")	0.26	3.8	3.3		0.30	0.26	0.49	57	•	•	•	•						
HP ^{SC} (Solar Cooling Low E Argon IGU)	0.25	4.0	3.4		0.29	0.24	0.48	57	•	•	•	•						
Grilles (Width<1")	0.25	4.0	3.4		0.29	0.22	0.43	57	•	•	•	•						
Sculptured Grilles (Width>1")	0.25	4.0	3.4		0.29	0.20	0.39	57	•	•	•	•						
HP2 (Double Low E Argon IGU)	0.25	4.0	3.4		0.29	0.30	0.52	57	•	•	•	•						
Grilles (Width<1")	0.25	4.0	3.4		0.29	0.27	0.47	57	•	•	•	•						
Sculptured Grilles (Width>1")	0.25	4.0	3.4		0.29	0.24	0.42	57	•	•	•	•						
HP2+ (Double Low E Argon IGU)	0.22	4.5	3.8		0.26	0.30	0.57	46	•	•	•	•						
Grilles (Width<1")	0.22	4.5	3.8		0.26	0.27	0.51	46	•	•	•	•						
Sculptured Grilles (Width>1")	0.22	4.5	3.8		0.26	0.24	0.45	46	•	•	•	•						
HP2Max (Triple Pane Double Low E Argon IGU)	0.18	5.6	5.3		0.19	0.28	0.47	66	•	•	•	•						
Grilles (Width<1")	0.18	5.6	4.8		0.21	0.25	0.43	66	•	•	•	•						
Sculptured Grilles (Width>1")	N/A	N/A	N/A		N/A	N/A	N/A	N/A	-	-	-	-						
HP3Max (Triple Pane Triple Low E Argon IGU)	0.16	6.3	5.9		0.17	0.24	0.44	57	•	•	•	•						
Grilles (Width<1")	0.16	6.3	5.6		0.18	0.21	0.40	57	•	•	•	•						
Sculptured Grilles (Width>1")	N/A	N/A	N/A		N/A	N/A	N/A	N/A	-	-	-	-						
Warm Edge Plus+ Spacer																		
Clear IGU	N/A	N/A	N/A		N/A	N/A	N/A	N/A	N/A	-	-	-	-					
Grilles (Width<1")	N/A	N/A	N/A		N/A	N/A	N/A	N/A	N/A	-	-	-	-					
Sculptured Grilles (Width>1")	N/A	N/A	N/A		N/A	N/A	N/A	N/A	N/A	-	-	-	-					
HP (Low E Argon IGU)	0.26	3.8	3.4		0.29	0.32	0.61	59	•	•	•	•						
Grilles (Width<1")	0.26	3.8	3.4		0.29	0.29	0.55	59	•	•	•	•						
Sculptured Grilles (Width>1")	0.26	3.8	3.4		0.29	0.26	0.49	59	•	•	•	•						
HP ^{SC} (Solar Cooling Low E Argon IGU)	0.25	4.0	3.6		0.28	0.24	0.48	59	•	•	•	•						
Grilles (Width<1")	0.25	4.0	3.6		0.28	0.22	0.43	59	•	•	•	•						
Sculptured Grilles (Width>1")	0.25	4.0	3.6	0.28	0.20	0.39	59	•	•	•	•							
HP2 (Double Low E Argon IGU)	0.25	4.0	3.6	0.28	0.30	0.52	60	•	•	•	•							
Grilles (Width<1")	0.25	4.0	3.6	0.28	0.27	0.47	60	•	•	•	•							
Sculptured Grilles (Width>1")	0.25	4.0	3.6	0.28	0.24	0.42	60	•	•	•	•							
HP2+ (Double Low E Argon IGU)	0.22	4.5	3.8	0.26	0.30	0.57	48	•	•	•	•							
Grilles (Width<1")	0.22	4.5	3.8	0.26	0.27	0.51	48	•	•	•	•							
Sculptured Grilles (Width>1")	0.22	4.5	3.8	0.26	0.24	0.45	48	•	•	•	•							
Frame R-Core Up-Grade																		
WarmEdge Spacer																		
Clear IGU	0.49	2.0	2.2	PWG-M-41	0.46	0.69	0.73	44										
Grilles (Width<1")	0.49	2.0	2.2		0.46	0.62	0.65	44										
Sculptured Grilles (Width>1")	0.49	2.0	2.2		0.46	0.56	0.58	44										
HP (Low E Argon IGU)	0.26	3.8	3.6		0.28	0.32	0.61	56	•	•	•	•						
Grilles (Width<1")	0.26	3.8	3.6		0.28	0.29	0.55	56	•	•	•	•						
Sculptured Grilles (Width>1")	0.26	3.8	3.6		0.28	0.26	0.49	56	•	•	•	•						
HP ^{SC} (Solar Cooling Low E Argon IGU)	0.25	4.0	3.6		0.28	0.24	0.48	57	•	•	•	•						
Grilles (<1")	0.25	4.0	3.6		0.28	0.22	0.43	57	•	•	•	•						
Sculptured Grilles (Width>1")	0.25	4.0	3.6		0.28	0.20	0.39	57	•	•	•	•						
HP2 (Double Low E Argon IGU)	0.25	4.0	3.6		0.28	0.30	0.52	57	•	•	•	•						
Grilles (Width<1")	0.25	4.0	3.6		0.28	0.27	0.47	57	•	•	•	•						
Sculptured Grilles (Width>1")	0.25	4.0	3.6		0.28	0.24	0.42	57	•	•	•	•						
HP2+ (Double Low E Argon IGU)	0.22	4.5	4.3		0.23	0.30	0.57	45	•	•	•	•						
Grilles (Width<1")	0.22	4.5	4.3		0.23	0.27	0.51	45	•	•	•	•						
Sculptured Grilles (Width>1")	0.22	4.5	4.3		0.23	0.24	0.45	45	•	•	•	•						
HP2Max (Triple Pane Double Low E Argon IGU)	0.17	5.9	5.3		0.19	0.28	0.47	66	•	•	•	•						
Grilles (Width<1")	0.17	5.9	4.8		0.21	0.25	0.43	66	•	•	•	•						
Sculptured Grilles (Width>1")	N/A	N/A	N/A		N/A	N/A	N/A	N/A	-	-	-	-						
HP3Max (Triple Pane Triple Low E Argon IGU)	0.14	7.1	5.9		0.17	0.23	0.44	55	•	•	•	•						
Grilles (Width<1")	0.14	7.1	5.6		0.18	0.21	0.39	55	•	•	•	•						
Sculptured Grilles (Width>1")	N/A	N/A	N/A		N/A	N/A	N/A	N/A	-	-	-	-						
WarmEdge Plus+ Spacer																		
Clear IGU	0.49	2.0	2.2		0.46	0.69	0.73	44										
Grilles (Width<1")	0.49	2.0	2.2		0.46	0.62	0.65	44										
Sculptured Grilles (Width>1")	0.49	2.0	2.2		0.46	0.56	0.58	44										
HP (Low E Argon IGU)	0.26	3.8	3.6		0.28	0.32	0.61	56	•	•	•	•						
Grilles (Width<1")	0.26	3.8	3.6		0.28	0.29	0.55	56	•	•	•	•						
Sculptured Grilles (Width>1")	0.26	3.8	3.6		0.28	0.26	0.49	56	•	•	•	•						
HP ^{SC} (Solar Cooling Low E Argon IGU)	0.25	4.0	3.6		0.28	0.24	0.48	56	•	•	•	•						
Grilles (<1")	0.25	4.0	3.6		0.28	0.22	0.43	56	•	•	•	•						
Sculptured Grilles (Width>1")	0.25	4.0	3.6	0.28	0.20	0.39	56	•	•	•	•							
HP2 (Double Low E Argon IGU)	0.25	4.0	3.6	0.28	0.30	0.52	57	•	•	•	•							
Grilles (Width<1")	0.25	4.0	3.6	0.28	0.27	0.47	57	•	•	•	•							
Sculptured Grilles (Width>1")	0.25	4.0	3.6	0.28	0.24	0.42	57	•	•	•	•							
HP2+ (Double Low E Argon IGU)	0.22	4.5	4.3	0.23	0.30	0.57	47	•	•	•	•							
Grilles (Width<1")	0.22	4.5	4.3	0.23	0.27	0.51	47	•	•	•	•							
Sculptured Grilles (Width>1")	0.22	4.5	4.3	0.23	0.24	0.45	47	•	•	•	•							
R-5 Option																		
HP3 _{MAX} (Triple Pane Triple Low E Argon IGU)	0.14	7.1	5.7	0.17	0.23	0.44	55	•	•	•	•							
Grilles (Width<1")	0.14	7.1	5.6	0.18	0.21	0.39	55	•	•	•	•							
Sculptured Grilles (Width>1")	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	-	-	-							

