

**APPLICATION FOR
URBAN DESIGN COMMISSION
REVIEW AND APPROVAL**

**AGENDA ITEM # _____
Project # _____
Legistar # _____**

DATE SUBMITTED: <u>March 27, 2013</u>	Action Requested
UDC MEETING DATE: <u>April 3, 2013</u>	<input type="checkbox"/> Informational Presentation
	<input type="checkbox"/> Initial Approval and/or Recommendation
	<input checked="" type="checkbox"/> Final Approval and/or Recommendation

PLEASE PRINT!

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PROJECT ADDRESS: 502 S. Park Street

ALDERMANIC DISTRICT: District 13- Sue Ellingson

OWNER/DEVELOPER (Partners and/or Principals) <u>The Gallina Companies</u> <u>101 E Main Street Suite 500</u> <u>Mount Horeb, WI 53572</u>	ARCHITECT/DESIGNER/OR AGENT: <u>Plunkett Raysich Architects</u> <u>2310 Crossroads Dr. Suite 2000</u> <u>Madison, WI 53718</u>
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TYPE OF PROJECT:
(See Section A for:)

- Planned Unit Development (PUD)
 - General Development Plan (GDP)
 - Specific Implementation Plan (SIP)
- Planned Community Development (PCD)
 - General Development Plan (GDP)
 - Specific Implementation Plan (SIP)
- Planned Residential Development (PRD)
- New Construction or Exterior Remodeling in an Urban Design District * (A public hearing is required as well as a fee)
- School, Public Building or Space (Fee may be required)
- New Construction or Addition to or Remodeling of a Retail, Hotel or Motel Building Exceeding 40,000 Sq. Ft.
- Planned Commercial Site

(See Section B for:)

- New Construction or Exterior Remodeling in C4 District (Fee required)

(See Section C for:)

- R.P.S.M. Parking Variance (Fee required)

(See Section D for:)

- Comprehensive Design Review* (Fee required)
- Street Graphics Variance* (Fee required)
- Other Review window alternative

*Public Hearing Required (Submission Deadline 3 Weeks in Advance of Meeting Date)

Where fees are required (as noted above) they apply with the first submittal for either initial or final approval of a project.

Comparison Unit	Wojan Awning (AW65) Fixed (AW100) Hopper (AW70) Casement (AW70)	JELD-WEN Awning Fixed Casement
Air	<.01 Fixed	<.01 Fixed .01 Casement/ Awning
Water	12 PSF	7.5 PSF LC-PG50
U Factor	.39 Fixed	.28 Casement/ Awning .27 Fixed Both w/ Argon
SHGC	<.40	.27 Casement/ Awning .32 Fixed
CRF	52	59 Casement 55 Awning/ Fixed
Warranty Unit	10 Year Option	10 Year
Warranty Glass	10 Year	10 Year
Warranty Finish	10 Year	10 Year
Warranty Thermal Break	10 Year	

The performance information listed is for new products and is intended to be used for reference only, and is not complete. Depending on the components, accessories, and options chosen, the actual rating could vary. Confirm ratings for specific products with your supplier or JELD-WEN sales representative.

Premium Vinyl											
SERIES	GLAZING	No Grids				Flat GBG, Narrow Contour GBG			Wide Contoured Grids		
		U-FACTOR	CR	SHGC	VT	U-FACTOR	SHGC	VT	U-FACTOR	SHGC	VT
Casement	Clear	0.42	43	0.56	0.59	0.42	0.50	0.52	0.42	0.50	0.52
	Low-E 272	0.30	55	0.27	0.46	0.30	0.25	0.41	0.30	0.25	0.41
	Low-E 272 Argon	0.28	59	0.27	0.46	0.28	0.25	0.41	0.28	0.25	0.41
	Low-E 366	0.30	56	0.18	0.41	0.30	0.17	0.37	0.30	0.17	0.37
	Low-E 366 Argon	0.27	59	0.18	0.41	0.27	0.17	0.37	0.27	0.17	0.37
	Energy Saver Max: Triple Glaze Low E Argon	0.24	65	0.23	0.36	-	-	-	-	-	-
	Energy Saver Max: Triple Glaze Low-E 366 Argon	0.23	66	0.16	0.29	-	-	-	-	-	-
	Energy Saver Max K: Triple Glaze Low E Krypton	0.20	70	0.23	0.36	-	-	-	-	-	-
	Energy Saver Max K: Triple Glaze Low-E 366 Krypton	0.20	70	0.16	0.29	-	-	-	-	-	-
	Energy Saver Plus	0.27	59	0.18	0.41	0.27	0.17	0.37	0.27	0.17	0.37
	Energy Star northern qualified	0.28	59	0.27	0.46	0.28	0.25	0.41	0.28	0.25	0.41
	Energy Star north central qualified	0.28	59	0.27	0.46	0.28	0.25	0.41	0.28	0.25	0.41
	Energy Star south central qualified	0.30	56	0.18	0.41	0.30	0.17	0.37	0.30	0.17	0.37
Energy Star southern qualified	0.30	56	0.18	0.41	0.30	0.17	0.37	0.30	0.17	0.37	
Stationary Casement	Clear	0.44	43	0.61	0.63	0.44	0.54	0.56	0.44	0.54	0.56
	Low-E 272	0.30	53	0.32	0.55	0.30	0.29	0.49	0.30	0.29	0.49
	Low-E 272 Argon	0.27	55	0.32	0.55	0.27	0.29	0.49	0.27	0.29	0.49
	Low-E 366	0.30	54	0.21	0.50	0.30	0.19	0.44	0.30	0.19	0.44
	Low-E 366 Argon	0.26	56	0.21	0.50	0.26	0.19	0.44	0.26	0.19	0.44
	Energy Saver Max: Triple Glaze Low E Argon	0.22	65	0.27	0.44	-	-	-	-	-	-
	Energy Saver Max: Triple Glaze Low-E 366 Argon	0.22	66	0.19	0.35	-	-	-	-	-	-
	Energy Saver Max K: Triple Glaze Low E Krypton	0.18	70	0.27	0.44	-	-	-	-	-	-
	Energy Saver Max K: Triple Glaze Low-E 366 Krypton	0.18	70	0.18	0.35	-	-	-	-	-	-
	Energy Saver Plus	0.30	54	0.21	0.50	0.30	0.19	0.44	0.30	0.19	0.44
	Energy Star northern qualified	0.27	55	0.32	0.55	0.27	0.29	0.49	0.27	0.29	0.49
	Energy Star north central qualified	0.27	55	0.32	0.55	0.27	0.29	0.49	0.27	0.29	0.49
	Energy Star south central qualified	0.30	54	0.21	0.50	0.30	0.19	0.44	0.30	0.19	0.44
Energy Star southern qualified	0.30	54	0.21	0.50	0.30	0.19	0.44	0.30	0.19	0.44	

SERIES	GLAZING	No Grids				Flat GBG, Narrow Contour GBG			Wide Contoured Grids		
		U-FACTOR	CR	SHGC	VT	U-FACTOR	SHGC	VT	U-FACTOR	SHGC	VT
Awning	Clear	0.42	43	0.51	0.53	0.42	0.46	0.47	0.42	0.46	0.47
	Low-E 272	0.30	52	0.27	0.46	0.30	0.25	0.41	0.30	0.25	0.41
	Low-E 272 Argon	0.28	55	0.27	0.46	0.28	0.30	0.25	0.28	0.25	0.41
	Low-E 366	0.30	53	0.18	0.41	0.30	0.17	0.37	0.30	0.17	0.37
	Low-E 366 Argon	0.27	55	0.18	0.41	0.27	0.16	0.37	0.27	0.16	0.37
	Energy Saver Max: Triple Glaze Low E Argon	0.24	66	0.23	0.36	-	-	-	-	-	-
	Energy Saver Max: Triple Glaze Low-E 366 Argon	0.23	66	0.16	0.29	-	-	-	-	-	-
	Energy Saver Max K: Triple Glaze Low E Krypton	0.20	70	0.23	0.36	-	-	-	-	-	-
	Energy Saver Max K: Triple Glaze Low-E 366 Krypton	0.20	71	0.16	0.29	-	-	-	-	-	-
	Energy Saver Plus	0.27	55	0.18	0.41	0.27	0.16	0.37	0.27	0.16	0.37
	Energy Star northern qualified	0.28	55	0.27	0.46	0.28	0.30	0.25	0.28	0.25	0.41
	Energy Star north central qualified	0.28	55	0.27	0.46	0.28	0.30	0.25	0.28	0.25	0.41
	Energy Star south central qualified	0.30	53	0.18	0.41	0.30	0.17	0.37	0.30	0.17	0.37
	Energy Star southern qualified	0.30	53	0.18	0.41	0.30	0.17	0.37	0.30	0.17	0.37
Horizontal Slider	Clear	0.47	41	0.64	0.66	0.47	0.57	0.59	0.47	0.57	0.59
	Low-E 272	0.33	53	0.34	0.58	0.33	0.31	0.52	0.33	0.31	0.52
	Low-E 272 Argon	0.30	55	0.34	0.58	0.30	0.30	0.52	0.30	0.30	0.52
	Low-E 366	0.33	53	0.23	0.52	0.33	0.20	0.47	0.33	0.20	0.47
	Low-E 366 Argon	0.29	56	0.22	0.52	0.29	0.20	0.47	0.29	0.20	0.47
	Energy Saver Max: Triple Glaze Low E Argon	0.25	63	0.28	0.46	-	-	-	-	-	-
	Energy Saver Max: Triple Glaze Low-E 366 Argon	0.24	64	0.19	0.37	-	-	-	-	-	-
	Energy Saver Max K: Triple Glaze Low E Krypton	0.20	67	0.28	0.46	-	-	-	-	-	-
	Energy Saver Max K: Triple Glaze Low-E 366 Krypton	0.20	67	0.19	0.37	-	-	-	-	-	-
	Energy Saver Plus	0.29	56	0.22	0.52	0.29	0.20	0.47	0.29	0.20	0.47
	Energy Star northern qualified	0.29	56	0.22	0.52	0.29	0.20	0.47	0.29	0.20	0.47
	Energy Star north central qualified	0.29	56	0.22	0.52	0.29	0.20	0.47	0.29	0.20	0.47
	Energy Star south central qualified	0.33	53	0.23	0.52	0.33	0.20	0.47	0.33	0.20	0.47
	Energy Star southern qualified	0.33	53	0.23	0.52	0.33	0.20	0.47	0.33	0.20	0.47
Single-Hung	Clear	0.47	43	0.63	0.66	0.47	0.57	0.59	0.48	0.57	0.59
	Low-E 272	0.33	53	0.34	0.58	0.33	0.31	0.52	0.33	0.31	0.52
	Low-E 272 Argon	0.29	56	0.34	0.58	0.29	0.30	0.52	0.29	0.30	0.52
	Low-E 366	0.32	53	0.23	0.52	0.32	0.20	0.47	0.32	0.20	0.47
	Low-E 366 Argon	0.29	57	0.22	0.52	0.29	0.20	0.47	0.29	0.20	0.47
	Energy Saver Max: Triple Glaze Low E Argon	0.24	65	0.28	0.46	-	-	-	-	-	-
	Energy Saver Max: Triple Glaze Low-E 366 Argon	0.24	65	0.19	0.37	-	-	-	-	-	-
	Energy Saver Max K: Triple Glaze Low E Krypton	0.20	68	0.28	0.46	-	-	-	-	-	-
	Energy Saver Max K: Triple Glaze Low-E 366 Krypton	0.20	68	0.19	0.37	-	-	-	-	-	-
	Energy Saver Plus	0.29	57	0.22	0.52	0.29	0.20	0.47	0.29	0.20	0.47
	Energy Star northern qualified	0.29	57	0.22	0.52	0.29	0.20	0.47	0.29	0.20	0.47
	Energy Star north central qualified	0.29	57	0.22	0.52	0.29	0.20	0.47	0.29	0.20	0.47
	Energy Star south central qualified	0.32	53	0.23	0.52	0.32	0.20	0.47	0.32	0.20	0.47
	Energy Star southern qualified	0.32	53	0.23	0.52	0.32	0.20	0.47	0.32	0.20	0.47

