



## Manufacturer's Certification Ply Gem Windows – East Premium, Pro and Contractor Replacement Series

Ply Gem Windows, located at 4415 Pheasant Ridge Road, Suite 300, Roanoke, Virginia 24014, manufactures certain exterior windows and doors that, when purchased with optional Low-E glass products, argon gas fill and spacer system upgrades in a single, double or triple glazed unit, meet or exceed the prescriptive criteria established by the IECC for all climate zones in which the window or doors are installed.

To qualify for the 2011 federal tax credit, exterior windows and doors must meet the ENERGY STAR requirements for the climate zone in which they are installed. The Ply Gem window and door products shown on Attachment A qualify for this tax credit. To qualify for the tax credit, homeowners must purchase the qualifying products and install between January 1, 2011 and December 31, 2011.

To certify the qualifying Ply Gem Windows products for purposes of the tax credits available, **Ply Gem Windows represents that its window and door products meet the ENERGY STAR zone requirements shown on Attachment A and are “Eligible Building Envelope Component(s)” that qualify for the federal income tax credit.**

**Homeowners should consult their tax advisor to determine whether they qualify for any potential income tax credits.**

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 true, correct, and complete.

A handwritten signature in black ink, appearing to read 'Lynn Morstad', written in a cursive style.

Lynn Morstad  
President, Ply Gem Windows

February, 2011  
[www.plygemwindows.com](http://www.plygemwindows.com)



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	
<b>Double Hung</b>													
<b>WarmEdge Spacer</b>													
HP (Low E Argon IGU)	0.26	3.8	3.2	PWG-M-29	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 <sup>SC</sup> (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	•	•	•	•	
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	•	•	•	•	
<b>Energy Package Option</b>													
<b>WarmEdge Spacer</b>													
Energy Package ( Low E Argon IGU)	0.26	3.8	3.3		PWG-M-32	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 <sup>SC</sup> (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	•	•	•	•	
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	•	•	•	•	
<b>WarmEdge Plus+ Spacer</b>													
HP (Low E Argon IGU)	0.26	3.8	3.3	PWG-M-29		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 <sup>SC</sup> (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	•	•	•	•	
<b>Energy Package Option</b>													
<b>WarmEdge Plus+ Spacer</b>													
Energy Package ( Low E Argon IGU)	0.26	3.8	3.4		PWG-M-32	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 <sup>SC</sup> (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	•	•	•	•	
<b>R-5 Option</b>													
HP3 <sub>MAX</sub> (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	•	•	•	•	