Product Type / Popular Glazing Options	U-Factor (Center of Glass)	R-value (Center of Glass)	Total Unit R-value	NFRC Certified Values					Energy Star Qualified											
				NFRC CPD Number	Total Unit U-Factor	SHGC	VT	CR	Northern	North-Central	South-Central	Southern								
Caseмент																				
Warm Edge Spacer																				
Clear IGU	0.49	2.0	2.3		0.43	0.55	0.57	44												
Grilles (Width<1")	0.49	2.0	2.3		0.43	0.50	0.51	44												
Sculptured Grilles (Width>1")	0.49	2.0	2.3		0.43	0.45	0.46	44												
HP(Low E Argon IGU)	0.26	3.8	3.4		0.29	0.25	0.48	59	•	•	•	•	•							
Grilles (Width<1")	0.26	3.8	3.4		0.29	0.23	0.43	59	•	•	•	•	•							
Sculptured Grilles (Width>1")	0.26	3.8	3.4		0.29	0.21	0.39	59	•	•	•	•	•							
HP ^{SC} (Solar Cooling Low E Argon IGU)	0.25	4.0	3.4		0.29	0.19	0.37	59	•	•	•	•	•							
Grilles (Width<1")	0.25	4.0	3.4		0.29	0.18	0.34	59	•	•	•	•	•							
Sculptured Grilles (Width>1")	0.25	4.0	3.4		0.29	0.16	0.30	59	•	•	•	•	•							
HP2 (Double Low E Argon IGU)	0.25	4.0	3.6		0.28	0.24	0.40	59	•	•	•	•	•							
Grilles (Width<1")	0.25	4.0	3.6		0.28	0.22	0.37	59	•	•	•	•	•							
Sculptured Grilles (Width>1")	0.25	4.0	3.6		0.28	0.20	0.33	59	•	•	•	•	•							
HP2+ (Double Low E Argon IGU)	0.21	4.8	4.0		0.25	0.25	0.46	48	•	•	•	•	•							
Grilles (Width<1")	0.21	4.8	4.0		0.25	0.22	0.42	48	•	•	•	•	•							
Sculptured Grilles (Width>1")	0.21	4.8	4.0		0.25	0.20	0.38	48	•	•	•	•	•							
HP2Max (Triple Pane Double Low E Argon IGU)	0.18	5.6	4.5		0.22	0.22	0.37	69	•	•	•	•	•							
Grilles (Width<1")	0.18	5.6	4.3		0.23	0.20	0.34	69	•	•	•	•	•							
Sculptured Grilles (Width>1")	N/A	N/A	N/A		N/A	N/A	N/A	N/A	-	-	-	-	-							
HP3Max (Triple Pane Triple Low E Argon IGU)	0.14	7.1	4.8		0.21	0.19	0.36	56	•	•	•	•	•							
Grilles (Width<1")	0.14	7.1	4.8		0.21	0.18	0.33	56	•	•	•	•	•							
Sculptured Grilles (Width>1")	N/A	N/A	N/A		N/A	N/A	N/A	N/A	-	-	-	-	-							
Warm Edge Plus+ Spacer																				
Clear IGU	N/A	N/A	N/A		N/A	N/A	N/A	N/A	-	-	-	-	-							
Grilles (Width<1")	N/A	N/A	N/A		N/A	N/A	N/A	N/A	-	-	-	-	-							
Sculptured Grilles (Width>1")	N/A	N/A	N/A		N/A	N/A	N/A	N/A	-	-	-	-	-							
HP (Low E Argon IGU)	0.26	3.8	3.7		0.27	0.25	0.48	62	•	•	•	•	•							
Grilles (Width<1")	0.26	3.8	3.7		0.27	0.23	0.43	62	•	•	•	•	•							
Sculptured Grilles (Width>1")	0.26	3.8	3.7		0.27	0.21	0.39	62	•	•	•	•	•							
HP ^{SC} (Solar Cooling Low E Argon IGU)	0.25	4.0	3.7		0.27	0.19	0.37	62	•	•	•	•	•							
Grilles (Width<1")	0.25	4.0	3.7		0.27	0.18	0.34	62	•	•	•	•	•							
Sculptured Grilles (Width>1")	0.25	4.0	3.7		0.27	0.16	0.30	62	•	•	•	•	•							
HP2 (Double Low E Argon IGU)	0.25	4.0	3.7		0.27	0.24	0.40	63	•	•	•	•	•							
Grilles (Width<1")	0.25	4.0	3.7		0.27	0.22	0.37	63	•	•	•	•	•							
Sculptured Grilles (Width>1")	0.25	4.0	3.7		0.27	0.20	0.33	63	•	•	•	•	•							
HP2+ (Double Low E Argon IGU)	0.21	4.8	4.2		0.24	0.25	0.46	50	•	•	•	•	•							
Grilles (Width<1")	0.21	4.8	4.2		0.24	0.22	0.42	50	•	•	•	•	•							
Sculptured Grilles (Width>1")	0.21	4.8	4.2		0.24	0.20	0.38	50	•	•	•	•	•							
Frame R-Core Up-Grade																				
WarmEdge Spacer																				
Clear IGU	0.49	2.0	2.3		0.43	0.55	0.57	44												
Grilles (Width<1")	0.49	2.0	2.3		0.43	0.50	0.51	44												
Sculptured Grilles (Width>1")	0.49	2.0	2.3		0.43	0.45	0.46	44												
HP (Low E Argon IGU)	0.26	3.8	3.6		0.28	0.25	0.48	59	•	•	•	•	•							
Grilles (Width<1")	0.26	3.8	3.6		0.28	0.23	0.43	59	•	•	•	•	•							
Sculptured Grilles (Width>1")	0.26	3.8	3.6		0.28	0.21	0.39	59	•	•	•	•	•							
HP ^{SC} (Solar Cooling Low E Argon IGU)	0.25	4.0	3.6		0.28	0.19	0.37	59	•	•	•	•	•							
Grilles (<1")	0.25	4.0	3.6		0.28	0.18	0.34	59	•	•	•	•	•							
Sculptured Grilles (Width>1")	0.25	4.0	3.6		0.28	0.16	0.30	59	•	•	•	•	•							
HP2 (Double Low E Argon IGU)	0.25	4.0	3.6		0.28	0.24	0.40	59	•	•	•	•	•							
Grilles (Width<1")	0.25	4.0	3.6		0.28	0.22	0.37	59	•	•	•	•	•							
Sculptured Grilles (Width>1")	0.25	4.0	3.6		0.28	0.20	0.33	59	•	•	•	•	•							
HP2+ (Double Low E Argon IGU)	0.21	4.8	4.1		0.25	0.25	0.46	48	•	•	•	•	•							
Grilles (Width<1")	0.21	4.8	4.1		0.25	0.22	0.42	48	•	•	•	•	•							
Sculptured Grilles (Width>1")	0.21	4.8	4.1		0.25	0.20	0.38	48	•	•	•	•	•							
HP2Max (Triple Pane Double Low E Argon IGU)	0.18	5.6	4.3		0.23	0.22	0.37	66	•	•	•	•	•							
Grilles (Width<1")	0.18	5.6	4.3		0.23	0.20	0.33	66	•	•	•	•	•							
Sculptured Grilles (Width>1")	N/A	N/A	N/A		N/A	N/A	N/A	N/A	-	-	-	-	-							
HP3Max (Triple Pane Triple Low E Argon IGU)	0.16	6.3	5.0		0.20	0.19	0.36	56	•	•	•	•	•							
Grilles (Width<1")	0.16	6.3	4.8		0.21	0.18	0.33	56	•	•	•	•	•							
Sculptured Grilles (Width>1")	N/A	N/A	N/A		N/A	N/A	N/A	N/A	-	-	-	-	-							
WarmEdge Plus+ Spacer																				
Clear IGU	N/A	N/A	N/A		N/A	N/A	N/A	N/A	-	-	-	-	-							
Grilles (Width<1")	N/A	N/A	N/A		N/A	N/A	N/A	N/A	-	-	-	-	-							
Sculptured Grilles (Width>1")	N/A	N/A	N/A		N/A	N/A	N/A	N/A	-	-	-	-	-							
HP (Low E Argon IGU)	0.26	3.8	3.7		0.27	0.25	0.48	62	•	•	•	•	•							
Grilles (Width<1")	0.26	3.8	3.7		0.27	0.23	0.43	62	•	•	•	•	•							
Sculptured Grilles (Width>1")	0.26	3.8	3.7		0.27	0.21	0.39	62	•	•	•	•	•							
HP ^{SC} (Solar Cooling Low E Argon IGU)	0.25	4.0	3.7		0.27	0.19	0.37	62	•	•	•	•	•							
Grilles (<1")	0.25	4.0	3.7		0.27	0.18	0.34	62	•	•	•	•	•							
Sculptured Grilles (Width>1")	0.25	4.0	3.7		0.27	0.20	0.33	62	•	•	•	•	•							
HP2 (Double Low E Argon IGU)	0.25	4.0	3.7		0.27	0.24	0.40	63	•	•	•	•	•							
Grilles (Width<1")	0.25	4.0	3.7		0.27	0.22	0.37	63	•	•	•	•	•							
Sculptured Grilles (Width>1")	0.25	4.0	3.7		0.27	0.20	0.33	63	•	•	•	•	•							
HP2+ (Double Low E Argon IGU)	0.21	4.8	4.2		0.24	0.25	0.46	50	•	•	•	•	•							
Grilles (Width<1")	0.21	4.8	4.2		0.24	0.22	0.42	50	•	•	•	•	•							
Sculptured Grilles (Width>1")	0.21	4.8	4.2		0.24	0.20	0.38	50	•	•	•	•	•							
R-5 Option																				
HP3 _{MAX} (Triple Pane Triple Low E Argon IGU)	0.16	6.3	4.8		0.21	0.19	0.36	56	•	•	•	•	•							
Grilles (Width<1")	0.16	6.3	4.8		0.21	0.18	0.33	56	•	•	•	•	•							
Sculptured Grilles (Width>1")	N/A	N/A	N/A		N/A	N/A	N/A	N/A	-	-	-	-	-							