SERIES	GLAZING	No Grids				Flat GBG, Narrow Contour GBG			Wide Contoured Grids		
		U-FACTOR	CR	SHGC	VT	U-FACTOR	SHGC	VT	U-FACTOR	SHGC	VT
Picture (standard sloped sill)	Clear	0.46	43	0.69	0.72	0.46	0.62	0.65	0.47	0.62	0.65
	Low-E 272	0.31	53	0.37	0.64	0.31	0.33	0.57	0.31	0.33	0.57
	Low-E 272 Argon	0.27	55	0.37	0.64	0.27	0.33	0.57	0.27	0.33	0.57
	Low-E 366	0.31	53	0.24	0.57	0.31	0.22	0.51	0.31	0.22	0.51
	Low-E 366 Argon	0.27	55	0.24	0.57	0.27	0.22	0.51	0.27	0.22	0.51
	Energy Saver Max: Triple Glaze Low E Argon	0.22	65	0.31	0.50	-	-	-	-	-	-
	Energy Saver Max: Triple Glaze Low-E 366 Argon	0.22	66	0.21	0.41	-	-	-	-	-	-
	Energy Saver Max K: Triple Glaze Low E Krypton	0.18	70	0.31	0.50	-	-	-	-	-	-
	Energy Saver Max K: Triple Glaze Low-E 366 Krypton	0.17	70	0.21	0.41	-	-	-	-	-	-
	Energy Saver Plus	0.27	55	0.24	0.57	0.27	0.22	0.51	0.27	0.22	0.51
	Energy Star northern qualified	0.27	55	0.37	0.64	0.27	0.33	0.57	0.27	0.33	0.57
	Energy Star north central qualified	0.27	55	0.37	0.64	0.27	0.33	0.57	0.27	0.33	0.57
	Energy Star south central qualified	0.31	53	0.24	0.57	0.31	0.22	0.51	0.31	0.22	0.51
Energy Star southern qualified	0.31	53	0.24	0.57	0.31	0.22	0.51	0.31	0.22	0.51	
Picture (block frame with track filler)	Clear	0.43	42	0.61	0.63	0.43	0.54	0.56	0.43	0.54	0.56
	Low-E 272	0.30	53	0.32	0.55	0.30	0.29	0.49	0.30	0.29	0.49
	Low-E 272 Argon	0.27	56	0.32	0.55	0.27	0.29	0.49	0.27	0.29	0.49
	Low-E 366	0.30	53	0.21	0.50	0.30	0.19	0.44	0.30	0.19	0.44
	Low-E 366 Argon	0.26	57	0.21	0.50	0.26	0.19	0.44	0.26	0.19	0.44
	Energy Saver Max: Triple Glaze Low E Argon	0.22	63	0.27	0.44	0.22	0.24	0.39	0.22	0.24	0.39
	Energy Saver Max: Triple Glaze Low-E 366 Argon	0.22	64	0.19	0.35	0.22	0.17	0.31	0.22	0.17	0.31
	Energy Saver Max K: Triple Glaze Low E Krypton	0.18	68	0.27	0.44	0.18	0.24	0.39	0.18	0.24	0.39
	Energy Saver Max K: Triple Glaze Low-E 366 Krypton	0.18	68	0.18	0.35	0.18	0.17	0.31	0.18	0.17	0.31
	Energy Saver Plus	0.26	57	0.21	0.50	0.26	0.19	0.44	0.26	0.19	0.44
	Energy Star northern qualified	0.27	56	0.32	0.55	0.27	0.29	0.49	0.27	0.29	0.49
	Energy Star north central qualified	0.27	56	0.32	0.55	0.27	0.29	0.49	0.27	0.29	0.49
	Energy Star south central qualified	0.30	53	0.21	0.50	0.30	0.19	0.44	0.30	0.19	0.44
Energy Star southern qualified	0.30	53	0.21	0.50	0.30	0.19	0.44	0.30	0.19	0.44	
Double-Hung	Clear	0.45	41	0.56	0.59	0.45	0.50	0.52	0.45	0.50	0.52
	Low-E 272	0.33	51	0.30	0.51	0.33	0.27	0.45	0.33	0.27	0.45
	Low-E 272 Argon	0.30	54	0.30	0.51	0.30	0.27	0.45	0.30	0.27	0.45
	Low-E 366	0.32	51	0.20	0.46	0.32	0.18	0.41	0.32	0.18	0.41
	Low-E 366 Argon	0.29	54	0.20	0.46	0.29	0.18	0.41	0.29	0.18	0.41
	Energy Saver Max: Triple Glaze Low E Argon	0.23	65	0.25	0.40	-	-	-	-	-	-
	Energy Saver Max: Triple Glaze Low-E 366 Argon	0.23	65	0.17	0.33	-	-	-	-	-	-
	Energy Saver Max K: Triple Glaze Low E Krypton	0.20	68	0.25	0.40	-	-	-	-	-	-
	Energy Saver Max K: Triple Glaze Low-E 366 Krypton	0.20	68	0.17	0.33	-	-	-	-	-	-
	Energy Saver Plus	0.29	54	0.20	0.46	0.29	0.18	0.41	0.29	0.18	0.41
	Energy Star northern qualified	0.30	54	0.30	0.51	0.30	0.27	0.45	0.30	0.27	0.45
	Energy Star north central qualified	0.30	54	0.30	0.51	0.30	0.27	0.45	0.30	0.27	0.45
	Energy Star south central qualified	0.32	51	0.20	0.46	0.32	0.18	0.41	0.32	0.18	0.41
Energy Star southern qualified	0.32	51	0.20	0.46	0.32	0.18	0.41	0.32	0.18	0.41	

SERIES	GLAZING	No Grids				Flat GBG, Narrow Contour GBG			Wide Contoured Grids		
		U-FACTOR	CR	SHGC	VT	U-FACTOR	SHGC	VT	U-FACTOR	SHGC	VT
Double-Slide	Clear	0.45	41	0.56	0.59	0.45	0.50	0.52	0.45	0.50	0.52
	Low-E 272	0.33	51	0.30	0.51	0.33	0.27	0.45	0.33	0.27	0.45
	Low-E 272 Argon	0.30	54	0.30	0.51	0.30	0.27	0.45	0.30	0.27	0.45
	Low-E 366	0.32	51	0.20	0.46	0.32	0.18	0.41	0.32	0.18	0.41
	Low-E 366 Argon	0.29	54	0.20	0.46	0.29	0.18	0.41	0.29	0.18	0.41
	Energy Saver Max: Triple Glaze Low E Argon	0.23	65	0.25	0.40	-	-	-	-	-	-
	Energy Saver Max: Triple Glaze Low-E 366 Argon	0.23	65	0.17	0.33	-	-	-	-	-	-
	Energy Saver Max K: Triple Glaze Low E Krypton	0.20	68	0.25	0.40	-	-	-	-	-	-
	Energy Saver Max K: Triple Glaze Low-E 366 Krypton	0.20	68	0.17	0.33	-	-	-	-	-	-
	Energy Saver Plus	0.29	54	0.20	0.46	0.29	0.18	0.41	0.29	0.18	0.41
	Energy Star northern qualified	0.30	54	0.30	0.51	0.30	0.27	0.45	0.30	0.27	0.45
	Energy Star north central qualified	0.30	54	0.30	0.51	0.30	0.27	0.45	0.30	0.27	0.45
	Energy Star south central qualified	0.32	51	0.20	0.46	0.32	0.18	0.41	0.32	0.18	0.41
	Energy Star southern qualified	0.32	51	0.20	0.46	0.32	0.18	0.41	0.32	0.18	0.41
Double-Hung/Double-Slide Fixed	Clear	0.44	44	0.60	0.66	0.44	0.54	0.59	0.44	0.54	0.59
	Low-E 272	0.30	55	0.34	0.58	0.30	0.30	0.52	0.30	0.30	0.52
	Low-E 272 Argon	0.27	58	0.33	0.58	0.27	0.30	0.52	0.27	0.30	0.52
	Low-E 366	0.30	55	0.23	0.52	0.30	0.21	0.47	0.30	0.21	0.47
	Low-E 366 Argon	0.26	59	0.23	0.52	0.26	0.21	0.47	0.26	0.21	0.47
	Energy Saver Max: Triple Glaze Low E Argon	0.19	71	0.29	0.48	-	-	-	-	-	-
	Energy Saver Max: Triple Glaze Low-E 366 Argon	0.19	71	0.20	0.39	-	-	-	-	-	-
	Energy Saver Max K: Triple Glaze Low E Krypton	0.16	75	0.29	0.48	-	-	-	-	-	-
	Energy Saver Max K: Triple Glaze Low-E 366 Krypton	0.15	75	0.20	0.39	-	-	-	-	-	-
	Energy Saver Plus	0.30	55	0.23	0.52	0.30	0.21	0.47	0.30	0.21	0.47
	Energy Star northern qualified	0.27	58	0.33	0.58	0.27	0.30	0.52	0.27	0.30	0.52
	Energy Star north central qualified	0.27	58	0.33	0.58	0.27	0.30	0.52	0.27	0.30	0.52
	Energy Star south central qualified	0.30	55	0.23	0.52	0.30	0.21	0.47	0.30	0.21	0.47
	Energy Star southern qualified	0.30	55	0.23	0.52	0.30	0.21	0.47	0.30	0.21	0.47
Sliding Patio Door (Narrow Stile)	Clear	0.46	41	0.62	0.65	0.46	0.55	0.57	0.46	0.55	0.57
	Low-E 272	0.33	51	0.33	0.57	0.33	0.30	0.50	0.33	0.30	0.50
	Low-E 272 Argon	0.29	54	0.33	0.57	0.29	0.29	0.50	0.29	0.29	0.50
	Low-E 366	0.32	51	0.22	0.51	0.32	0.20	0.45	0.32	0.20	0.46
	Low-E 366 Argon	0.29	54	0.22	0.52	0.29	0.20	0.45	0.29	0.20	0.45
	Energy Saver Max: Triple Glaze Low E Argon	0.25	60	0.28	0.46	-	-	-	-	-	-
	Energy Saver Max: Triple Glaze Low-E 366 Argon	0.24	61	0.19	0.37	-	-	-	-	-	-
	Energy Saver Max K: Triple Glaze Low E Krypton	0.20	64	0.28	0.46	-	-	-	-	-	-
	Energy Saver Max K: Triple Glaze Low-E 366 Krypton	0.20	64	0.19	0.37	-	-	-	-	-	-
	Energy Saver Plus	0.29	54	0.22	0.52	0.29	0.20	0.45	0.29	0.20	0.45
	Energy Star - > 1/2 lite	0.32	51	0.22	0.51	0.32	0.20	0.45	0.32	0.20	0.46