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	
<b>Slider</b>													
<b>WarmEdge Spacer</b>													
HP (Low E Argon IGU)	0.26	3.8	3.3	PWG-M-38	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 <sup>SC</sup> (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	0.24	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	•	•	•	•	
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	•	•	•	•	
<b>Energy Package Option</b>													
<b>WarmEdge Spacer</b>													
Energy Package ( Low E Argon IGU)	0.26	3.8	3.4		PWG-M-37	0.29	0.26	0.50	55	•	•	•	•
Grilles (Width<1")	0.26	3.8	3.4			0.29	0.24	0.44	55	•	•	•	•
Sculptured Grilles (Width>1")	0.26	3.8	3.4	0.29		0.21	0.39	55	•	•	•	•	
Energy Package <sup>SC</sup> (Solar Cooling Low E Argon IGU)	0.25	4.0	3.4	0.29		0.20	0.39	55	•	•	•	•	
Grilles (Width<1")	0.25	4.0	3.4	0.29		0.18	0.35	55	•	•	•	•	
Sculptured Grilles (Width>1")	0.25	4.0	3.4	0.29		0.16	0.31	55	•	•	•	•	
Energy Package Plus (Double Low E Argon IGU)	0.25	4.0	3.4	0.29		0.25	0.43	55	•	•	•	•	
Grilles (Width<1")	0.25	4.0	3.4	0.29		0.22	0.38	55	•	•	•	•	
Sculptured Grilles (Width>1")	0.25	4.0	3.4	0.29		0.20	0.31	55	•	•	•	•	
Energy Package 2Plus+ (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	•	•	•	•	
Energy Package 2Max (Triple Pane Double Low E Argon IGU)	0.18	5.6	4.3	0.23		0.23	0.39	61	•	•	•	•	
Grilles (Width<1")	0.18	5.6	4.2	0.24		0.21	0.34	61	•	•	•	•	
Energy Package 3Max (Triple Pane Double Low E Argon IGU)	0.16	6.3	4.8	0.21		0.20	0.38	52	•	•	•	•	
Grilles (Width<1")	0.16	6.3	4.8	0.21		0.18	0.34	52	•	•	•	•	
<b>WarmEdge Plus+ Spacer</b>													
HP (Low E Argon IGU)	0.26	3.8	3.4	PWG-M-38		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 <sup>SC</sup> (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	•	•	•	•	
<b>Energy Package Option</b>													
<b>WarmEdge Plus+ Spacer</b>													
Energy Package ( Low E Argon IGU)	0.26	3.8	3.6		PWG-M-37	0.28	0.26	0.50	59	•	•	•	•
Grilles (Width<1")	0.26	3.8	3.6			0.28	0.24	0.44	59	•	•	•	•
Sculptured Grilles (Width>1")	0.26	3.8	3.6			0.28	0.21	0.39	59	•	•	•	•
Energy Package <sup>SC</sup> (Solar Cooling Low E Argon IGU)	0.25	4.0	3.6			0.28	0.20	0.39	59	•	•	•	•
Grilles (Width<1")	0.25	4.0	3.6			0.28	0.18	0.35	59	•	•	•	•
Sculptured Grilles (Width>1")	0.25	4.0	3.6			0.28	0.16	0.31	59	•	•	•	•
Energy Package Plus (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	•	•	•	•	
<b>R-5 Option</b>													
HP <sub>3MAX</sub> (Triple Pane Triple Low E Argon IGU)	0.16	6.3	4.8	PWG-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	•	•	•	•

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		
<b>Picture</b>														
<b>WarmEdge Spacer</b>														
HP (Low E Argon IGU)	0.26	3.8	3.6	PWG-M-41	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 <sup>SC</sup> (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	•	•	•	•	•	
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	•	•	•	•	•	
<b>WarmEdge Plus+ Spacer</b>														
HP (Low E Argon IGU)	0.26	3.8	3.6		PWG-M-151	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 <sup>SC</sup> (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	•	•	•	•	•	
<b>R-5 Option</b>														
HP3 <sub>MAX</sub> (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	•	•	•	•	•	
<b>Architectural Shapes</b>														
<b>WarmEdge Spacer</b>														
HP (Low E Argon IGU)	0.26	3.8	3.6	PWG-M-151		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 <sup>SC</sup> (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	•	•	•	•	•	
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	•	•	•	•	•	
<b>R-5 Option</b>														
HP3 <sub>MAX</sub> (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	•	•	•	•	•	



ATTACHMENT A

Product Type / Popular Glazing Options	U-Factor (Center of Glass)	R-value (Center of Glass)	Total Unit R-value	NFRC CPD Number	Total Unit U-Factor	SHGC	VT	CR	Energy Star Qualified			
									Northern	North-Central	South-Central Southern	
<b>Casement</b>												
<b>WarmEdge Spacer</b>												
HP (Low E Argon IGU)	0.26	3.8	3.6	PWG-M-25	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 <sup>SC</sup> (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	•	•	•	
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	•	•	•	
<b>Energy Package Option</b>												
<b>WarmEdge Spacer</b>												
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 <sup>SC</sup> (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	•	•	•		
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	•	•	•		
<b>WarmEdge Plus+ Spacer</b>												
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 <sup>SC</sup> (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	•	•	•		
<b>Energy Package Option</b>												
<b>WarmEdge Plus+ Spacer</b>												
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 <sup>SC</sup> (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	•	•	•		
<b>R-5 Option</b>												
HP3 <sub>MAX</sub> (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	•	•	•		