PWG-M-25

Product Type / Popular Glazing Options	U-Factor (Center of Glass)	R-value (Center of Glass)	Total Unit R-value	NFRF Certified Values					Energy Star Qualified					
				NFRF CPD Number	Total Unit U-Factor	SHGC	VT	CR	Northern	North-Central	South-Central	Southern		
Fixed Casement														
Warm Edge Spacer														
Clear IGU	0.49	2.0	2.2	PWG-M-24	0.45	0.63	0.66	44						
Grilles (Width<1")	0.49	2.0	2.2		0.45	0.56	0.58	44						
Sculptured Grilles (Width>1")	0.49	2.0	2.2		0.45	0.50	0.52	44						
HP (Low E Argon IGU)	0.26	3.8	3.7		0.27	0.29	0.55	58	•	•	•			
Grilles (Width<1")	0.26	3.8	3.7		0.27	0.26	0.50	58	•	•	•			
Sculptured Grilles (Width>1")	0.26	3.8	3.7		0.27	0.24	0.44	58	•	•	•			
HP ^{SC} (Solar Cooling Low E Argon IGU)	0.25	4.0	3.7		0.27	0.22	0.44	58	•	•	•			
Grilles (Width<1")	0.25	4.0	3.7		0.27	0.20	0.39	58	•	•	•			
Sculptured Grilles (Width>1")	0.25	4.0	3.7		0.27	0.18	0.34	58	•	•	•			
HP2 (Double Low E Argon IGU)	0.25	4.0	3.7		0.27	0.27	0.47	59	•	•	•			
Grilles (Width<1")	0.25	4.0	3.7		0.27	0.25	0.42	59	•	•	•			
Sculptured Grilles (Width>1")	0.25	4.0	3.7		0.27	0.22	0.37	59	•	•	•			
HP2+ (Double Low E Argon IGU)	0.21	4.8	4.2		0.24	0.28	0.54	47	•	•	•			
Grilles (Width<1")	0.21	4.8	4.2		0.24	0.25	0.48	47	•	•	•			
Sculptured Grilles (Width>1")	0.21	4.8	4.2		0.24	0.23	0.42	47	•	•	•			
HP2Max (Triple Pane Double Low E Argon IGU)	0.18	5.6	4.5		0.22	0.25	0.43	69	•	•	•			
Grilles (Width<1")	0.18	5.6	4.3		0.23	0.23	0.38	69	•	•	•			
Sculptured Grilles (Width>1")	N/A	N/A	N/A		N/A	N/A	N/A	N/A	-	-	-			
HP3Max (Triple Pane Triple Low E Argon IGU)	0.16	6.3	5.0		0.20	0.22	0.41	54	•	•	•			
Grilles (Width<1")	0.16	6.3	5.0		0.20	0.20	0.37	54	•	•	•			
Sculptured Grilles (Width>1")	N/A	N/A	N/A		N/A	N/A	N/A	N/A	-	-	-			
Warm Edge Plus+ Spacer														
Clear IGU	N/A	N/A	N/A		N/A	N/A	N/A	N/A	N/A	-	-	-		
Grilles (Width<1")	N/A	N/A	N/A		N/A	N/A	N/A	N/A	N/A	-	-	-		
Sculptured Grilles (Width>1")	N/A	N/A	N/A		N/A	N/A	N/A	N/A	N/A	-	-	-		
HP (Low E Argon IGU)	0.26	3.8	3.8		0.27	0.29	0.55	62	•	•	•			
Grilles (Width<1")	0.26	3.8	3.8		0.27	0.26	0.50	62	•	•	•			
Sculptured Grilles (Width>1")	0.26	3.8	3.7		0.27	0.24	0.44	62	•	•	•			
HP ^{SC} (Solar Cooling Low E Argon IGU)	0.25	4.0	3.7		0.27	0.22	0.44	62	•	•	•			
Grilles (Width<1")	0.25	4.0	3.7		0.27	0.20	0.39	62	•	•	•			
Sculptured Grilles (Width>1")	0.25	4.0	3.7		0.27	0.18	0.34	62	•	•	•			
HP2 (Double Low E Argon IGU)	0.25	4.0	3.8		0.26	0.27	0.47	63	•	•	•			
Grilles (Width<1")	0.25	4.0	3.8		0.26	0.25	0.42	63	•	•	•			
Sculptured Grilles (Width>1")	0.25	4.0	3.8		0.26	0.22	0.37	63	•	•	•			
HP2+ (Double Low E Argon IGU)	0.21	4.8	4.3		0.23	0.28	0.54	50	•	•	•			
Grilles (Width<1")	0.21	4.8	4.3		0.23	0.25	0.48	50	•	•	•			
Sculptured Grilles (Width>1")	0.21	4.8	4.3		0.23	0.23	0.42	50	•	•	•			
Frame R-Core Up-Grade														
WarmEdge Spacer														
Clear IGU	0.49	2.0	2.3		0.44	0.63	0.66	44						
Grilles (Width<1")	0.49	2.0	2.3		0.44	0.56	0.58	44						
Sculptured Grilles (Width>1")	0.49	2.0	2.3		0.44	0.47	0.48	44						
HP (Low E Argon IGU)	0.26	3.8	3.7		0.27	0.29	0.55	58	•	•	•			
Grilles (Width<1")	0.26	3.8	3.7		0.27	0.26	0.50	58	•	•	•			
Sculptured Grilles (Width>1")	0.26	3.8	3.7		0.27	0.24	0.44	58	•	•	•			
HP ^{SC} (Solar Cooling Low E Argon IGU)	0.25	4.0	3.7		0.27	0.22	0.44	58	•	•	•			
Grilles (<1")	0.25	4.0	3.7		0.27	0.20	0.39	58	•	•	•			
Sculptured Grilles (Width>1")	0.25	4.0	3.7		0.27	0.18	0.34	58	•	•	•			
HP2 (Double Low E Argon IGU)	0.25	4.0	3.7		0.27	0.27	0.47	59	•	•	•			
Grilles (Width<1")	0.25	4.0	3.7		0.27	0.25	0.42	59	•	•	•			
Sculptured Grilles (Width>1")	0.25	4.0	3.7		0.27	0.22	0.37	59	•	•	•			
HP2+ (Double Low E Argon IGU)	0.21	4.8	4.4		0.23	0.28	0.54	47	•	•	•			
Grilles (Width<1")	0.21	4.8	4.4		0.23	0.25	0.48	47	•	•	•			
Sculptured Grilles (Width>1")	0.21	4.8	4.4		0.23	0.23	0.42	47	•	•	•			
HP2Max (Triple Pane Double Low E Argon IGU)	0.18	5.6	4.8		0.21	0.25	0.43	65	•	•	•			
Grilles (Width<1")	0.18	5.6	4.8		0.21	0.23	0.38	65	•	•	•			
Sculptured Grilles (Width>1")	N/A	N/A	N/A		N/A	N/A	N/A	N/A	-	-	-			
HP3Max (Triple Pane Triple Low E Argon IGU)	0.17	5.9	5.3		0.19	0.22	0.41	53	•	•	•			
Grilles (Width<1")	0.17	5.9	5.0		0.20	0.20	0.37	53	•	•	•			
Sculptured Grilles (Width>1")	N/A	N/A	N/A		N/A	N/A	N/A	N/A	-	-	-			
WarmEdge Plus+ Spacer														
Clear IGU	N/A	N/A	N/A		N/A	N/A	N/A	N/A	N/A	-	-	-		
Grilles (Width<1")	N/A	N/A	N/A		N/A	N/A	N/A	N/A	N/A	-	-	-		
Sculptured Grilles (Width>1")	N/A	N/A	N/A		N/A	N/A	N/A	N/A	N/A	-	-	-		
HP (Low E Argon IGU)	0.26	3.8	3.8		0.26	0.29	0.55	62	•	•	•			
Grilles (Width<1")	0.26	3.8	3.8		0.26	0.26	0.50	62	•	•	•			
Sculptured Grilles (Width>1")	0.26	3.8	3.8		0.26	0.24	0.44	62	•	•	•			
HP ^{SC} (Solar Cooling Low E Argon IGU)	0.25	4.0	3.8		0.26	0.22	0.44	62	•	•	•			
Grilles (<1")	0.25	4.0	3.8		0.26	0.20	0.39	62	•	•	•			
Sculptured Grilles (Width>1")	0.25	4.0	3.8		0.26	0.18	0.34	62	•	•	•			
HP2 (Double Low E Argon IGU)	0.25	4.0	3.8		0.26	0.27	0.47	63	•	•	•			
Grilles (Width<1")	0.25	4.0	3.8		0.26	0.25	0.42	63	•	•	•			
Sculptured Grilles (Width>1")	0.25	4.0	3.8		0.26	0.22	0.37	63	•	•	•			
HP2+ (Double Low E Argon IGU)	0.21	4.8	4.5		0.22	0.28	0.54	49	•	•	•			
Grilles (Width<1")	0.21	4.8	4.5		0.22	0.25	0.48	49	•	•	•			
Sculptured Grilles (Width>1")	0.21	4.8	4.5		0.22	0.23	0.42	49	•	•	•			
R-5 Option														
HP3 _{MAX} (Triple Pane Triple Low E Argon IGU)	0.16	6.3	5.0		0.20	0.22	0.42	54	•	•	•			
Grilles (Width<1")	0.16	6.3	5.0		0.20	0.20	0.37	54	•	•	•			
Sculptured Grilles (Width>1")	N/A	N/A	N/A		N/A	N/A	N/A	N/A	-	-	-			