SERIES	GLAZING	No Grids				Flat GBG, Narrow Contour GBG			Wide Contoured Grids		
		U-FACTOR	CR	SHGC	VT	U-FACTOR	SHGC	VT	U-FACTOR	SHGC	VT
Sliding Patio Door Sidelite / Transom (Narrow Stile)	Clear	0.45	44	0.58	0.61	0.45	0.52	0.54	0.45	0.52	0.54
	Low-E 272	0.32	55	0.31	0.53	0.32	0.28	0.47	0.32	0.28	0.47
	Low-E 272 Argon	0.29	58	0.31	0.53	0.29	0.28	0.47	0.29	0.28	0.47
	Low-E 366	0.31	55	0.21	0.48	0.31	0.19	0.43	0.31	0.19	0.43
	Low-E 366 Argon	0.28	59	0.21	0.48	0.28	0.19	0.43	0.28	0.19	0.43
	Energy Saver Max: Triple Glaze Low E Argon	0.24	65	0.26	0.43	-	-	-	-	-	-
	Energy Saver Max: Triple Glaze Low-E 366 Argon	0.24	66	0.18	0.34	-	-	-	-	-	-
	Energy Saver Max K: Triple Glaze Low E Krypton	0.20	70	0.26	0.43	-	-	-	-	-	-
	Energy Saver Max K: Triple Glaze Low-E 366 Krypton	0.20	70	0.18	0.34	-	-	-	-	-	-
	Energy Saver Plus	0.28	59	0.21	0.48	0.28	0.19	0.43	0.28	0.19	0.43
Energy Star - > 1/2 lite	0.31	55	0.21	0.48	0.31	0.19	0.43	0.31	0.19	0.43	
Sliding Patio Door (Wide Stile)	Clear	0.46	42	0.62	0.65	0.46	0.48	0.50	0.46	0.48	0.50
	Low-E 272	0.34	51	0.30	0.51	0.34	0.26	0.44	0.34	0.26	0.44
	Low-E 272 Argon	0.31	54	0.30	0.51	0.31	0.26	0.44	0.31	0.26	0.44
	Low-E 366	0.34	52	0.20	0.46	0.34	0.18	0.40	0.34	0.18	0.40
	Low-E 366 Argon	0.30	54	0.20	0.46	0.30	0.18	0.40	0.30	0.18	0.40
	Energy Saver Max: Triple Glaze Low E Argon	0.27	60	0.25	0.40	-	-	-	-	-	-
	Energy Saver Max: Triple Glaze Low-E 366 Argon	0.26	60	0.17	0.33	-	-	-	-	-	-
	Energy Saver Max K: Triple Glaze Low E Krypton	0.23	60	0.25	0.40	-	-	-	-	-	-
	Energy Saver Max K: Triple Glaze Low-E 366 Krypton	0.23	60	0.17	0.33	-	-	-	-	-	-
	Energy Saver Plus	-	-	-	-	-	-	-	-	-	-
Energy Star - > 1/2 lite	0.30	54	0.20	0.46	0.30	0.18	0.40	0.30	0.18	0.40	
Sliding Patio Door Sidelite / Transom (Wide Stile)	Clear	0.45	44	0.50	0.53	0.45	0.45	0.46	0.45	0.45	0.46
	Low-E 272	0.34	56	0.27	0.46	0.34	0.24	0.40	0.34	0.24	0.40
	Low-E 272 Argon	0.31	59	0.27	0.46	0.31	0.24	0.40	0.31	0.24	0.40
	Low-E 366	0.33	56	0.18	0.41	0.33	0.17	0.36	0.33	0.17	0.36
	Low-E 366 Argon	0.30	59	0.18	0.41	0.30	0.17	0.36	0.30	0.17	0.36
	Energy Saver Max: Triple Glaze Low E Argon	0.27	64	0.23	0.37	-	-	-	-	-	-
	Energy Saver Max: Triple Glaze Low-E 366 Argon	0.27	64	0.16	0.30	-	-	-	-	-	-
	Energy Saver Max K: Triple Glaze Low E Krypton	0.24	64	0.23	0.37	-	-	-	-	-	-
	Energy Saver Max K: Triple Glaze Low-E 366 Krypton	0.23	64	0.16	0.30	-	-	-	-	-	-
	Energy Saver Plus	-	-	-	-	-	-	-	-	-	-
Energy Star - > 1/2 lite	0.30	59	0.18	0.41	0.30	0.17	0.36	0.30	0.17	0.36	



The performance information listed is for new products and is intended to be used for reference only, and is not complete. Depending on the components, accessories, and options chosen, the actual rating could vary. Confirm ratings for specific products with your supplier or JELD-WEN sales representative. Products subject to regional availability. Please visit <http://www.jeld-wen.com/windows> to verify which products are available in your area.

Product	AAMA/WDMA/CSA				
	101 / I.S. 2 / A440-05				
	Config.	Performance Class and Grade	Max Size Tested	Water Performance (psf)	Air Performance (cfm/ft2)
Casement	Single Unit	C50	36x72	7.50	< 0.1
	Twin	C35	72x72	5.25	< 0.1
	Triple	C35	106x72	5.25	< 0.2
	Triple	C50	109x72	7.50	< 0.2
	XOX	C35	120x60	5.25	< 0.2
Stationary Casement	Single Unit	C35	60x72	5.25	< 0.1
	Single Unit	C50	36x72	7.50	< 0.1
Awning	Single Unit	C50	48x36	7.50	< 0.2
	Triple	C35	144x36	5.25	< 0.2
Single-Hung	Single Unit	C35	56x96	5.25	< 0.2
	Single Unit w/ transom	C35	48x108	5.25	< 0.2
	XOX	C35	90x96, 144x60	5.25	< 0.2
	XOX w/ transom	C35	120x66	5.25	< 0.1
	Triple	R20	108x84	3.00	< 0.3
	Triple	R20	144x60	3.00	< 0.3
Horizontal Slider	Single Unit	C35	72x72	5.25	0.10
	XOX	C35	144x60, 120x72	5.25	< 0.1
	XOX w/ transom	C35	120x60, 72x120	5.25	< 0.2
Fixed	O	C35	93x85	5.25	< 0.1
	O	C30	102x72	4.50	< 0.1
	O	C50	144x36, 60x84	7.52	< 0.1
	OOO	R20	80x72	3.00	N/A
Double-Hung	Single Unit	R20	48x84	3.00	< 0.2
	Single Unit	R50	44x63	7.52	< 0.3
Double-Slide	Single Unit XX	R20	72x60	3.00	< 0.2
	Single Unit XX	R35	63x44	5.25	< 0.3
Double-Hung / Slide Fixed	Single Unit	R20	96x72	3.00	< 0.1
Sliding Patio Door	XO narrow stile	C35	96x96	5.25	< 0.2
	XO narrow stile	C50	72x80	7.50	< 0.2
	XO wide stile	C35	96x96	5.25	< 0.2
	XO wide stile	C50	72x80	7.50	< 0.2
	XOX narrow stile	R20	143.75x95.5	3.00	< 0.2
	XOO narrow stile	R20	139.75x95.5	3.00	< 0.2
	XOO wide stile	R20	139x95.5	3.00	< 0.1
	OXXO wide stile	R20	144.5x95.5	3.00	< 0.2
	OXXO narrow stile	R20	188.5x95.5	3.00	< 0.2
	OXXO wide stile	R20	188.5x95.5	3.00	< 0.2
Sidelite	O	C35	47.5x95.5	5.25	< 0.1
Transom	O	C35	95.5x23.5	5.25	< 0.1
	O	R20	144.5x23.5	5.25	< 0.1

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Total product price*: \$ 0 USD

* Price reflects final product cost excluding installation.

Project Summary

LEED New Construction 2009

EA Prerequisite 2 Minimum Energy Performance:	Contributes
EA Credit 1 Optimize Energy Performance:	Contributes
MR Credit 4 Recycled Content: 10% & 20% (post-consumer + 0.5 x pre-consumer) Contribution:	Contributes **
IEQ Credit 2 Increased Ventilation:	Qualifies
IEQ Credit 6.2 Controllability of Systems: Thermal Comfort:	Qualifies
IEQ Credit 8.1 Daylighting and Views - Daylight:	Qualifies
Pilot Credit 4 Innovative Ventilation:	Qualifies ***
Pilot Credit 43 Certified Products:	May qualify with available option ***

LEED Existing Buildings 2009

IEQ Credit 2.4 Daylight and Views - Daylight:	Qualifies
Pilot Credit 43 Certified Products:	May qualify with available option ***

LEED New Construction v2.2

MR Credit 4.1 & 4.2 Recycled Content: 10% & 20% (post-consumer + 0.5 x pre-consumer) Contribution:	Contributes **
IEQ Credit 8.1 Daylighting and Views - Daylight:	Qualifies

LEED Existing Buildings v2.0

IEQ Credit 8.1 & 8.2 Daylighting and Views - Daylight:	Qualifies
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LEED for Homes

EA Prerequisite 1.1 Optimize Energy Performance (ENERGY STAR):	See product detail below
EA Credit 1.2 Exceptional Energy Performance:	See product detail below
EA Credit 4.1 Good Windows:	See product detail below
EA Credit 4.2-4.3 Enhanced or Exceptional Windows:	See product detail below
MR Credit 2.2 Environmentally Preferable Products:	Qualifies
EQ Credit 4.1 Basic Outdoor Air Ventilation:	Qualifies

ReGreen Program

The configuration of products in this project does not contribute to this rating system.

As a reminder, windows and doors make up a portion of the overall structure. While this list demonstrates how JELD-WEN products may impact project certification, environmental rating systems take the entire structures design into account. It is the designers responsibility to verify the requirements of the building as a whole.

JELD-WEN is not responsible for the environmental performance of its products involving factors outside of its control or recommended installation and use.

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CHPS 2006

M Credit 4.1.2 Recycled Content Contribution: Contributes **
EQ Credit 1.1 Daylighting and Views - Daylight: Qualifies

CHPS 2009

M Credit 4.1.2, 4.1.4 Recycled Content Contribution: Contributes **
EQ Credit 1.1 Daylighting and Views - Daylight: Qualifies

LABS21

MR Credit 4 Recycled Content (specify 25%) Contribution: Contributes **
EQ Credit 8.1 Daylighting and Views - Daylight: Qualifies

Green Guide for Health Care

EQ Credit 8.1 Daylighting and Views - Daylight: Qualifies

National Green Building Standard

RE 601.7 Site-Applied Finishing Materials: Qualifies
RE 602.12 Flashing Details: Qualifies
RE 701.4.4 Fenestration (With ENERGY STAR option): Contributes
RE 703.3.1 Enhanced Fenestration (With ENERGY STAR option): Contributes

Green Globes New Buildings

Project Management Credit A.2 Environmental Purchasing: Qualifies
Energy Credit C.1 Energy Consumption (with ENERGY STAR option): May qualify with available option
Energy Credit C.2 Energy Demand Minimization: Qualifies
Resources Credit E.4 Durable Components: Qualifies
Indoor Environment Credit G.2 Indoor Pollutants: Qualifies
Indoor Environment Credit G.3 Daylighting: Qualifies
Indoor Environment G.4 Thermal Comfort: Qualifies

As a reminder, windows and doors make up a portion of the overall structure. While this list demonstrates how JELD-WEN products may impact project certification, environmental rating systems take the entire structures design into account. It is the designers responsibility to verify the requirements of the building as a whole.

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Premium Vinyl Windows 1015

JELD-WEN Premium Vinyl features design options previously only available in wood windows. For the ultimate in design flexibility, durability, low-maintenance, and exceptional energy efficiency, choose Premium Vinyl.



Note: For energy-related credits, choose a glass package that suits your goals and climate zone to optimize the contribution.