ATTACHMENT 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	
<b>Fixed Casement</b>													
<b>WarmEdge Spacer</b>													
HP (Low E Argon IGU)	0.26	3.8	3.7	PWG-M-24	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 <sup>SC</sup> (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	•	•	•	•	•
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	•	•	•	•	•
<b>Energy Package Option</b>													
<b>WarmEdge Spacer</b>													
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 <sup>SC</sup> (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	•	•	•	•	•	
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	•	•	•	•	•	
<b>WarmEdge Plus+ Spacer</b>													
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 <sup>SC</sup> (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	•	•	•	•	•	
<b>Energy Package Option</b>													
<b>WarmEdge Plus+ Spacer</b>													
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 <sup>SC</sup> (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	•	•	•	•	•	
<b>R-5 Option</b>													
HP <sub>3MAX</sub> (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	•	•	•	•	•	



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
<b>Awning</b>										
<b>WarmEdge Spacer</b>										
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 <sup>SC</sup> (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	•	•
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	•	•
<b>Energy Package Option</b>										
<b>WarmEdge Spacer</b>										
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 <sup>SC</sup> (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	•	•
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	•	•
<b>WarmEdge Plus+ Spacer</b>										
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 <sup>SC</sup> (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	•	•
<b>Energy Package Option</b>										
<b>WarmEdge Plus+ Spacer</b>										
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 <sup>SC</sup> (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	•	•
<b>R-5 Option</b>										
HP3 <sub>MAX</sub> (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-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	
<b>Premium Sliding Patio Door (CMPD)</b>													
<b>WarmEdge Spacer</b>				PWG-M-45									
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 <sup>SC</sup> (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	•	•	•	•	
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	•	•	•	•	
<b>WarmEdge Plus+ Spacer</b>													
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 <sup>SC</sup> (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	•	•	•	•	
<b>R-5 Option</b>													
HP3 <sub>MAX</sub> (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	•	•	•	•	

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.



**PRO SERIES**  
REPLACEMENT WINDOWS

ATTACHMENT 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	
<b>Double Hung</b>													
<b>Warm Edge Spacer</b>													
HP (Low E Argon IGU)	0.26	3.8	3.2	PWG-M-28	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 <sup>SC</sup> (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	•	•	•	•	
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	•	•	•	•	
<b>Warm Edge Plus+ Spacer</b>													
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 <sup>SC</sup> (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	•	•	•	•		
<b>Frame R-Core Up-Grade</b>													
<b>WarmEdge Spacer</b>													
HP (Low E Argon IGU)	0.26	3.8	3.2	PWG-M-29	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 <sup>SC</sup> (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	•	•	•	•	
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	•	•	•	•	
<b>WarmEdge Plus+ Spacer</b>													
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 <sup>SC</sup> (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	•	•	•	•		
<b>R-5 Option</b>													
HP <sup>3MAX</sup> (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	•	•	•	•	



**PRO SERIES**  
REPLACEMENT WINDOWS

ATTACHMENT 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	
<b>Slider</b>													
<b>Warm Edge Spacer</b>													
HP (Low E Argon IGU)	0.26	3.8	3.1	PGW-M-36	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 <sup>SC</sup> (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	•	•	•	•	
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	•	•	•	•	
<b>Warm Edge Plus+ Spacer</b>													
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 <sup>SC</sup> (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	•	•	•	•		
<b>Frame R-Core Up-Grade</b>													
<b>WarmEdge Spacer</b>													
HP (Low E Argon IGU)	0.26	3.8	3.3	PWG-M-38	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 <sup>SC</sup> (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	•	•	•	•	
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	•	•	•	•	
<b>WarmEdge Plus+ Spacer</b>													
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 <sup>SC</sup> (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	•	•	•	•		
<b>R-5 Option</b>													
HP3 <sub>MAX</sub> (Triple Pane Triple Low E Argon IGU)	0.16	6.3	4.8	PWG-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	•	•	•	•	



**PRO SERIES**  
REPLACEMENT WINDOWS

ATTACHMENT 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	
<b>Picture</b>													
<b>Warm Edge Spacer</b>													
HP (Low E Argon IGU)	0.26	3.8	3.4	PWG-M-42	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 <sup>SC</sup> (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	•	•	•	•	
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	•	•	•	•	
<b>Warm Edge Plus+ Spacer</b>													
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 <sup>SC</sup> (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	•	•	•	•		
<b>Frame R-Core Up-Grade</b>													
<b>WarmEdge Spacer</b>													
HP (Low E Argon IGU)	0.26	3.8	3.6	PWG-M-41	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 <sup>SC</sup> (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	•	•	•	•	
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	•	•	•	•	
<b>WarmEdge Plus+ Spacer</b>													
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 <sup>SC</sup> (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	•	•	•	•		
<b>R-5 Option</b>													
HP <sub>MAX</sub> (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	•	•	•	•		