Product Type / Popular Glazing Options	U-Factor (Center of Glass)	R-value (Center of Glass)	Total Unit R-value	NFRC Certified Values					Energy Star Qualified			
				NFRC CPD Number	Total Unit U-Factor	SHGC	VT	CR	Northern	North-Central	South-Central	Southern
Awning												
Warm Edge Spacer												
Clear IGU	0.49	2.0	2.3		0.44	0.54	0.56	43				
Grilles (Width<1")	0.49	2.0	2.3		0.44	0.49	0.51	43				
Sculptured Grilles (Width>1")	0.49	2.0	2.3		0.44	0.45	0.46	43				
HP (Low E Argon IGU)	0.26	3.8	3.4		0.29	0.25	0.48	55	•	•	•	
Grilles (Width<1")	0.26	3.8	3.4		0.29	0.23	0.43	55	•	•	•	
Sculptured Grilles (Width>1")	0.26	3.8	3.4		0.29	0.21	0.39	55	•	•	•	
HP ^{SC} (Solar Cooling Low E Argon IGU)	0.25	4.0	3.4		0.29	0.19	0.37	55	•	•	•	
Grilles (Width<1")	0.25	4.0	3.4		0.29	0.18	0.34	55	•	•	•	
Sculptured Grilles (Width>1")	0.25	4.0	3.4		0.29	0.16	0.30	55	•	•	•	
HP2 (Double Low E Argon IGU)	0.25	4.0	3.6		0.28	0.24	0.40	56	•	•	•	
Grilles (Width<1")	0.25	4.0	3.6		0.28	0.22	0.37	56	•	•	•	
Sculptured Grilles (Width>1")	0.25	4.0	3.6		0.28	0.20	0.33	56	•	•	•	
HP2+ (Double Low E Argon IGU)	0.21	4.8	4.0		0.25	0.25	0.46	45	•	•	•	
Grilles (Width<1")	0.21	4.8	4.0		0.25	0.22	0.42	45	•	•	•	
Sculptured Grilles (Width>1")	0.21	4.8	4.0		0.25	0.20	0.38	45	•	•	•	
HP2Max (Triple Pane Double Low E Argon IGU)	0.18	5.6	4.5		0.22	0.22	0.37	69	•	•	•	
Grilles (Width<1")	0.18	5.6	4.5		0.22	0.20	0.34	69	•	•	•	
Sculptured Grilles (Width>1")	N/A	N/A	N/A		N/A	N/A	N/A	N/A	-	-	-	
HP3Max (Triple Pane Triple Low E Argon IGU)	0.16	6.3	4.8		0.21	0.19	0.36	56	•	•	•	
Grilles (Width<1")	0.16	6.3	4.8		0.21	0.18	0.33	56	•	•	•	
Sculptured Grilles (Width>1")	N/A	N/A	N/A		N/A	N/A	N/A	N/A	-	-	-	
Warm Edge Plus+ Spacer												
Clear IGU	N/A	N/A	N/A		N/A	N/A	N/A	N/A	-	-	-	
Grilles (Width<1")	N/A	N/A	N/A		N/A	N/A	N/A	N/A	-	-	-	
Sculptured Grilles (Width>1")	N/A	N/A	N/A		N/A	N/A	N/A	N/A	-	-	-	
HP (Low E Argon IGU)	0.26	3.8	3.7		0.27	0.25	0.48	58	•	•	•	
Grilles (Width<1")	0.26	3.8	3.7		0.27	0.23	0.43	58	•	•	•	
Sculptured Grilles (Width>1")	0.26	3.8	3.7		0.27	0.21	0.39	58	•	•	•	
HP ^{SC} (Solar Cooling Low E Argon IGU)	0.25	4.0	3.7		0.27	0.19	0.37	58	•	•	•	
Grilles (Width<1")	0.25	4.0	3.7		0.27	0.18	0.34	58	•	•	•	
Sculptured Grilles (Width>1")	0.25	4.0	3.7		0.27	0.16	0.30	58	•	•	•	
HP2 (Double Low E Argon IGU)	0.25	4.0	3.7		0.27	0.24	0.40	59	•	•	•	
Grilles (Width<1")	0.25	4.0	3.7		0.27	0.22	0.37	59	•	•	•	
Sculptured Grilles (Width>1")	0.25	4.0	3.7		0.27	0.20	0.33	59	•	•	•	
HP2+ (Double Low E Argon IGU)	0.21	4.8	4.2		0.24	0.25	0.46	47	•	•	•	
Grilles (Width<1")	0.21	4.8	4.2		0.24	0.22	0.42	47	•	•	•	
Sculptured Grilles (Width>1")	0.21	4.8	4.2		0.24	0.20	0.38	47	•	•	•	
Frame R-Core Up-Grade												
WarmEdge Spacer												
Clear IGU	0.49	2.0	2.3		0.43	0.54	0.56	43				
Grilles (Width<1")	0.49	2.0	2.3		0.43	0.49	0.51	43				
Sculptured Grilles (Width>1")	0.49	2.0	2.3		0.43	0.45	0.48	43				
HP (Low E Argon IGU)	0.26	3.8	3.6		0.28	0.25	0.48	55	•	•	•	
Grilles (Width<1")	0.26	3.8	3.6		0.28	0.23	0.43	55	•	•	•	
Sculptured Grilles (Width>1")	0.26	3.8	3.6		0.28	0.21	0.39	55	•	•	•	
HP ^{SC} (Solar Cooling Low E Argon IGU)	0.25	4.0	3.6		0.28	0.19	0.37	55	•	•	•	
Grilles (<1")	0.25	4.0	3.6		0.28	0.18	0.34	55	•	•	•	
Sculptured Grilles (Width>1")	0.25	4.0	3.6		0.28	0.16	0.30	55	•	•	•	
HP2 (Double Low E Argon IGU)	0.25	4.0	3.6		0.28	0.24	0.40	56	•	•	•	
Grilles (Width<1")	0.25	4.0	3.6		0.28	0.22	0.37	56	•	•	•	
Sculptured Grilles (Width>1")	0.25	4.0	3.6		0.28	0.20	0.33	56	•	•	•	
HP2+ (Double Low E Argon IGU)	0.21	4.8	4.1		0.25	0.25	0.46	45	•	•	•	
Grilles (Width<1")	0.21	4.8	4.1		0.25	0.22	0.42	45	•	•	•	
Sculptured Grilles (Width>1")	0.21	4.8	4.1		0.25	0.20	0.38	45	•	•	•	
HP2Max (Triple Pane Double Low E Argon IGU)	0.18	5.6	4.3		0.23	0.22	0.37	67	•	•	•	
Grilles (Width<1")	0.18	5.6	4.3		0.23	0.20	0.33	67	•	•	•	
Sculptured Grilles (Width>1")	N/A	N/A	N/A		N/A	N/A	N/A	N/A	-	-	-	
HP3Max (Triple Pane Triple Low E Argon IGU)	0.17	5.9	5.0		0.20	0.19	0.36	56	•	•	•	
Grilles (Width<1")	0.17	5.9	4.8		0.21	0.18	0.33	56	•	•	•	
Sculptured Grilles (Width>1")	N/A	N/A	N/A		N/A	N/A	N/A	N/A	-	-	-	
WarmEdge Plus+ Spacer												
Clear IGU	N/A	N/A	N/A		N/A	N/A	N/A	N/A	-	-	-	
Grilles (Width<1")	N/A	N/A	N/A		N/A	N/A	N/A	N/A	-	-	-	
Sculptured Grilles (Width>1")	N/A	N/A	N/A		N/A	N/A	N/A	N/A	-	-	-	
HP (Low E Argon IGU)	0.26	3.8	3.7		0.27	0.25	0.48	62	•	•	•	
Grilles (Width<1")	0.26	3.8	3.7		0.27	0.23	0.43	62	•	•	•	
Sculptured Grilles (Width>1")	0.26	3.8	3.7		0.27	0.21	0.39	62	•	•	•	
HP ^{SC} (Solar Cooling Low E Argon IGU)	0.25	4.0	3.7		0.27	0.19	0.37	62	•	•	•	
Grilles (<1")	0.25	4.0	3.7		0.27	0.18	0.34	62	•	•	•	
Sculptured Grilles (Width>1")	0.25	4.0	3.7		0.27	0.16	0.30	62	•	•	•	
HP2 (Double Low E Argon IGU)	0.25	4.0	3.7		0.27	0.24	0.40	63	•	•	•	
Grilles (Width<1")	0.25	4.0	3.7		0.27	0.22	0.37	63	•	•	•	
Sculptured Grilles (Width>1")	0.25	4.0	3.7		0.27	0.20	0.33	63	•	•	•	
HP2+ (Double Low E Argon IGU)	0.21	4.8	4.2		0.24	0.25	0.46	47	•	•	•	
Grilles (Width<1")	0.21	4.8	4.2		0.24	0.22	0.42	47	•	•	•	
Sculptured Grilles (Width>1")	0.21	4.8	4.2		0.24	0.20	0.38	47	•	•	•	
R-5 Option												
HP3 _{MAX} (Triple Pane Triple Low E Argon IGU)	0.16	6.3	4.8		0.21	0.19	0.36	56	•	•	•	
Grilles (Width<1")	0.16	6.3	4.8		0.21	0.18	0.33	56	•	•	•	
Sculptured Grilles (Width>1")	N/A	N/A	N/A		N/A	N/A	N/A	N/A	-	-	-	