As a reminder, windows and doors make up a portion of the overall structure. While this list demonstrates how JELD-WEN products contribute to certification, environmental rating systems take the entire structure's design into account. It is the designer's responsibility to verify what requirements the building as a whole meets.

Price:	No Price Provided
Quantity:	1 EA
Product Category:	Windows
Material Type:	Vinyl
Product Line:	Premium Vinyl
MasterFormat Number:	085313
Location of Manufacture:	Cheyenne, WY 82007

Environmental Characteristics

Post-Consumer Recycled Content:	0.0%
Pre-Consumer Recycled Content:	10.0%
Pre-finished:	Yes
EPA Environmentally Preferable Purchasing:	Yes
Product contributes to daylight factors:	Yes
Operable Window:	Yes
Durable Component:	Yes

Environmental Certifications

CARB - Airborne Toxic Control Measure, Phase 2:	Yes
ENERGY STAR® Listed option available:	Yes
Buy American Act Compliant:	Yes

LEED New Construction 2009

EA Prerequisite 2 Minimum Energy Performance:	Contributes
EA Credit 1 Optimize Energy Performance:	Contributes

As a reminder, windows and doors make up a portion of the overall structure. While this list demonstrates how JELD-WEN products may impact project certification, environmental rating systems take the entire structures design into account. It is the designers responsibility to verify the requirements of the building as a whole.

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MR Credit 4 Recycled Content: 10% & 20% (post-consumer + 0.5 x pre-consumer) Contribution:	Contributes *
IEQ Credit 2 Increased Ventilation:	Qualifies
IEQ Credit 6.2 Controllability of Systems: Thermal Comfort:	Qualifies
IEQ Credit 8.1 Daylighting and Views - Daylight:	Qualifies
IEQ Credit 8.2 Daylighting and Views - Views:	Qualifies
Pilot Credit 4 Innovative Ventilation:	Qualifies ***
Pilot Credit 43 Certified Products:	Option available ***

LEED Existing Buildings 2009

IEQ Credit 2.4 Daylight and Views - Daylight:	Qualifies
Pilot Credit 43 Certified Products:	Option available ***

LEED New Construction v2.2

MR Credit 4.1 & 4.2 Recycled Content: 10% & 20% (post-consumer + 0.5 x pre-consumer) Contribution:	Contributes *
IEQ Credit 8.1 Daylighting and Views - Daylight:	Qualifies
IEQ Credit 8.2 Daylighting and Views - Views:	Qualifies

LEED Existing Buildings v2.0

IEQ Credit 8.1 & 8.2 Daylighting and Views - Daylight:	Qualifies
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LEED for Homes

EA Prerequisite 1.1 Optimize Energy Performance (ENERGY STAR):	Contributes
EA Credit 1.2 Exceptional Energy Performance:	Contributes
EA Credit 4.1 Good Windows:	Contributes
EA Credit 4.2-4.3 Enhanced or Exceptional Windows:	Contributes
MR Credit 2.2 Environmentally Preferable Products:	Qualifies
EQ Credit 4.1 Basic Outdoor Air Ventilation:	Qualifies

ReGreen Program

Product does not contribute to this rating system.

CHPS 2006

M Credit 4.1.2 Recycled Content Contribution:	Contributes *
EQ Credit 1.1 Daylighting and Views - Daylight:	Qualifies

CHPS 2009

M Credit 4.1.2, 4.1.4 Recycled Content Contribution:	Contributes *
EQ Credit 1.1 Daylighting and Views - Daylight:	Qualifies

As a reminder, windows and doors make up a portion of the overall structure. While this list demonstrates how JELD-WEN products may impact project certification, environmental rating systems take the entire structures design into account. It is the designers responsibility to verify the requirements of the building as a whole.

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LABS21

MR Credit 4 Recycled Content (specify 25%) Contribution:

Contributes *

EQ Credit 8.1 Daylighting and Views - Daylight:

Qualifies

Green Guide for Health Care

EQ Credit 8.1 Daylighting and Views - Daylight:

Qualifies

National Green Building Standard

RE 601.7 Site-Applied Finishing Materials:

Qualifies

RE 602.12 Flashing Details:

Qualifies

RE 701.4.4 Fenestration (With ENERGY STAR option):

Contributes

RE 703.3.1 Enhanced Fenestration (With ENERGY STAR option):

Contributes

Green Globes New Buildings

Project Management Credit A.2 Environmental Purchasing:

Qualifies

Energy Credit C.1 Energy Consumption (with ENERGY STAR option):

Option available

Energy Credit C.2 Energy Demand Minimization:

Qualifies

Resources Credit E.4 Durable Components:

Qualifies

Indoor Environment Credit G.2 Indoor Pollutants:

Qualifies

Indoor Environment Credit G.3 Daylighting:

Qualifies

Indoor Environment G.4 Thermal Comfort:

Qualifies

As a reminder, windows and doors make up a portion of the overall structure. While this list demonstrates how JELD-WEN products may impact project certification, environmental rating systems take the entire structures design into account. It is the designers responsibility to verify the requirements of the building as a whole.

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Premium Vinyl Patio Doors 1016

JELD-WEN Premium Vinyl features design options previously only available in wood windows. For the ultimate in design flexibility, durability, low-maintenance, and exceptional energy efficiency, choose Premium Vinyl.



Note: For energy-related credits, choose a glass package that suits your goals and climate zone to optimize the contribution.

Price:	No Price Provided
Quantity:	1 EA
Product Category:	Patio Doors
Material Type:	Vinyl
Product Line:	Premium Vinyl
MasterFormat Number:	083216
Location of Manufacture:	Cheyenne, WY 82007

Environmental Characteristics

Post-Consumer Recycled Content:	0.0%
Pre-Consumer Recycled Content:	10.0%
Pre-finished:	Yes
EPA Environmentally Preferable Purchasing:	Yes
Product contributes to daylight factors:	Yes
Operable Window:	Yes
Durable Component:	Yes

Environmental Certifications

CARB - Airborne Toxic Control Measure, Phase 2:	Yes
ENERGY STAR® Listed option available:	Yes
Buy American Act Compliant:	Yes

LEED New Construction 2009

EA Prerequisite 2 Minimum Energy Performance:	Contributes
EA Credit 1 Optimize Energy Performance:	Contributes
MR Credit 4 Recycled Content: 10% & 20% (post-consumer + 0.5 x pre-consumer) Contribution:	Contributes *
IEQ Credit 2 Increased Ventilation:	Qualifies
IEQ Credit 6.2 Controllability of Systems: Thermal Comfort:	Qualifies
IEQ Credit 8.1 Daylighting and Views - Daylight:	Qualifies

As a reminder, windows and doors make up a portion of the overall structure. While this list demonstrates how JELD-WEN products may impact project certification, environmental rating systems take the entire structures design into account. It is the designers responsibility to verify the requirements of the building as a whole.

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IEQ Credit 8.2 Daylighting and Views - Views:	Qualifies
Pilot Credit 4 Innovative Ventilation:	Qualifies ***
Pilot Credit 43 Certified Products:	Option available ***
LEED Existing Buildings 2009	
IEQ Credit 2.4 Daylight and Views - Daylight:	Qualifies
Pilot Credit 43 Certified Products:	Option available ***
LEED New Construction v2.2	
MR Credit 4.1 & 4.2 Recycled Content: 10% & 20% (post-consumer + 0.5 x pre-consumer) Contribution:	Contributes *
IEQ Credit 8.1 Daylighting and Views - Daylight:	Qualifies
IEQ Credit 8.2 Daylighting and Views - Views:	Qualifies
LEED Existing Buildings v2.0	
IEQ Credit 8.1 & 8.2 Daylighting and Views - Daylight:	Qualifies
LEED for Homes	
MR Credit 2.2 Environmentally Preferable Products:	Qualifies
EQ Credit 4.1 Basic Outdoor Air Ventilation:	Qualifies
ReGreen Program	
Product does not contribute to this rating system.	
CHPS 2006	
M Credit 4.1.2 Recycled Content Contribution:	Contributes *
EQ Credit 1.1 Daylighting and Views - Daylight:	Qualifies
CHPS 2009	
M Credit 4.1.2, 4.1.4 Recycled Content Contribution:	Contributes *
EQ Credit 1.1 Daylighting and Views - Daylight:	Qualifies
LABS21	
MR Credit 4 Recycled Content (specify 25%) Contribution:	Contributes *
EQ Credit 8.1 Daylighting and Views - Daylight:	Qualifies
Green Guide for Health Care	
EQ Credit 8.1 Daylighting and Views - Daylight:	Qualifies
National Green Building Standard	
RE 601.7 Site-Applied Finishing Materials:	Qualifies
RE 602.12 Flashing Details:	Qualifies

As a reminder, windows and doors make up a portion of the overall structure. While this list demonstrates how JELD-WEN products may impact project certification, environmental rating systems take the entire structures design into account. It is the designers responsibility to verify the requirements of the building as a whole.

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RE 701.4.4 Fenestration (With ENERGY STAR option):	Contributes
RE 703.3.1 Enhanced Fenestration (With ENERGY STAR option):	Contributes

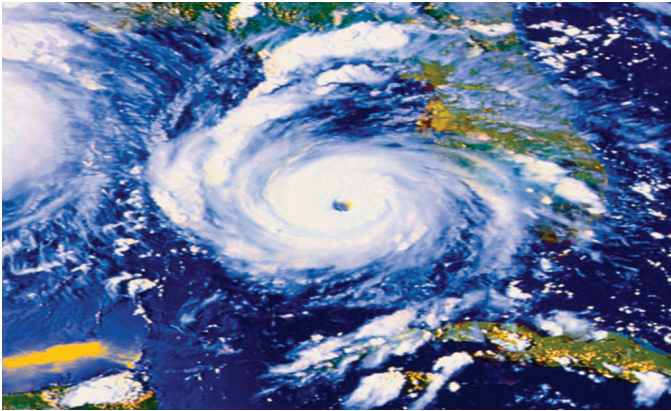
Green Globes New Buildings

Project Management Credit A.2 Environmental Purchasing:	Qualifies
Energy Credit C.1 Energy Consumption (with ENERGY STAR option):	Option available
Energy Credit C.2 Energy Demand Minimization:	Qualifies
Resources Credit E.4 Durable Components:	Qualifies
Indoor Environment Credit G.2 Indoor Pollutants:	Qualifies
Indoor Environment Credit G.3 Daylighting:	Qualifies
Indoor Environment G.4 Thermal Comfort:	Qualifies

*** Note, to participate in a pilot credit you will first need to register with USGBC on [this page](#). Questions about pilot credits can be directed to USGBC at pilot@usgbc.org.

As a reminder, windows and doors make up a portion of the overall structure. While this list demonstrates how JELD-WEN products may impact project certification, environmental rating systems take the entire structures design into account. It is the designers responsibility to verify the requirements of the building as a whole.

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In addition to providing basic light, ventilation and beauty to a structure, windows and patio doors are expected to meet certain design, energy and glass performance standards. Understanding window and patio door performance characteristics will help with product selection and increase satisfaction.

INTRODUCTION

Windows and patio doors are designed and built to perform differently relative to environmental conditions. For example, houses in hot climates benefit from Low-E treated glass and houses in tornado or hurricane zones benefit from impact glass.

Windows and patio doors are built to withstand different levels of wind and/or water without failing. They are given performance ratings based on three different criteria:

- **Energy performance:**
The energy-efficient characteristics of the product
- **Glass performance:**
The characteristics of different types of glass such as safety, light and noise transmittance
- **Design performance:**
The product's ability to withstand various weather conditions and other elements

Product labeling indicates the minimum certified performance levels met by the product. If products fail to meet customer performance expectations, it may be a result of incorrect product selection, improper installation or lack of product care and maintenance. In some instances, product performance failure could be a result of a manufacturing defect in which case product warranty coverage could apply. If unsure about selecting the proper windows or patio doors, please contact us or your distributor.