**PRO SERIES**  
REPLACEMENT WINDOWS

ATTACHMENT 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
<b>Casement</b>												
<b>Warm Edge Spacer</b>												
HP (Low E Argon IGU)	0.26	3.8	3.4	PWG-M-25	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 <sup>SC</sup> (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	•	•	•	•
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	•	•	•	•
<b>Warm Edge Plus+ Spacer</b>												
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 <sup>SC</sup> (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	•	•	•	•
<b>Frame R-Core Up-Grade</b>												
<b>WarmEdge Spacer</b>												
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 <sup>SC</sup> (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	•	•	•	•	
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	•	•	•	•	
<b>WarmEdge Plus+ Spacer</b>												
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 <sup>SC</sup> (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	•	•	•	•	
<b>R-5 Option</b>												
HP3 <sub>MAX</sub> (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	•	•	•	•	



**PRO SERIES**  
REPLACEMENT WINDOWS

ATTACHMENT 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
<b>Fixed Casement</b>												
<b>Warm Edge Spacer</b>												
HP (Low E Argon IGU)	0.26	3.8	3.7	PWG-M-24	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 <sup>SC</sup> (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	•	•	•	•
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	•	•	•	•
<b>Warm Edge Plus+ Spacer</b>												
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 <sup>SC</sup> (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	•	•	•	•	
<b>Frame R-Core Up-Grade</b>												
<b>WarmEdge Spacer</b>												
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 <sup>SC</sup> (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	•	•	•	•	
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	•	•	•	•	
<b>WarmEdge Plus+ Spacer</b>												
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 <sup>SC</sup> (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	•	•	•	•	
<b>R-5 Option</b>												
HP <sup>3MAX</sup> (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	•	•	•	•	



**PRO SERIES**  
REPLACEMENT WINDOWS

ATTACHMENT 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	
<b>Awning</b>													
<b>Warm Edge Spacer</b>													
HP (Low E Argon IGU)	0.26	3.8	3.4	PWG-M-26	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 <sup>SC</sup> (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	•	•	•	•	
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	-	-	-	-	
<b>Warm Edge Plus+ Spacer</b>													
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 <sup>SC</sup> (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	•	•	•	•	
<b>Frame R-Core Up-Grade</b>													
<b>WarmEdge Spacer</b>													
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 <sup>SC</sup> (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	•	•	•	•		
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	•	•	•	•		
<b>WarmEdge Plus+ Spacer</b>													
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 <sup>SC</sup> (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	•	•	•	•		
<b>R-5 Option</b>													
HP3 <sub>MAX</sub> (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	•	•	•	•		



**PRO SERIES**  
REPLACEMENT WINDOWS

ATTACHMENT 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
<b>Sliding Patio Door</b>												
<b>New Construction Door (APD)</b>												
<b>Warm Edge Spacer</b>												
HP (Low E Argon IGU)	0.25	4.0	3.4	PWG-M-44	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 <sup>SC</sup> (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	•	•	•	•
<b>Warm Edge Plus+ Spacer</b>												
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 <sup>SC</sup> (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+ (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.



2000 CONTRACTOR SERIES  
REPLACEMENT WINDOWS

ATTACHMENT 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		
<b>Double Hung</b>														
<b>WarmEdge Spacer</b>														
Low E Air IGU	0.30	3.3	3.1	PWG-M-155	0.32	0.27	0.52	54	•	•	•	•		
Grilles (Width<1")	0.30	3.3	3.1		0.32	0.25	0.46	54	•	•	•	•		
LE <sup>SC</sup> 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 <sup>SC</sup> (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	•	•	•	•		
<b>Warm Edge Plus+ Spacer</b>														
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 <sup>SC</sup> 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 <sup>SC</sup> (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	•	•	•	•			
<b>R-5 Option</b>														
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	•	•	•	•			
<b>Slider</b>														
<b>WarmEdge Spacer</b>														
Low E Air IGU	0.31	3.2	2.9	PWG-M-157	0.35	0.27	0.52	56	•	•	•	•		
Grilles (Width<1")	0.31	3.2	2.9		0.35	0.25	0.46	56	•	•	•	•		
LE <sup>SC</sup> 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 <sup>SC</sup> (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	•	•	•	•		
<b>Warm Edge Plus+ Spacer</b>														
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 <sup>SC</sup> 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 <sup>SC</sup> (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	•	•	•	•			
<b>R-5 Option</b>														
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	•	•	•	•			