PWG-M-26

Product Type / Popular Glazing Options	U-Factor (Center of Glass)	R-value (Center of Glass)	Total Unit R-value	NFRC Certified Values					Energy Star Qualified										
				NFRC CPD Number	Total Unit U-Factor	SHGC	VT	CR	Northern	North-Central	South-Central	Southern							
Sliding Patio Door																			
New Construction Door (APD)																			
Warm Edge Spacer																			
Clear IGU	0.48	2.1	2.1	PWG-M-44	0.48	0.64	0.68	42											
Grilles (Width<1")	0.48	2.1	2.1		0.48	0.57	0.59	42											
Sculptured Grilles (Width>1")	0.48	2.1	2.1		0.48	0.50	0.52	42											
HP (Low E Argon IGU)	0.25	4.0	3.4		0.29	0.30	0.57	54											
Grilles (Width<1")	0.25	4.0	3.2		0.31	0.27	0.50	54	•	•	•	•							
Sculptured Grilles (Width>1")	0.25	4.0	3.2		0.31	0.24	0.44	54	•	•	•	•							
HP ^{SC} (Solar Cooling Low E Argon IGU)	0.24	4.2	3.4		0.29	0.23	0.45	54	•	•	•	•							
Grilles (Width<1")	0.24	4.2	3.2		0.31	0.20	0.39	54	•	•	•	•							
Sculptured Grilles (Width>1")	0.24	4.2	3.2		0.31	0.18	0.34	54	•	•	•	•							
HP2 (Double Low E Argon IGU)	0.25	4.0	3.4		0.29	0.30	0.57	54	•	•	•	•							
Grilles (Width<1")	0.25	4.0	3.3		0.30	0.27	0.50	54	•	•	•	•							
Sculptured Grilles (Width>1")	0.25	4.0	3.3		0.30	0.24	0.44	54	•	•	•	•							
HP2+ (Double Low E Argon IGU)	0.21	4.8	4.0		0.25	0.29	0.56	44	•	•	•	•							
Grilles (Width<1")	0.21	4.8	3.6		0.28	0.26	0.49	44	•	•	•	•							
Sculptured Grilles (Width>1")	0.21	4.8	3.6		0.28	0.23	0.42	44	•	•	•	•							
Warm Edge Plus+ Spacer																			
Clear IGU	N/A	N/A	N/A		N/A	N/A	N/A	N/A	-	-	-	-							
Grilles (Width<1")	N/A	N/A	N/A		N/A	N/A	N/A	N/A	-	-	-	-							
Sculptured Grilles (Width>1")	N/A	N/A	N/A		N/A	N/A	N/A	N/A	-	-	-	-							
HP (Low E Argon IGU)	0.25	4.0	3.5		0.29	0.30	0.57	58	•	•	•	•							
Grilles (Width<1")	0.25	4.0	3.3		0.31	0.27	0.50	58	•	•	•	•							
Sculptured Grilles (Width>1")	0.25	4.0	3.2		0.31	0.24	0.44	58	•	•	•	•							
HP ^{SC} (Solar Cooling Low E Argon IGU)	0.24	4.2	3.5		0.28	0.23	0.45	58	•	•	•	•							
Grilles (Width<1")	0.24	4.2	3.3		0.30	0.20	0.39	58	•	•	•	•							
Sculptured Grilles (Width>1")	0.24	4.2	3.3		0.30	0.18	0.34	58	•	•	•	•							
HP2 (Double Low E Argon IGU)	0.25	4.0	3.6		0.28	0.28	0.49	59	•	•	•	•							
Grilles (Width<1")	0.25	4.0	3.4		0.29	0.25	0.43	59	•	•	•	•							
Sculptured Grilles (Width>1")	0.25	4.0	3.4		0.29	0.22	0.37	59	•	•	•	•							
HP2 ^{SC} (Solar Cooling Double Low E Argon IGU)	0.25	4.0	3.6	0.28	0.20	0.30	59	•	•	•	•								
Grilles (<1")	0.25	4.0	3.4	0.29	0.18	0.26	59	•	•	•	•								
Sculptured Grilles (Width>1")	0.25	4.0	3.4	0.29	0.16	0.23	59	•	•	•	•								
HP2+ (Double Low E Argon IGU)	0.21	4.8	4.1	0.25	0.29	0.56	48	•	•	•	•								
Grilles (Width<1")	0.21	4.8	3.7	0.27	0.26	0.49	48	•	•	•	•								
Sculptured Grilles (Width>1")	0.21	4.8	3.7	0.27	0.23	0.42	48	•	•	•	•								

- Option does NOT meet ENERGY STAR zone requirements for 2011 federal energy tax credit.
- DS w/ grilles option does NOT meet ENERGY STAR zone requirements for 2011 federal energy tax credit.
- TS w/ grilles option does NOT meet ENERGY STAR zone requirements for 2011 federal energy tax credit.
- Option is Energy Star Qualified per zone.

NFRC (National Fenestration Rating Council)

- CPD - Certified Product Directory
- SHGC - Solar Heat Gain Coefficient
- VT - Visible Light Transmission
- CR - Condensation Resistance

- U-Factor - Rate of Heat Loss
- R-Value - Resistance to Heat Flow



Footnotes: Total unit values: Single strength glass for all dual & triple pane windows.