CONTACT US

For questions, feel free to contact us by phone or email:

- Email: customerserviceagents@jeld-wen.com
- Phone: 1-(800)-JELD-WEN/1-(800)-535-3936

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ENERGY PERFORMANCE

There are three principal ways heat energy is transferred from a warm to a cool place: conduction, radiation and convection. Modern window technology works to control these processes to manage energy transfer through a window. The total energy performance of a window is measured with a value called a U-Factor.

CONDUCTION

Conduction is when heat is transferred through direct contact. A good example is the burning sensation you receive when you pick up a hot plate.

Insulating glass controls conductive energy with the air space between the panes of glass separated by a spacer (usually a piece of formed sheet metal). This air space prevents direct conductive transfer of energy through the glass between warm and cold environments.

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ENERGY PERFORMANCE - CONTINUED

RADIATION

Radiation is the transfer of energy by waves or rays. Sunburn even when the air temperature is cold is a result of the transfer of radiation energy by exposure to sunlight.

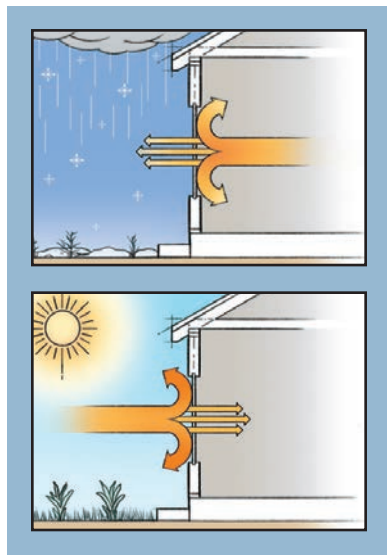
Low-E Coatings

Low-E is a very thin, transparent, metallic coating applied to insulating glass at the factory. This coating is usually put on the exterior surface of the interior pane of glass (between the panes). Dual Low-E has an additional coating on the interior surface of the interior pane. It controls heat gain (or loss) by reflecting most of the radiant heat (infrared light) caused by the sun. Some coatings focus on solar heat control while others emphasize control of interior heat loss.

In cold weather, Low-E reduces the amount of heat loss to the outdoors by reflecting radiant heat back into the house.

In warm weather, the sun's energy is reflected back outside and prevented from entering the house.

A Low-E value or emissivity is the measure of how well the product reduces radiant energy transfer. Low-E values typically range from 0.04 to 0.15. The smaller value represents the best reduction of energy transfer.



Glass equipped with dual Low-E can be scratched with metal objects. Another common aesthetic concern is when replacing older Low-E glass. The new glass color (caused by the metallic coating) may not be the same color as the older Low-E glass. Call us for recommendations.

Measuring Radiant Heat Transfer

Solar Heat Gain

A Solar Heat Gain Coefficient (SHGC) is the measurement of the solar heat that passes through glass from sunlight. This measurement is expressed as a number between 0 and 1. A value of 1 indicates that all solar heat passes through, and a value of 0 indicates that no solar heat passes through. A single pane of glass typically has an SHGC of about 0.80 allowing most of the solar heat to pass through. Multi-pane (insulating) glass allows less solar heat to pass through and has a lower SHGC.

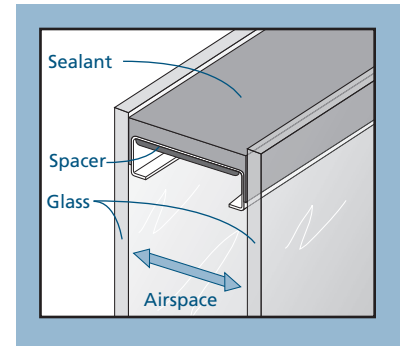
A high SHGC would be the best in cold climates where solar heat gained through glass can help tremendously with heating costs. A low SHGC can help save air-conditioning costs in warm climates by keeping solar heat out.

CONVECTION

Convection is the transfer of heat through air movement. Many houses use convection for heating as warm air circulates through the house and gradually raises the temperature.

Insulating Glass Spacer Width

The airspace between glass panes affects the convection of an insulating glass unit. Narrow spacing between panes (or a single pane of glass) increases the risk of hot or cold temperatures passing through. Wider spacing between glass panes lowers the risk of heat or cold transfer through the glass unit. Optimum spacing occurs near 0.5".



Insulating Glass with Argon

Argon is a non-toxic, non-hazardous dense gas injected into the air space inside insulating glass units to help control convective heat transfer. A mixture of argon and air can achieve higher levels of energy performance than with air alone because compared to normal air, argon does not move around as much between the panes. This reduces heat transfer from the warm pane to the cool pane.

U-FACTOR

U-factor (sometimes called U-value) is the measurement of how well the window or patio door transfers heat. The lower the U-factor, the better the window reduces energy loss. Common insulating glass U-factors range from about 0.2 to 1.2. The inverse of the U-factor is the R-value, or insulating value. The R-value is calculated from the U-factor as follows:

$1/U\text{-factor} = R\text{-value}$

Variation in values is due to factors such as:

- Insulating glass (multi-pane is better than single-pane)
- Insulating air space width
- Low-E coatings
- Gas (argon) in air space
- Window size and frame material

Energy Star (a United States Environmental Protection Agency/Department of Energy program) is a great resource for finding out the recommended U-factor (or other energy information) for any location in the United States. Visit their website at www.energystar.gov (search for U-factor) or call their hotline at 1-888-782-7937.



GLASS PERFORMANCE

There are several characteristics and properties of glass in window and patio door products that directly effect customer satisfaction. These characteristics include glass type, acoustical performance, visible light transmittance (the ability to pass light to the interior), ultraviolet (UV) light transmittance and glass quality.

TYPES OF GLASS

Float Glass

Nearly all residential glass is known as float glass (also referred to as flat glass), a high-quality glass made by a process where a ribbon of molten glass is fed across a bath of heated liquid, usually molten tin, in a carefully controlled environment. The highest grades are used for mirror and cabinet-type products. A slightly lower grade may contain minor blemishes such as small air bubbles or minor scratches, and is used for residential and light commercial windows and patio doors. Lower grades are considered greenhouse quality.

Float glass may be heat-treated for additional strength. There are two basic types of heat-treated glass: heat-strengthened, and fully-tempered. Heat-strengthened float glass is twice as strong as standard float glass and breaks into large fragments as does standard float glass. Fully-tempered float glass is considered safety glass.

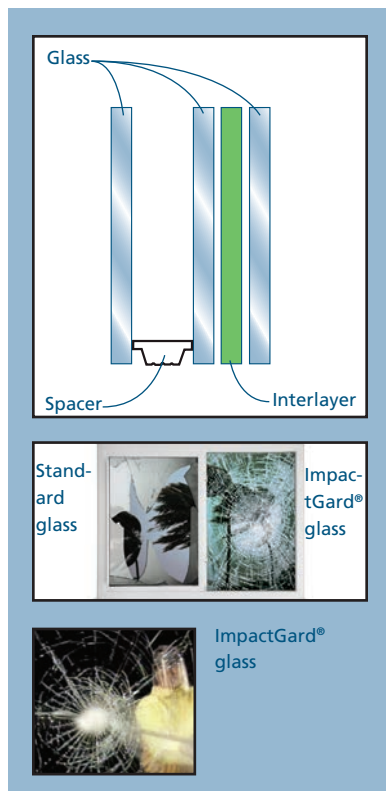
Safety Glass

There are two types of safety glass commonly used in window products: fully-tempered and laminated.

Fully-tempered float glass is twice as strong as heat-strengthened glass and is often required by local building codes for safety reasons. Fully-tempered glass is less likely to break by impact than standard and heat-strengthened float glass. If it breaks, it shatters into many small pieces instead of larger shards as heat-strengthened and standard float glass.

For more strength, glass may be laminated, a process where two or more sheets of glass are bonded together with one or more layers of plastic membrane or liquid resin (interlayer). Laminated glass is approximately 75% to 90% stronger than standard float glass and is used to minimize penetration of airborne objects and intruders. If broken, the glass will fragment and remain attached to the plastic membrane. Laminated glass is often required in coastal areas subject to hurricane-force winds and in vehicles.

Plate and Rolled Glass
Plate glass is very strong and is commonly used in commercial structures. Rolled glass is about 50%-80% translucent, and is used in patterned glass designs such as stained glass.



ACOUSTICAL PERFORMANCE

Windows and patio doors must be able to control a variety of conditions, including environmental sounds. Uncontrolled noise levels inside a structure can disrupt work, inhibit sleep, cause stress and fatigue and increase irritability.

Window and door design now includes ways to limit the transmission of noise. Windows and doors are tested and rated for the amount of noise they let pass through. Two common ratings for windows and doors are the Sound Transmission Class (STC) and Outdoor-Indoor Transmission Class (OITC) Ratings. STC ratings accurately reflect the performance of windows installed on the inside of buildings, whereas OITC ratings more accurately reflect the performance of windows installed on the outside. In both cases, the higher the number the better the acoustical performance.

Acoustical performance factors include:

- **Product mass or weight**
Increasing the mass of a product will reduce the transmission of sound. An example is increasing glass thickness, which will increase the overall mass of a door or window, reducing sound transmission.
- **Air space thickness between panes**
The air space between panes also limits sound transmission. Increasing the air space depth will increase the acoustical performance of the insulated glass unit.
- **Glass type**
Different types of insulated glass units offer specific benefits to limiting sound transmission. Thick glass mutes low frequency noise (e.g., road traffic). Thinner, laminated glass controls high frequency noise (e.g., conversation).

For very noisy areas, a laminated window made with thick panes of glass would work very well combining the low frequency acoustic properties of the thick glass with the high frequency acoustic properties of the laminated glass.
- **Air infiltration**
A window or door's ability to block air movement will also effect sound transmission. Products with a lower air infiltration rating will also block sound more effectively.

VISIBLE LIGHT TRANSMITTANCE

Glass production techniques and Low-E coatings can affect the amount of visible light that passes through glass.

The amount of light that passes through glass is measured and given a value between 0 and 1. The higher the number, the more light will pass through the glass.

GLASS PERFORMANCE - CONTINUED

ULTRAVIOLET (UV) LIGHT TRANSMITTANCE

Window products containing glass with high ultraviolet (UV) protection are desired by consumers for guarding indoor furnishings against UV fading. UV fading occurs when the energy of UV radiation alters the chemical structure of dyes and other colorants. Low-E coatings can provide a reduction in UV transmittance and slow the process of fading. In addition to UV light, other causes for fading and color changes include:

- Humidity
- Dye types
- Oxygen (and other gases)
- Visible light
- Heat
- Sky conditions (sunny or cloudy)
- Window orientation

No residential glass product will completely block out all UV light and prevent fading. Various types of furnishings (wood, fabrics, paint, rugs, etc.) react at differing fading rates depending on the colorant type and its susceptibility to fading from any of these causes.

GLASS QUALITY

Float and heat-treated glass are manufactured through processes that may result in minor blemishes (e.g. slight wavy appearance or minute visible blemishes).

Very small particles from the manufacturing process can sometimes embed into the glass surface and are difficult to see but may be detected by touch. It is important to protect glass at job sites from other building materials, and to clean the glass properly to avoid embedding these particles into the glass. For proper glass cleaning procedures, visit our website, www.jeld-wen.com for a copy of the appropriate Care and Maintenance Guide. Some manufacturers offer products with a protective film on the glass to protect glass surfaces at the job site that will peel off. Call your supplier for more information.