2000  
**CONTRACTOR SERIES**  
 REPLACEMENT WINDOWS

ATTACHMENT 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	
<b>Picture &amp; Architectural Shapes</b>													
<b>WarmEdge Spacer</b>													
Low E Air IGU	0.31	3.2	3.0	PWG-M-156	0.33	0.30	0.56	57					
Grilles (Width<1")	0.31	3.2	3.0		0.33	0.27	0.50	57					
LE <sup>SC</sup> 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 <sup>SC</sup> (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					
<b>Warm Edge Plus+ Spacer</b>													
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 <sup>SC</sup> 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 <sup>SC</sup> (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					
<b>R-5 Option</b>													
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						
<b>Caseament</b>													
<b>WarmEdge Spacer</b>													
Low E Air IGU	0.31	3.2	3.1	PWG-M-025	0.32	0.25	0.48	55					
Grilles (Width<1")	0.31	3.2	3.1		0.32	0.23	0.43	55					
LE <sup>SC</sup> 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 <sup>SC</sup> (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					
<b>Warm Edge Plus+ Spacer</b>													
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 <sup>SC</sup> 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 <sup>SC</sup> (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					
<b>R-5 Option</b>													
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						



2000 CONTRACTOR SERIES  
REPLACEMENT WINDOWS

ATTACHMENT 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	
<b>Fixed Casement</b>													
<b>WarmEdge Spacer</b>													
Low E Air IGU	0.31	3.2	3.2	PWG-M-024	0.31	0.29	0.55	55	•	•	•	•	
Grilles (Width<1")	0.31	3.2	3.2		0.31	0.26	0.50	55	•	•	•	•	
LE <sup>SC</sup> 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 <sup>SC</sup> (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	•	•	•	•	
<b>Warm Edge Plus+ Spacer</b>													
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 <sup>SC</sup> 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 <sup>SC</sup> (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	•	•	•	•		
<b>R-5 Option</b>													
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	•	•	•	•		
<b>Awning</b>													
<b>WarmEdge Spacer</b>													
Low E Air IGU	0.31	3.2	3.1	PWG-M-026	0.32	0.25	0.48	52	•	•	•	•	
Grilles (Width<1")	0.31	3.2	3.1		0.32	0.22	0.43	52	•	•	•	•	
LE <sup>SC</sup> 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 <sup>SC</sup> (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	•	•	•	•	
<b>Warm Edge Plus+ Spacer</b>													
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 <sup>SC</sup> 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 <sup>SC</sup> (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	•	•	•	•		
<b>R-5 Option</b>													
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	•	•	•	•		

# PLY GEM 2000 CONTRACTOR SERIES

WINDOWS REPLACEMENT WINDOWS

ATTACHMENT 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	
<b>Sliding Patio Door</b>													
<b>WarmEdge Spacer</b>				PWG-M-44									
Low E Air IGU	0.30	3.4	3.1		0.32	0.28	0.49	52	•	•	•	•	
LE <sup>SC</sup> Air IGU	0.29	3.4	3.1		0.32	0.20	0.30	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 <sup>SC</sup> (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	•	•	•	•	
<b>Warm Edge Plus+ Spacer</b>													
Low E Air IGU	0.30	3.4	3.1		0.32	0.28	0.49	55	•	•	•	•	
LE <sup>SC</sup> Air IGU	0.29	3.4	3.1		0.32	0.20	0.30	55	•	•	•	•	
Grilles (Width<1")	0.25	4.0	3.3		0.31	0.27	0.50	58	•	•	•	•	
HP <sup>SC</sup> (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.