Total unit values: Double strength glass for all dual & triple pane Patio Doors, Picture Windows and Architectural Shapes.

Product Type / Popular Glazing Options	U-Factor (Center of Glass)	R-value (Center of Glass)	Total Unit R-value	NFRC Certified Values					Energy Star Qualified			
				NFRC CPD Number	Total Unit U-Factor	SHGC	VT	CR	Northern	North-Central	South-Central	Southern
Double Hung												
WarmEdge Spacer												
Clear IGU	0.49	2.0	2.2		0.45	0.60	0.61	38				
Grilles (Width<1")	0.49	2.0	2.2		0.45	0.53	0.54	38				
Low E Air IGU	0.30	3.3	3.1		0.32	0.27	0.52	54				
Grilles (Width<1")	0.30	3.3	3.1		0.32	0.25	0.46	54				
LE ^{SC} Air IGU	0.30	3.3	3.1		0.32	0.21	0.41	54				
Grilles (Width<1")	0.30	3.3	3.1		0.32	0.19	0.36	54				
HP (Low E Argon IGU)	0.25	4.0	3.4		0.29	0.27	0.52	60				
Grilles (Width<1")	0.25	4.0	3.4		0.29	0.25	0.46	60				
HP ^{SC} (Low E Argon IGU)	0.25	4.0	3.4		0.29	0.21	0.41	60				
Grilles (Width<1")	0.25	4.0	3.4		0.29	0.19	0.36	60				
HP2+ (Low E Argon IGU)	0.21	4.8	3.8		0.26	0.28	0.50	38				
Grilles (Width<1")	0.21	4.8	3.8		0.26	0.25	0.44	38				
HP2Max (Triple Pane Double Low E Argon IGU)	0.18	5.6	4.1		0.25	0.25	0.40	64				
Grilles (Width<1")	0.18	5.6	4.0		0.25	0.23	0.36	64				
HP3Max (Triple Pane Triple Low E Argon IGU)	0.16	6.3	4.4		0.23	0.22	0.39	57				
Grilles (Width<1")	0.16	6.3	4.3		0.23	0.20	0.34	57				
Warm Edge Plus+ Spacer												
Low E Air IGU	0.30	3.3	3.1		0.32	0.27	0.52	56				
Grilles (Width<1")	0.30	3.3	3.1		0.32	0.25	0.46	56				
LE ^{SC} Air IGU	0.30	3.3	3.1		0.32	0.21	0.41	56				
Grilles (Width<1")	0.30	3.3	3.1		0.32	0.19	0.36	56				
HP (Low E Argon IGU)	0.25	4.0	3.4		0.29	0.27	0.52	62				
Grilles (Width<1")	0.25	4.0	3.4		0.29	0.25	0.46	62				
HP ^{SC} (Low E Argon IGU)	0.25	4.0	3.6		0.28	0.21	0.41	62				
Grilles (Width<1")	0.25	4.0	3.6		0.28	0.19	0.36	62				
HP2+ (Low E Argon IGU)	0.21	4.8	3.9		0.25	0.28	0.50	39				
Grilles (Width<1")	0.21	4.8	3.9		0.25	0.25	0.44	39				
HP2Max (Triple Pane Double Low E Argon IGU)	0.18	5.6	4.2		0.24	0.25	0.40	66				
Grilles (Width<1")	0.18	5.6	4.1		0.24	0.23	0.36	66				
HP3Max (Triple Pane Triple Low E Argon IGU)	0.16	6.3	4.5		0.22	0.22	0.39	59				
Grilles (Width<1")	0.16	6.3	4.4		0.23	0.20	0.34	59				
R-5 Option												
HP3Max (Triple Pane Triple Low E Argon IGU)	0.16	6.3	4.8		0.21	0.22	0.39	57				
Grilles (Width<1")	0.16	6.3	4.7		0.21	0.20	0.34	57				
Slider												
WarmEdge Spacer												
Clear IGU	0.49	2.0	2.1		0.47	0.59	0.61	44				
Grilles (Width<1")	0.49	2.0	2.1		0.47	0.53	0.54	44				
Low E Air IGU	0.31	3.2	2.9		0.35	0.27	0.52	56				
Grilles (Width<1")	0.31	3.2	2.9		0.35	0.25	0.46	56				
LE ^{SC} Air IGU	0.30	3.3	2.9		0.34	0.21	0.40	56				
Grilles (Width<1")	0.30	3.3	2.9		0.34	0.19	0.36	56				
HP (Low E Argon IGU)	0.26	3.8	3.2		0.31	0.27	0.52	59				
Grilles (Width<1")	0.26	3.8	3.2		0.31	0.24	0.46	59				
HP ^{SC} (Low E Argon IGU)	0.26	3.8	3.2		0.31	0.21	0.40	59				
Grilles (Width<1")	0.26	3.8	3.2		0.31	0.19	0.36	59				
HP2+ (Low E Argon IGU)	0.21	4.8	3.6		0.28	0.26	0.50	49				
Grilles (Width<1")	0.21	4.8	3.6		0.28	0.24	0.44	49				
HP2Max (Triple Pane Double Low E Argon IGU)	0.18	5.6	4.1		0.25	0.24	0.40	64				
Grilles (Width<1")	0.18	5.6	4.0		0.25	0.21	0.36	64				
HP3Max (Triple Pane Triple Low E Argon IGU)	0.16	6.3	4.4		0.23	0.21	0.39	56				
Grilles (Width<1")	0.16	6.3	4.3		0.23	0.19	0.34	56				
Warm Edge Plus+ Spacer												
Low E Air IGU	0.31	3.2	2.9		0.34	0.27	0.52	59				
Grilles (Width<1")	0.31	3.2	2.9		0.34	0.25	0.46	59				
LE ^{SC} Air IGU	0.30	3.3	3.0		0.33	0.21	0.40	59				
Grilles (Width<1")	0.30	3.3	3.0		0.33	0.19	0.36	59				
HP (Low E Argon IGU)	0.26	3.8	3.3		0.30	0.27	0.51	62				
Grilles (Width<1")	0.26	3.8	3.3		0.30	0.24	0.45	62				
HP ^{SC} (Low E Argon IGU)	0.26	3.8	3.3		0.30	0.20	0.40	62				
Grilles (Width<1")	0.26	3.8	3.3		0.30	0.18	0.36	62				
HP2+ (Low E Argon IGU)	0.21	4.8	3.8		0.26	0.26	0.50	51				
Grilles (Width<1")	0.21	4.8	3.8		0.26	0.24	0.44	51				
HP2Max (Triple Pane Double Low E Argon IGU)	0.18	5.6	4.2		0.24	0.24	0.40	65				
Grilles (Width<1")	0.18	5.6	4.1		0.25	0.21	0.36	65				
HP3Max (Triple Pane Triple Low E Argon IGU)	0.16	6.3	4.5		0.22	0.21	0.39	58				
Grilles (Width<1")	0.16	6.3	4.4		0.23	0.19	0.34	59				
R-5 Option												
HP3Max (Triple Pane Triple Low E Argon IGU)	0.16	6.3	4.6		0.22	0.21	0.39	56				
Grilles (Width<1")	0.16	6.3	4.5		0.22	0.19	0.34	56				