Through the manufacturing and shipping process, glass may collect a non-visible residue that may become visible under moist conditions. This is not considered a glass defect.

DESIGN PERFORMANCE

Windows and patio doors are designed to perform under various weather conditions and exposures. Some are designed for mild exposures and others for harsher and more extreme exposures. Products designed for mild weather or protected locations should not be installed in extreme weather areas.

When choosing a window or patio door, it is very important to consider the design and location of the structure. A large roof overhang or recessed windows may lessen performance grade requirements depending on characteristics such as the size and height of the building. Structure location determines general weather exposure and protection. For instance, a structure on a coastal bluff may need a higher performance grade than one protected by wind breaks.

Local building codes may define a minimum performance grade, but because of increased cost, it is important to select a product that does not have a performance grade higher than needed.

Manufacturers design and test their products to withstand wind loads as well as water and air leakage. Window and patio door standards help to establish minimum levels of acceptable performance for manufacturers and suppliers.

UNITED STATES STANDARDS AND CERTIFICATION

Two primary North American organizations developed voluntary certification programs and standards:

- The American Architectural Manufacturers Association (AAMA)
- Window and Door Manufacturers Association (WDMA)

These are trade associations of window and door manufacturers, component suppliers and test laboratories. Their purpose includes formulating and promoting high standards of performance and administering an ANSI (American National Standards Institute) accredited third party certification program for fenestration products.

Under the Certification Program, a third party administrator verifies the products are tested using the proper procedures. A minimum of two unannounced factory inspections are conducted per year to ensure products are equivalent to the samples that were tested. The manufacturer must submit samples for retesting periodically to maintain certification.

Structural standards for the AAMA and WDMA include:

- AAMA/WDMA/CSA 101/1.5.2/A440 North American Fenestration Standard (NAFS)

These structural standards:

- Provide overall performance ratings for window and door products to assist customers in selecting the appropriate products for their houses.
- Allow manufacturers to certify the performance grade of their products through independent testing laboratories for structural, air, water, and forced entry resistance performance.
- Define window products by performance class and performance grade.

DESIGN PERFORMANCE - CONTINUED

CANADIAN STANDARDS AND CERTIFICATION

The CSA (Canadian Standards Association) established a certification program with a set of standards for windows AAMA/WDMA/CSA 101/I.S.2/A440 North American Fenestration Standard (NAFS) that is referenced by the 2010 National Building Code of Canada (NBCC). This certification program allows manufacturers to certify the performance grade of their products through independent laboratory testing. Customers can then select windows suitable for their climatic conditions, installation height, building type etc.

Window products are defined by the building size, residential being three stories or less, or not exceeding 600 square meters. Larger buildings are considered commercial. CSA A440 S1 specifies minimum ratings for each product designation based on the structure's location and exposure.

TESTING

Both the U.S. and Canada use the same testing methods. They both report a separate air leakage rating. Water and structural performance are combined into one Performance Grade (PG) rating. Optional water and negative wind pressure ratings may also be used.

To meet all standards, a product must be tested in an independent laboratory to receive a performance grade. A performance grade rates the performance of a product against a set of specific tests. Higher grade numbers represent higher performance grade ratings.

Testing methods:

- **Uniform Load Deflection Test:**
Determines the degree of deflection to a product when under pressure
- **Uniform Load Structural Test:**
Determines the product's ability to withstand wind pressure
- **Air Infiltration:**
Determines if the amount of air that passes through the product meets requirements
- **Water Resistance:**
Determines the windows' resistance to wind-driven rain.
- **Forced Entry Resistance Test:**
Determines on a pass/fail basis if the product adequately prevents easy opening from the exterior when locked. Some areas may require higher testing levels for some window operator types

UNITED STATES AND CANADIAN RATING SYSTEM

Test results are reported in PG (Performance Grade) numbers (e.g. PG20, PG50). A window that has a PG20 rating (mild weather or protected location) means that the window passed with 20 pounds of pressure for each square foot (psf) of window.

A PG rating includes both the water test and the structural test. If the water test results in 35 psf and the structural test results in 20 psf, the window receives a PG rating of PG20.

In order to pass the air leakage test, all windows must not allow more than 0.3 cubic feet of air per minute per square foot to pass through.

PRODUCT DESIGNATION

After a product is tested and given a performance grade, it receives a product designation. When certified, the product is labeled by the manufacturer with a designation like this:

Class R-PG20-120 x 59-Type HS

Where:

R = Performance Class (Residential)

PG20 = Performance Grade (PG20)

120 x 59 = Maximum Size Tested

Type HS = Product Type (Horizontal Sliding Window)

The following tables list the code and its definition for performance class.

NAFS - 05 PERFORMANCE CODE AND PERFORMANCE CLASSES		
R	Residential	Primarily used for single family houses.
LC	Light Commercial	Typically used for low-rise multi-family dwellings, professional buildings such as doctor's offices, libraries, and motels.
C	Commercial	Primarily used for lighter use industrial buildings, factories, hotels and retail sales buildings.
HC	Heavy Commercial	Typically used buildings such as hospitals, schools, public buildings, or other buildings where heavy use is expected.
AW	Architectural	Commonly used for architectural structures such as hospitals, schools, institutions, and high-rise buildings.

NAFS - 08 PERFORMANCE CODE AND PERFORMANCE CLASSES		
R	Residential	Primarily used for single family houses.
LC	Light Commercial	Typically used for low-rise multi-family dwellings, professional buildings such as doctor's offices, libraries, and motels.
CW	Heavy Commercial	Typically used buildings such as hospitals, schools, public buildings, or other buildings where heavy use is expected.
AW	Architectural	Commonly used for architectural structures such as hospitals, schools, institutions, and high-rise buildings.

DESIGN PERFORMANCE - CONTINUED

PRODUCT DESIGNATION - CONTINUED

The following tables list the code and its definition for product type.

PRODUCT CODE-TO-PRODUCT TYPES			
AP	Awning, hopper projected windows	JA	Jalousie-awning windows
BW	Basement windows	RW	Roof windows
C	Casement windows	SGD	Sliding glass doors
DA	Dual action windows	SHW	Side hinged in-swing windows
DAHGD	Dual action hinged glass doors	SLT	Side lite
F	Fixed windows	SP	Specialty products
GH	Greenhouse windows	SKG	Skylights/glass glazed
H	Hung windows (single, double, triple)	SKP	Skylights/plastic glazed
HE	Hinged rescue windows	TA	Tropical awning windows
HP	Horizontally pivoted windows	TH	Top hinged windows
HGD	Hinged glass doors	TR	Transom
HS	Horizontal sliding windows	VP	Vertically pivoted windows
J	Jalousie windows	VS	Vertical sliding windows

HURRICANE AREA REQUIREMENTS

Hurricanes can cause extensive property damage, which has led to the development of building code certification standards for windows and doors installed in coastal areas prone to hurricanes and strong winds. The certifications are designed to ensure structures can withstand extreme weather.

Windows and doors that can remain intact are crucial to maintaining a building's structural integrity. If a window or door breaks, wind can enter and the increased pressure can lift the roof and push walls outward.



Safe Impact-Resistance

JELD-WEN offers windows and patio doors with ImpactGard® protection, which are designed to accept impacts, and while the glass still cracks, the fragments will remain adhered to the laminated interlayer, keeping the shards within the frame.

Standard glass



ImpactGard® glass

Windborne Debris Regions

Areas from Texas to Maine subject to strong winds or hurricanes are categorized into four different windborne regions (or zones). The zone the product is to be installed in determines the type of windows and doors that must be installed to meet building codes. JELD-WEN offers products that meet the requirements for all 4 zones.

WINDBORNE DEBRIS <i>(As defined by ASTM E1996 and ASCE-7)</i>	
ZONE 1	Areas within 1 mile of the mean high tide line with winds 110 mph and up to 120 mph
ZONE 2	Areas more than 1 mile from the mean high tide line with winds 120 mph and up to 130 mph
ZONE 3	Areas with winds 130 mph and up to 140 mph; or 120 mph and up to 140 mph within 1 mile of the mean high tide line
ZONE 4	All areas with winds in excess of 140 mph (high-velocity wind zones)

Testing

ImpactGard® protection also meets the nation's toughest building codes (Missile Level D) that specify that windows must withstand a nine-pound 2x4 traveling at 50 feet per second (34 miles per hour).

TESTING REQUIREMENTS		
Windborne debris region	Impact resistance requirements for basic protection	Cyclic wind pressure requirement
ZONES 1 and 2	Must withstand Missile Level C: a 4-foot-long 2 x 4 at 40 feet per second (27 mph)	Hurricane loads up to 9,000 wind cycles
ZONE 3	Must withstand Missile Level D: an 8-foot-long 2 x 4 at 50 feet per second (34 mph)	Hurricane loads up to 9,000 wind cycles
ZONE 4 <i>(Impact resistance testing for Zone 4 also includes multiple hits per test unit)</i>	Must withstand Missile Level D: an 8-foot-long 2 x 4 at 50 feet per second (34 mph)	Hurricane loads up to 9,000 wind cycles

Certification

Products that pass the testing requirements for impact resistance are certified by various jurisdictions and labeled.

PERFORMANCE LABELING

This section shows examples of a temporary (certification strip to the right) and permanent (shown on the next page) labels used on JELD-WEN products. These labels contain energy performance and structural performance information specific to each product. Certification strip labels are temporary and are removed after final inspection. Permanent labels, if applicable, are often affixed to the frame in a protected location.

ENERGY PERFORMANCE

Products that meet Energy Star program requirements will have a label similar to the one shown at the top of the strip. The highlighted geographical regions correspond with the product's energy performance values.

Energy performance values are displayed on the NFRC Label. This label may be found on products manufactured in the United States and Canada. The NFRC is an industry organization that focuses on developing comparative energy performance for the consumer in evaluating different products.

- U-factor (sometimes called U-value) is the measurement of how well the window or patio door transfers heat. The lower the U-factor, the better the window reduces energy loss.
- Solar Heat Gain Coefficient (SHGC) is the measurement of the solar heat that passes through glass from sunlight. This measurement is expressed as a number between 0 and 1. A value of 1 indicates that all solar heat passes through, and a value of 0 indicates that no solar heat passes through.
- Visible transmittance is the amount of light that passes through glass. It is measured and given a value between 0 and 1. The higher the number, the more light will pass through the glass.

STRUCTURAL PERFORMANCE

The AAMA and WDMA are the two major organizations in the United States that provide performance standards and product certification.

JELD-WEN uses the AAMA program guidelines to evaluate its vinyl and aluminum products. Products which meet the AAMA program requirements will have a temporary label similar to the one shown and a permanent gold or silver label (shown on the next page with the label details).

For wood products, the WDMA label (shown below), is located in place of the AAMA label shown on the sample certification strip.



The manufacturer, product type and performance grade given in negative and positive loads and tested size in conformance to AAMA/WDMA/CSA 101/I.S.2/A440 are listed on the sample label. This section may also contain specific information for Miami/Dade county, or other local building code requirements.

JELD-WEN labels also show order information on the bottom of the certification strip.

ENERGY STAR Qualified in highlighted Regions
ENERGY STAR en las regiones de destacados

Canada
energystar.nrcan-rncan.gc.ca

U.S. / É.U.
energystar.gov

■ = Qualified/Admissible

National Fenestration Rating Council®
CERTIFIED

JELD-WEN
WINDOWS & DOORS

Vinyl Frame
Premium Single-Hung
ZF-S Spacer CLR + LowE

4750837

ENERGY PERFORMANCE RATINGS
EVALUACION DE RENDIMIENTO ENERGETICO

U-FACTOR (U.S./I-P) FACTOR-U	SOLAR HEAT GAIN COEFFICIENT COEFICIENTE: GANANCIA DE ENERGIA SOLAR
0.32 (U.S./I-P) 1.8 (Metric/SI)	0.33

ADDITIONAL PERFORMANCE RATINGS
EVALUACION SUPLEMENTARIA DE RENDIMIENTO

VISIBLE TRANSMITTANCE TRANSMISION DE LUZ VISIBLE
0.57

Manufacturer stipulates that these ratings conform to applicable NFRC procedures for determining whole product performance. NFRC ratings are determined for a fixed set of environmental conditions and a specific product size. NFRC does not recommend any product and does not warrant the suitability of any product for any specific use. Consult manufacturer's literature for other product performance information.
Este fabricante estipula que estos valores cumplen con los procedimientos aplicables de NFRC para determinar el rendimiento total del producto. Los valores usados por NFRC son determinados por un conjunto fijo de condiciones ambientales y un tamaño de producto específico. NFRC no recomienda ningún producto y no garantiza que el producto sea adecuado para un uso específico. Consulte con el folleto del fabricante para el uso apropiado de este producto.

www.nfrc.org

This fenestration product has been certified by the manufacturer to meet the air infiltration requirements of Section 116(a) 1, 2005 California Energy Standards.

American Architectural Manufacturers Association

Manufacturer stipulates conformance to the applicable standards

JELD-WEN Windows & Doors
Premium Single-Hung
H-C35 Size tested 56" x 96"

Tested to: AAMA/WDMA/CSA 101/I.S.2/A440-05

Remove Only After Final Inspection - Retain Label For Your Records

Order	Line	Batch	Seq	Build Date
656903	2	TESTLAS	PV0006	12/21/09

PERFORMANCE LABELING - CONTINUED

United States

Sample of a Permanent AAMA label:



Product details on this label are given on the third line down in the left column where:

HS = Horizontal Sliding window

R20 = Residential application tested to PG20

120 x 59 = Maximum size tested

Canada

CSA Certification Label

In Canada, look for certification information on a CSA or other label (permanent or temporary) on the product. The CSA Certification Label contains the CSA logo, information about the manufacturer, the product and the certification ratings for that product.



WEBSITES AND WARRANTY INFORMATION

For more information about window and patio door performance, visit the following websites:

- Window and Door Manufacturers Association (WDMA): www.wdma.com
- American Architectural Manufacturers Association (AAMA): www.aamanet.org
- Canadian Standards Association International (CSA): www.csa-international.org
- National Fenestration Rating Council: www.nfrc.org
www.windowratings.org
- Energy Star: www.energystar.gov
- Office of Energy Efficiency and Renewable Energy: www.eere.energy.gov/consumer
- Glass Association of North America: www.glasswebsite.com
- Efficient Windows Collaborative: www.efficientwindows.org
- Environmental Protection Agency: www.epa.org

Some information in this document was derived from the following sources:

- AAMA/WDMA/CSA 101/1.5.2/A440 NAFS (North American Fenestration Standard)
- Cardinal® IG Technical Service Bulletins
- CSA A440S1-09 Canadian Supplement to AAMA/WDMA/CSA 101/1.5.2/A440 NAFS

PRODUCT WARRANTY INFORMATION

Proper window selection is crucial to product satisfaction. It is important to use the right product with the right performance grade for a particular exposure. Proper handling, installation and care and maintenance are also essential to satisfactory window performance and long life. In the event of product failure due to a defect in the manufacturer's workmanship or materials, warranty coverage could apply.

Product failure due to improper installation, improper maintenance and acts of nature (hurricane, tornado, earthquake, flood, etc.) are excluded from most manufacturers' warranties. See your warranty for full details. If you do not have a copy of your warranty, visit our website: www.jeld-wen.com



Green Approved Product

For

National Green Building Certification

This is to signify that the following products for residential construction

ENERGY STAR Vinyl Windows & Patio Doors

Manufactured by

JELD-WEN, Inc.

Have been approved for points toward National Green Building Certification to the ICC 700-2008 National Green Building Standard as shown on page 2 of this certificate.

The NAHB Research Center hereby authorizes accredited verifiers to award these points toward certification when the products are used in accordance with the conditions shown on page 2 and the manufacturer's installation instructions.

This information has been verified by independent third-party testing or evaluation.

Certificate #00155



Signed:

Robert L. Hill, Director
Laboratory Sciences and Certification Programs

Issuance Date: November 12, 2010

Expiration Date: November 30, 2013

NAHB Research Center • 400 Prince George's Boulevard • Upper Marlboro, MD 20774 • www.nahbrc.com

This certificate is not a representation, warranty, or guarantee of product performance or certification of code compliance. For details of the product warranty, consult the product manufacturer.



Green Approved Products Certificate #00155

Products: ENERGY STAR Vinyl Windows & Patio Doors

Manufacturer: JELD-WEN, Inc.



The use of these products is approved to receive points to certification under the National Green Building Standard practices as noted below:

PRACTICE #	PRACTICE DESCRIPTION	POTENTIAL POINTS AVAILABLE	ADDITIONAL CONDITIONS OF USE TO AWARD POINTS
601.7	Building materials/assemblies do not require additional site applied material for finishing. 12 points max. awarded.	2	For 5 points, 90% or more of the installed windows and doors must be this product. For 2 points, 50-90% of the installed windows and doors must be this product.
701.4.4.1	NFRC-certified windows, exterior doors, skylights, and tubular daylighting devices (TDDs) are ENERGY STAR, or Table 701.4.4.1. Mandatory for certification.	Mandatory	To meet this mandatory requirement, the NFRC label on the windows must show that the appropriate window is used for the climate zone. Detail U-Factor & SHGC info based on product family and glazing type is available at www.jeld-wen.com/pro-center/performance-ratings
703.3.1	The NFRC-certified U-factor and SHGC for windows, exterior doors, skylights, and TDDs are in accordance with Table 703.3.1(a) or (b).	5-8	The NFRC label on the windows must be used in conjunction with Table 703.3.1(a) to award points based on climate zone. Detail U-Factor & SHGC info based on product family and glazing type is available at www.jeld-wen.com/pro-center/performance-ratings

Signed: 
 Robert L. Hill, Director
 Laboratory Sciences and Certification Programs

Issuance Date: November 12, 2010

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This certificate is not a representation, warranty, or guarantee of product performance or certification of code compliance. For details of the product warranty, consult the product manufacturer.

Crissy Field Center– Project Frog
San Francisco, California
Certified: USGBC- LEED Platinum (pending)

Project Challenge:

Project Frog is on a mission to revolutionize the way buildings are created.

Described as LEGOs® on steroids, the Project Frog approach applies new technology to overcome the inefficiencies of traditional construction.

The result is measurably greener and significantly smarter spaces such as the new 7500 square foot Crissy Field Center located on San Francisco’s waterfront adjacent to the picturesque Presidio and the Golden Gate Bridge.

The Crissy Field Center consists of environmental education classrooms, a science lab, a community gathering room and popular Beach Hut Café.

Designed with durability in mind, high performance features to note include the sleek storefront with aluminum exterior and environmentally friendly glazing and signature clerestory.

Architectural Solution:

Critical to the success of the project was the smooth integration of jamb and trim details to accomplish the desired exterior appearance.

The creative JELD-WEN Architectural Consultant and Commercial Solutions team worked in concert with a local JELD-WEN distribution partner team to create designs of mullied, high performance window units which complimented the look of anodized aluminum and fit into a value conscious budget.

Intended as a model of sustainable development for both students and community, the project strived to reach its efficiency goals while minimizing its environmental footprint.

Incorporating JELD-WEN Premium Sitrine EX Arctic Silver casement and awning windows with stainless steel hinging hardware, the project team successfully accomplished their goal.

Made with durable AuraLast® Wood, the windows featured efficient glazing with low U-Factors and 20-year warranties.





Project Details / Benefits

Premium Sitrine EX Clad Wood Windows with AuraLast® Wood

- » ENERGY STAR® qualified windows and doors featuring Low-E glazing
- » Prefinished Arctic Silver aluminum clad exterior for ease of maintenance
- » Reliable 20-year warranted AuraLast® Wood for durability

Architect: MKThink - San Francisco, CA

Builder: Fisher Development - San Francisco, CA

Dealer: Associated Building Supply - Burlingame, CA

Comments:

An ENERGY STAR® Partner since 1998, JELD-WEN ENERGY STAR qualified windows with Low-E glazing maximized daylight in the buildings and aided the project in achieving LEED Platinum designation (pending) from the U.S. Green Building Council.

RESPONSIBLE FORESTRY

Green building means good business

At JELD-WEN, we've been in the wood product business for over 50 years. Our legacy has been to make windows, doors and components in a manner consistent with efficient use of what nature provides. In effect, we've always strived to make stiles and sash, not sawdust.

In 1960, efficient resource use such as recycling and material reuse made sense because it was good business. We began the use of finger-joint and engineered wood components because it produced a better product. Today, these manufacturing methods are considered fundamental green building practices.

The most sustainably-sound building product is one which is reused. JELD-WEN offers wood windows and doors featuring salvaged wood components obtained from reclaimed barn and fence wood. Planed and finished, revealing the unique characteristics of each piece of lumber, these products are each truly one of a kind.



The mark of responsible forestry

The JELD-WEN belief in responsible forest product material sourcing has a long history. Wood is a durable, versatile and beautiful material that has been used in construction for centuries. It is recyclable, and its growth and replanting removes carbon dioxide from the environment. Among building materials, it is one of the few fully sustainable resources.

At JELD-WEN, we recognize that our future success as a wood products manufacturer is dependent upon responsible and sustainable forestland management. With that in mind, we proudly offer Ponderosa Pine wood windows and doors that are either SFI or FSC certified. Our dual-certification is testament to a desire to offer products you can feel good about specifying in your next project.



Our wood story gets even better

Only JELD-WEN makes window and door products with natural pine AuraLast—The Worry-Free Wood.



AuraLast Wood releases 96% fewer volatile organic compounds (VOCs) during the manufacturing process than traditional submersion treatment methods and it uses a water-based solution that is safer to handle than harsh, solvent-based treatments. Best of all, it comes with our reliable 20-year warranty against termites, wood rot and water saturation.



Supporting Sustainability

JELD-WEN offers beneficial products and services that meet many local green building provisions and which may contribute to a project's certification to nationally recognized programs. JELD-WEN products can be integrated into commercial projects pursuing certification by the U.S. Green Building Council's LEED or the Green Building Initiative's Green Globes standard, as well as residential single or multi-family projects certified to the National Green Building Standard.

- » ENERGY STAR® partner since 1998
- » USGBC National Member
- » GBI Board Member
- » Collaborative for High Performance Schools (CHPS) Member
- » SmartWay Transport Partner – Our transportation fleet meets the requirements as set forth by the Environmental Protection Agency



Trust JELD-WEN to assist you in meeting your sustainable construction objectives.