Product Type / Popular Glazing Options	U-Factor (Center of Glass)	R-value (Center of Glass)	Total Unit R-value	NFRC Certified Values				Energy Star Qualified							
				NFRC CPD Number	Total Unit U-Factor	SHGC	VT	CR	Northern	North-Central	South-Central	Southern			
Picture & Architectural Shapes															
WarmEdge Spacer															
Clear IGU	0.49	2.0	2.1		0.47	0.65	0.67	45							
Grilles (Width<1")	0.49	2.0	2.1		0.47	0.58	0.59	45							
Low E Air IGU	0.31	3.2	3.0		0.33	0.30	0.56	57							
Grilles (Width<1")	0.31	3.2	3.0		0.33	0.27	0.50	57							
LE ^{SC} Air IGU	0.30	3.3	3.0		0.33	0.23	0.44	57							
Grilles (Width<1")	0.30	3.3	3.0		0.33	0.21	0.39	57							
HP (Low E Argon IGU)	0.26	3.8	3.4		0.29	0.30	0.56	61							
Grilles (Width<1")	0.26	3.8	3.4		0.29	0.27	0.50	61							
HP ^{SC} (Low E Argon IGU)	0.26	3.8	3.4		0.29	0.22	0.44	61							
Grilles (Width<1")	0.26	3.8	3.4		0.29	0.20	0.39	61							
HP2+ (Low E Argon IGU)	0.21	4.8	3.9		0.26	0.29	0.54	48							
Grilles (Width<1")	0.21	4.8	3.9		0.26	0.26	0.48	48							
HP2Max (Triple Pane Double Low E Argon IGU)	0.19	5.3	4.1		0.24	0.26	0.43	64							
Grilles (Width<1")	0.19	5.3	4.0		0.25	0.23	0.38	64							
HP3Max (Triple Pane Triple Low E Argon IGU)	0.17	5.9	4.5		0.22	0.23	0.42	54							
Grilles (Width<1")	0.17	5.9	4.4		0.23	0.21	0.37	54							
Warm Edge Plus+ Spacer															
Low E Air IGU	0.31	3.2	3.1		0.32	0.30	0.56	59							
Grilles (Width<1")	0.31	3.2	3.1		0.32	0.27	0.50	59							
LE ^{SC} Air IGU	0.30	3.3	3.1		0.32	0.23	0.44	59							
Grilles (Width<1")	0.30	3.3	3.1		0.32	0.21	0.39	59							
HP (Low E Argon IGU)	0.26	3.8	3.4		0.29	0.30	0.56	63							
Grilles (Width<1")	0.26	3.8	3.4		0.29	0.27	0.50	63							
HP ^{SC} (Low E Argon IGU)	0.26	3.8	3.6		0.28	0.22	0.44	63							
Grilles (Width<1")	0.26	3.8	3.6		0.28	0.20	0.39	63							
HP2+ (Low E Argon IGU)	0.21	4.8	4.0		0.25	0.29	0.54	50							
Grilles (Width<1")	0.21	4.8	4.0		0.25	0.26	0.48	50							
HP2Max (Triple Pane Double Low E Argon IGU)	0.19	5.3	4.2		0.24	0.25	0.40	66							
Grilles (Width<1")	0.19	5.3	4.1		0.24	0.23	0.36	66							
HP3Max (Triple Pane Triple Low E Argon IGU)	0.17	5.9	4.5		0.22	0.22	0.39	59							
Grilles (Width<1")	0.17	5.9	4.4		0.23	0.20	0.34	59							
R-5 Option															
HP3Max (Triple Pane Triple Low E Argon IGU)	0.17	5.9	4.9		0.20	0.23	0.42	56							
Grilles (Width<1")	0.17	5.9	4.9		0.20	0.21	0.38	56							
Casement															
WarmEdge Spacer															
Clear IGU	0.49	2.0	2.3		0.43	0.55	0.57	44							
Grilles (Width<1")	0.49	2.0	2.3		0.43	0.50	0.51	44							
Low E Air IGU	0.31	3.2	3.1		0.32	0.25	0.48	55							
Grilles (Width<1")	0.31	3.2	3.1		0.32	0.23	0.43	55							
LE ^{SC} Air IGU	0.31	3.2	3.1		0.32	0.19	0.37	55							
Grilles (Width<1")	0.31	3.2	3.1		0.32	0.18	0.34	55							
HP (Low E Argon IGU)	0.26	3.8	3.4		0.29	0.25	0.48	59							
Grilles (Width<1")	0.26	3.8	3.4		0.29	0.23	0.43	59							
HP ^{SC} (Low E Argon IGU)	0.25	4.0	3.4		0.29	0.19	0.37	59							
Grilles (Width<1")	0.25	4.0	3.4		0.29	0.18	0.34	59							
HP2+ (Low E Argon IGU)	0.21	4.8	4.0		0.25	0.25	0.46	48							
Grilles (Width<1")	0.21	4.8	4.0		0.25	0.22	0.42	48							
HP2Max (Triple Pane Double Low E Argon IGU)	0.18	5.6	4.5		0.22	0.22	0.37	68							
Grilles (Width<1")	0.18	5.6	4.4		0.23	0.20	0.34	68							
HP3Max (Triple Pane Triple Low E Argon IGU)	0.16	6.3	4.9		0.21	0.19	0.36	56							
Grilles (Width<1")	0.16	6.3	4.8		0.21	0.18	0.33	56							
Warm Edge Plus+ Spacer															
Low E Air IGU	0.30	3.4	3.3		0.30	0.25	0.48	59							
Grilles (Width<1")	0.30	3.4	3.3		0.30	0.23	0.43	59							
LE ^{SC} Air IGU	0.30	3.4	3.3		0.30	0.19	0.37	59							
Grilles (Width<1")	0.30	3.4	3.3		0.30	0.18	0.34	59							
HP (Low E Argon IGU)	0.26	3.8	3.7		0.27	0.25	0.48	62							
Grilles (Width<1")	0.26	3.8	3.7		0.27	0.23	0.43	62							
HP ^{SC} (Low E Argon IGU)	0.25	4.0	3.7		0.27	0.19	0.37	62							
Grilles (Width<1")	0.25	4.0	3.7		0.27	0.18	0.34	62							
HP2+ (Low E Argon IGU)	0.21	4.8	4.2		0.24	0.25	0.46	50							
Grilles (Width<1")	0.21	4.8	4.2		0.24	0.22	0.42	50							
HP2Max (Triple Pane Double Low E Argon IGU)	0.18	5.6	4.7		0.21	0.22	0.37	71							
Grilles (Width<1")	0.18	5.6	4.6		0.22	0.20	0.34	71							
HP3Max (Triple Pane Triple Low E Argon IGU)	0.16	6.3	5.0		0.20	0.19	0.36	58							
Grilles (Width<1")	0.16	6.3	4.9		0.20	0.18	0.33	58							
R-5 Option															
HP3Max (Triple Pane Triple Low E Argon IGU)	0.16	6.3	4.8		0.21	0.19	0.36	56							
Grilles (Width<1")	0.16	6.3	4.8		0.21	0.18	0.33	56							