- » GREENdoc™ online tool to assist with your project certification submittals.
- » CARB-Compliant products
- » No Added Formaldehyde (NAF) Interior Doors
- » Products recognized by the NAHB Research Center for acceptance by the National Green Building Standard
- » Interior Doors Made with Recycled Content
- » FSC or SFI Certified Wood Windows and Doors



For questions or comments about JELD-WEN's sustainability platform, contact us at enquiry@jeld-wen.com

GLASS PERFORMANCE - CONTINUED

ULTRAVIOLET (UV) LIGHT TRANSMITTANCE

Window products containing glass with high ultraviolet (UV) protection are desired by consumers for guarding indoor furnishings against UV fading. UV fading occurs when the energy of UV radiation alters the chemical structure of dyes and other colorants. Low-E coatings can provide a reduction in UV transmittance and slow the process of fading. In addition to UV light, other causes for fading and color changes include:

- Humidity
- Dye types
- Oxygen (and other gases)
- Visible light
- Heat
- Sky conditions (sunny or cloudy)
- Window orientation

No residential glass product will completely block out all UV light and prevent fading. Various types of furnishings (wood, fabrics, paint, rugs, etc.) react at differing fading rates depending on the colorant type and its susceptibility to fading from any of these causes.

DESIGN PERFORMANCE

Windows and patio doors are designed to perform under various weather conditions and exposures. Some are designed for mild exposures and others for harsher and more extreme exposures. Products designed for mild weather or protected locations should not be installed in extreme weather areas.

When choosing a window or patio door, it is very important to consider the design and location of the structure. A large roof overhang or recessed windows may lessen performance grade requirements depending on characteristics such as the size and height of the building. Structure location determines general weather exposure and protection. For instance, a structure on a coastal bluff may need a higher performance grade than one protected by wind breaks.

Local building codes may define a minimum performance grade, but because of increased cost, it is important to select a product that does not have a performance grade higher than needed.

Manufacturers design and test their products to withstand wind loads as well as water and air leakage. Window and patio door standards help to establish minimum levels of acceptable performance for manufacturers and suppliers.

UNITED STATES STANDARDS AND CERTIFICATION

Two primary North American organizations developed voluntary certification programs and standards:

- The American Architectural Manufacturers Association (AAMA)
- Window and Door Manufacturers Association (WDMA)

GLASS QUALITY

Float and heat-treated glass are manufactured through processes that may result in minor blemishes (e.g. slight wavy appearance or minute visible blemishes).

Very small particles from the manufacturing process can sometimes embed into the glass surface and are difficult to see but may be detected by touch. It is important to protect glass at job sites from other building materials, and to clean the glass properly to avoid embedding these particles into the glass. For proper glass cleaning procedures, visit our website, www.jeld-wen.com for a copy of the appropriate Care and Maintenance Guide. Some manufacturers offer products with a protective film on the glass to protect glass surfaces at the job site that will peel off. Call your supplier for more information.

Through the manufacturing and shipping process, glass may collect a non-visible residue that may become visible under moist conditions. This is not considered a glass defect.

These are trade associations of window and door manufacturers, component suppliers and test laboratories. Their purpose includes formulating and promoting high standards of performance and administering an ANSI (American National Standards Institute) accredited third party certification program for fenestration products.

Under the Certification Program, a third party administrator verifies the products are tested using the proper procedures. A minimum of two unannounced factory inspections are conducted per year to ensure products are equivalent to the samples that were tested. The manufacturer must submit samples for retesting periodically to maintain certification.

Structural standards for the AAMA and WDMA include:

- AAMA/WDMA/CSA 101/1.S.2/A440 North American Fenestration Standard (NAFS)

These structural standards:

- Provide overall performance ratings for window and door products to assist customers in selecting the appropriate products for their houses.
- Allow manufacturers to certify the performance grade of their products through independent testing laboratories for structural, air, water, and forced entry resistance performance.
- Define window products by performance class and performance grade.

27 March 2013

Mr. Al Martin
Department of Planning & Community Development
City of Madison
215 Martin Luther King Jr. Blvd.
Madison, WI 53701

Re: Letter of Intent
New Construction in an Urban Design District
The Ideal Apartments
502 S. Park Street
Madison, WI
PRA Project No. 114387-01

Dear Mr. Martin:

The following Urban Design Application is submitted together with supplemental information for submittal of; Letter of Intent, technical information and supporting documents, for review of window alternative for Final approval.

Organizational Structure:

Owner:	Gallina Corporation 101 E. Main St., Ste. 500 Mt. Horeb, WI 53572 Contact: Craig Enzenroth cenzenroth@gallinacos.com	Architect:	Plunkett Raysich Architects, LLP 2310 Crossroads Dr., Ste. 2000 Madison, WI 53718 Contact: Steve Kieckhafer SKieckhafer@prarch.com
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Introduction:

The Ideal is a proposal for a mixed-use development consisting of apartments and retail located at 502 S. Park Street in Madison, Wisconsin. This development is in Urban Design District No. 7, and was presented for Final approval that was granted by the Commission at the September 19, 2012 meeting.

Description:

It is the project teams' desire for the Commission to consider an alternative window installation for the residential units of this mixed-use development.

The first floor level, or ground floor, will continue to be storefront aluminum frame, clear anodized windows as presented to the Commission. It is the desire for an alternate window system for the second

through fifth floor levels, which is the location of residential units, to be a manufactured vinyl, clear anodized color window.

With an emphasis on sustainability, and to achieve Green Build certification, is the purpose of considering an alternative window, which the previously proposed aluminum window system could not achieve this emphasis and certification. The following items outline the performance and sustainable features that the proposed windows provide.

- **Longevity-** Limited Lifetime warranty
- **Durability** – Built from industry leading Vinyl extrusions with top of the line hardware.
- **Color fastness-** We warranty that our factory-applied painted exterior color and factory applied laminated interior finish will not peel, blister, or flake for Ten years.
- **Warranty-** Commercial Ten Year Warranty (other than Owner-Occupied Single Family Residence) We warrant our product for a period of Ten (10) years from the date of Manufacture.

<http://c2456372.r72.cf0.rackcdn.com/current-jw-vinyl-window-warranty.pdf>

- **Sustainability- NAHB Green Approved ENERGY STAR®** rated vinyl windows and patio doors manufactured by JELD-WEN have been approved for points toward National Green Building Certification to the ICC 700-2008 National Green Building Standard for residential construction.

Sustainability at JELD-WEN

At JELD-WEN, sustainability is nothing new. With origins rooted in wood product manufacturing, our legacy has been to make windows, doors and components in a manner consistent with efficient use of what nature provides. In effect, we've always strived to make stiles and sash, not sawdust.

To us, minimizing waste has always made good ecological and business sense. Our mission is to develop high performance, high-value products that satisfy our customers' needs, while also caring for our communities by seeking ways to reduce our impact on the environment. We also realize that there is still work to be done. Sustainability is a journey, and our on-going efforts will remain directed toward continual improvement of our products, processes and culture.

We do this not because it's popular.

We do it because it's the right thing to do.

- **Performance-** As per attached and link below

<http://9dc159b43a66b1fe0a49-bd2073f7c8dbd16f36eed639782493f0.r48.cf1.rackcdn.com/15/JGI027.pdf>

Energy- Thermal ratings PDF Attached and **ENERGY STAR® Qualified Options** We are committed to offering products for improved energy efficiency in your home.

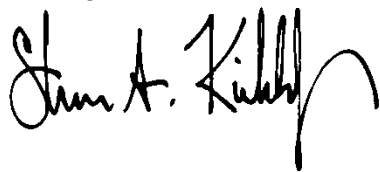
This product has ENERGY STAR qualified options to save energy and meet current requirements. As proof of our commitment, JELD-WEN has received the 2010 ENERGY STAR Partner of the Year award. The award signifies outstanding contributions to protecting the environment through energy efficiency and is presented to only a handful of 17,000 organizations that participate in the program each year. Our company-wide commitment to energy conservation excellence is part of our continued commitment to bringing reliability to your home and life. For more information, ask your dealer about JELD-WEN ENERGY STAR products

- **Features and Benefits -**
- **Color Options:** 9 exterior colors, 2 interior colors
- **Woodgrain Options:** cherry, light oak, dark oak interior
- **Glass Options:** energy efficient, protective, textured, tinted
- **Hardware Options:** Window Opening Control Device (WOCD) option available
- **Maintenance Level:** minimal
- **Project Type:** new construction and replacement
- **ENERGY STAR® Qualified Options:** yes
- **Warranty:** limited life

Please contact us with any questions or for additional information that you request.

Again, the emphasis on sustainability, and to achieve Green Build certification, is the purpose of considering an alternative window. Thank you for your time in reviewing our proposal.

Best regards,

A handwritten signature in black ink, appearing to read "Steven A. Kieckhafer". The signature is fluid and cursive, with a long, sweeping tail on the final letter.

Steven A. Kieckhafer, AIA
Architect

TYPICAL FOR ALL ELEVATIONS:

BRICK TO BE: MEDIUM IRONSPOT 46 BY ENDICOTT BRICK

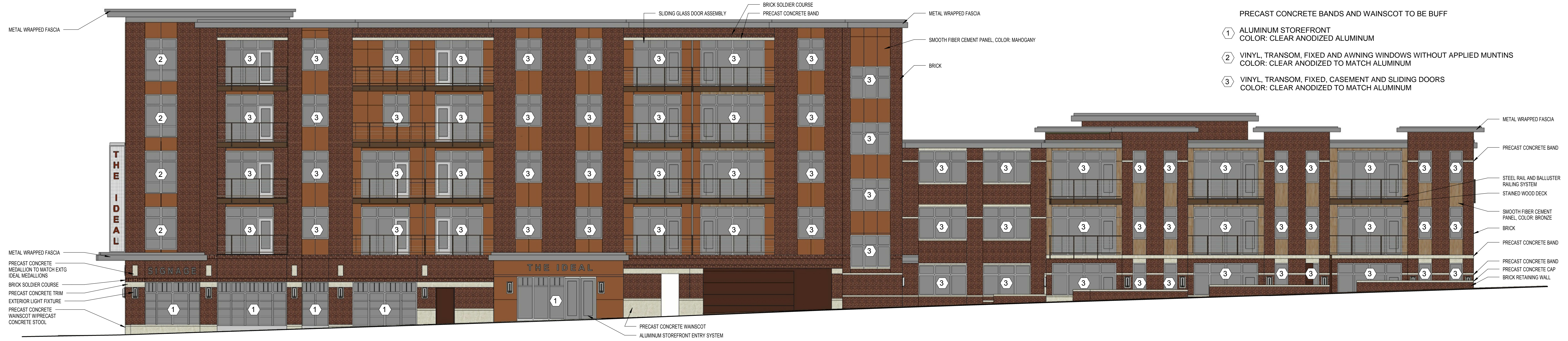
SMOOTH FIBER CEMENT SIDING TO BE EITHER:

MAHOGANY OR BRONZE

METAL FASCIA, STOREFRONT, WINDOWS, SLIDING DOOR ASSEMBLIES, EXTERIOR LIGHT FIXTURES TO BE CLEAR ANODIZED ALUMINUM

PRECAST CONCRETE BANDS AND WAINSCOT TO BE BUFF

- ① ALUMINUM STOREFRONT
COLOR: CLEAR ANODIZED ALUMINUM
- ② VINYL, TRANSOM, FIXED AND AWNING WINDOWS WITHOUT APPLIED MUNTINS
COLOR: CLEAR ANODIZED TO MATCH ALUMINUM
- ③ VINYL, TRANSOM, FIXED, CASEMENT AND SLIDING DOORS
COLOR: CLEAR ANODIZED TO MATCH ALUMINUM



B1 NORTH ELEVATION - COLOR
400A 1/8" = 1'-0"



D1 SOUTH ELEVATION - COLOR
400A 1/8" = 1'-0"



E1 WEST ELEVATION - COLOR
400A 1/8" = 1'-0"

E4 EAST ELEVATION - COLOR
400A 1/8" = 1'-0"

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