PWG-M-156

PWG-M-025

Product Type / Popular Glazing Options	U-Factor (Center of Glass)	R-value (Center of Glass)	Total Unit R-value	NFRC Certified Values				Energy Star Qualified							
				NFRC CPD Number	Total Unit U-Factor	SHGC	VT	CR	Northern	North-Central	South-Central	Southern			
Fixed Casement															
WarmEdge Spacer															
Clear IGU	0.49	2.0	2.2		0.45	0.63	0.66	44							
Grilles (Width<1")	0.49	2.0	2.2		0.45	0.56	0.58	44							
Low E Air IGU	0.31	3.2	3.2		0.31	0.29	0.55	55		•	•				
Grilles (Width<1")	0.31	3.2	3.2		0.31	0.26	0.50	55		•	•	•			
LE ^{SC} Air IGU	0.31	3.2	3.2		0.31	0.22	0.44	55		•	•	•	•		
Grilles (Width<1")	0.31	3.2	3.2		0.31	0.20	0.39	55		•	•	•	•		
HP (Low E Argon IGU)	0.26	3.8	3.7		0.27	0.29	0.55	58	•	•	•				
Grilles (Width<1")	0.26	3.8	3.7		0.27	0.26	0.50	58	•	•	•	•			
HP ^{SC} (Low E Argon IGU)	0.25	4.0	3.7		0.27	0.22	0.44	58	•	•	•	•			
Grilles (Width<1")	0.25	4.0	3.7		0.27	0.20	0.39	58	•	•	•	•			
HP2+ (Low E Argon IGU)	0.21	4.8	4.2		0.24	0.28	0.54	47	•	•	•				
Grilles (Width<1")	0.21	4.8	4.2		0.24	0.25	0.48	47	•	•	•	•			
HP2Max (Triple Pane Double Low E Argon IGU)	0.19	5.3	4.6		0.22	0.25	0.43	66	•	•	•	•			
Grilles (Width<1")	0.19	5.3	4.4		0.23	0.23	0.38	66	•	•	•	•			
HP3Max (Triple Pane Triple Low E Argon IGU)	0.17	5.9	5.0		0.20	0.22	0.41	54	•	•	•	•			
Grilles (Width<1")	0.17	5.9	4.9		0.20	0.20	0.37	54	•	•	•	•			
Warm Edge Plus+ Spacer															
Low E Air IGU	0.30	3.4	3.3		0.30	0.29	0.55	58	•	•	•				
Grilles (Width<1")	0.30	3.4	3.3		0.30	0.26	0.50	58	•	•	•	•			
LE ^{SC} Air IGU	0.30	3.4	3.3		0.30	0.22	0.44	58	•	•	•	•			
Grilles (Width<1")	0.30	3.4	3.3		0.30	0.20	0.39	58	•	•	•	•			
HP (Low E Argon IGU)	0.26	3.8	3.8		0.27	0.29	0.55	62	•	•	•				
Grilles (Width<1")	0.26	3.8	3.8		0.27	0.26	0.50	62	•	•	•	•			
HP ^{SC} (Low E Argon IGU)	0.25	4.0	3.7		0.27	0.22	0.44	62	•	•	•	•			
Grilles (Width<1")	0.25	4.0	3.7		0.27	0.20	0.39	62	•	•	•	•			
HP2+ (Low E Argon IGU)	0.21	4.8	4.3		0.23	0.28	0.54	50	•	•	•				
Grilles (Width<1")	0.21	4.8	4.3		0.23	0.25	0.48	50	•	•	•	•			
HP2Max (Triple Pane Double Low E Argon IGU)	0.19	5.3	4.7		0.21	0.25	0.43	69	•	•	•	•			
Grilles (Width<1")	0.19	5.3	4.6		0.22	0.23	0.38	69	•	•	•	•			
HP3Max (Triple Pane Triple Low E Argon IGU)	0.17	5.9	5.1		0.19	0.22	0.41	56	•	•	•	•			
Grilles (Width<1")	0.17	5.9	5.0		0.20	0.20	0.37	56	•	•	•	•			
R-5 Option															
HP3Max (Triple Pane Triple Low E Argon IGU)	0.16	6.3	5.0		0.20	0.22	0.42	54	•	•	•	•			
Grilles (Width<1")	0.16	6.3	5.0		0.20	0.20	0.37	54	•	•	•	•			
Awning															
WarmEdge Spacer															
Clear IGU	0.49	2.0	2.3		0.44	0.54	0.56	43							
Grilles (Width<1")	0.49	2.0	2.3		0.44	0.49	0.51	43							
Low E Air IGU	0.31	3.2	3.1		0.32	0.25	0.48	52		•	•	•			
Grilles (Width<1")	0.31	3.2	3.1		0.32	0.22	0.43	52		•	•	•			
LE ^{SC} Air IGU	0.31	3.2	3.1		0.32	0.19	0.37	52		•	•	•			
Grilles (Width<1")	0.31	3.2	3.1		0.32	0.18	0.34	52		•	•	•			
HP (Low E Argon IGU)	0.26	3.8	3.4		0.29	0.25	0.48	55	•	•	•				
Grilles (Width<1")	0.26	3.8	3.4		0.29	0.23	0.43	55	•	•	•	•			
HP ^{SC} (Low E Argon IGU)	0.25	4.0	3.4		0.29	0.19	0.37	55	•	•	•	•			
Grilles (Width<1")	0.25	4.0	3.4		0.29	0.18	0.34	55	•	•	•	•			
HP2+ (Low E Argon IGU)	0.21	4.8	4.0		0.25	0.25	0.46	45	•	•	•				
Grilles (Width<1")	0.21	4.8	4.0		0.25	0.22	0.42	45	•	•	•	•			
HP2Max (Triple Pane Double Low E Argon IGU)	0.18	5.6	4.5		0.22	0.22	0.37	69	•	•	•	•			
Grilles (Width<1")	0.18	5.6	4.5		0.22	0.20	0.34	69	•	•	•	•			
HP3Max (Triple Pane Triple Low E Argon IGU)	0.16	6.3	4.9		0.21	0.19	0.36	56	•	•	•	•			
Grilles (Width<1")	0.16	6.3	4.8		0.21	0.18	0.33	56	•	•	•	•			
Warm Edge Plus+ Spacer															
Low E Air IGU	0.30	3.4	3.3		0.30	0.25	0.48	58	•	•	•				
Grilles (Width<1")	0.30	3.4	3.3		0.30	0.23	0.43	58	•	•	•	•			
LE ^{SC} Air IGU	0.30	3.4	3.3		0.30	0.19	0.37	58	•	•	•	•			
Grilles (Width<1")	0.30	3.4	3.3		0.30	0.18	0.34	58	•	•	•	•			
HP (Low E Argon IGU)	0.26	3.8	3.7		0.27	0.25	0.48	58	•	•	•				
Grilles (Width<1")	0.26	3.8	3.7		0.27	0.23	0.43	58	•	•	•	•			
HP ^{SC} (Low E Argon IGU)	0.25	4.0	3.7		0.27	0.19	0.37	58	•	•	•	•			
Grilles (Width<1")	0.25	4.0	3.7		0.27	0.18	0.34	58	•	•	•	•			
HP2+ (Low E Argon IGU)	0.21	4.8	4.2		0.24	0.25	0.46	47	•	•	•				
Grilles (Width<1")	0.21	4.8	4.2		0.24	0.22	0.42	47	•	•	•	•			
HP2Max (Triple Pane Double Low E Argon IGU)	0.18	5.6	4.7		0.21	0.22	0.37	72	•	•	•	•			
Grilles (Width<1")	0.18	5.6	4.7		0.22	0.20	0.34	72	•	•	•	•			
HP3Max (Triple Pane Triple Low E Argon IGU)	0.16	6.3	5.0		0.20	0.19	0.36	58	•	•	•	•			
Grilles (Width<1")	0.16	6.3	5.0		0.20	0.18	0.33	58	•	•	•	•			
R-5 Option															
HP3Max (Triple Pane Triple Low E Argon IGU)	0.16	6.3	4.8		0.21	0.19	0.36	56	•	•	•	•			
Grilles (Width<1")	0.16	6.3	4.8		0.21	0.18	0.33	56	•	•	•	•			

PWG-M-024

PWG-M-026

Product Type / Popular Glazing Options	U-Factor (Center of Glass)	R-value (Center of Glass)	Total Unit R-value	NFRC Certified Values					Energy Star Qualified								
				NFRC CPD Number	Total Unit U-Factor	SHGC	VT	CR	Northern	North-Central	South-Central	Southern					
Sliding Patio Door																	
WarmEdge Spacer																	
Clear IGU	0.48	2.1	2.1	PWG-M-44	0.48	0.64	0.68	42									
Grilles (Width<1")	0.48	2.1	2.1		0.48	0.57	0.59	42									
Low E Air IGU	0.30	3.4	3.1		0.32	0.28	0.49	52	•	•	•	•					
Grilles (Width<1")	0.30	3.4	2.9		0.34	0.25	0.43	52									
LE ^{SC} Air IGU	0.29	3.4	3.1		0.32	0.20	0.30	52	•	•	•	•					
Grilles (Width<1")	0.29	3.4	2.9		0.34	0.18	0.26	52									
HP (Low E Argon IGU)	0.25	4.0	3.4		0.29	0.30	0.57	54	•	•	•	•					
Grilles (Width<1")	0.25	4.0	3.2		0.31	0.27	0.50	54	•	•	•	•					
HP ^{SC} (Low E Argon IGU)	0.24	4.2	3.4		0.29	0.23	0.45	54	•	•	•	•					
Grilles (Width<1")	0.24	4.2	3.2		0.31	0.20	0.39	54	•	•	•	•					
Warm Edge Plus+ Spacer																	
Low E Air IGU	0.30	3.4	3.1		0.32	0.28	0.49	55	•	•	•	•					
Grilles (Width<1")	0.30	3.4	3.0		0.33	0.25	0.43	55									
LE ^{SC} Air IGU	0.29	3.4	3.1		0.32	0.20	0.30	55	•	•	•	•					
Grilles (Width<1")	0.29	3.4	3.0		0.33	0.18	0.26	55									
HP (Low E Argon IGU)	0.25	4.0	3.5		0.29	0.30	0.57	58									
Grilles (Width<1")	0.25	4.0	3.3		0.31	0.27	0.50	58	•	•	•	•					
HP ^{SC} (Low E Argon IGU)	0.24	4.2	3.5		0.28	0.23	0.45	58	•	•	•	•					
Grilles (Width<1")	0.24	4.2	3.3		0.30	0.20	0.39	58	•	•	•	•					

-Option does NOT meet ENERGY STAR zone requirements for 2011 federal energy tax credit.
 -TS w/ grilles option does NOT meet ENERGY STAR zone requirements for 2011 federal energy tax credit.
 -Option is Energy Star Qualified per zone.

NFRC (National Fenestration Rating Council)

CPD - Certified Product Directory
 SHGC - Solar Heat Gain Coefficient
 VT - Visible Light Transmission
 CR - Condensation Resistance

U-Factor - Rate of Heat Loss
 R-Value - Resistance to Heat Flow



Footnotes: Total unit values: Single strength glass for all dual & triple pane windows.

Total unit values: Double strength glass for all dual & triple pane Patio Doors, Picture Windows and Architectural Shapes.