



*The way it should be.™*

**8400 SERIES THERMAL PERFORMANCE CHART**

Style	Glass Strength	Reinforcement	Configuration	Without Grids					With Grids				
				NFRC CPD #	U-Factor	R-Value	SHGC	VT	NFRC CPD #	U-Factor	R-Value	SHGC	VT
Vinyl Double Hung Window	DS-DS	A8	LE-CL	WCW-M-30-00386-00001	0.32	3.13	0.23	0.45	WCW-M-30-00386-00002	0.32	3.13	0.21	0.40
	DS-LAMI (PVB030)		LE-CL (Lami)	WCW-M-30-00388-00001	0.32	3.13	0.23	0.44	WCW-M-30-00388-00002	0.32	3.13	0.20	0.39
	DS-DS		BZ-LE	WCW-M-30-00386-00003	0.32	3.13	0.26	0.34	WCW-M-30-00386-00004	0.32	3.13	0.23	0.30
			GR-LE	WCW-M-30-00386-00005	0.32	3.13	0.24	0.31	WCW-M-30-00386-00006	0.32	3.13	0.22	0.27
	DS-DS-DS		LE-LE	WCW-M-30-00250-00001	0.29	3.45	0.21	0.35	WCW-M-30-00250-00002	0.29	3.45	0.19	0.36
			LE-CL-CL	WCW-M-30-00251-00001	0.31	3.23	0.23	0.41	WCW-M-30-00251-00001	0.31	3.23	0.19	0.36
			BZ-CL-LE	WCW-M-30-00251-00002	0.31	3.23	0.24	0.30	WCW-M-30-00251-00002	0.31	3.23	0.22	0.27
			GR-CL-LE	WCW-M-30-00251-00003	0.31	3.23	0.23	0.27	WCW-M-30-00251-00003	0.31	3.23	0.20	0.24
	DST-DST		LE-CL-LE	WCW-M-30-00253-00001	0.27	3.70	0.19	0.32	WCW-M-30-00254-00001	0.27	3.70	0.17	0.28
			LE-CL	WCW-M-30-00386-00001	0.32	3.13	0.23	0.45	WCW-M-30-00386-00002	0.32	3.13	0.21	0.40
	DST-LAMI (PVB030)		LE-CL (Lami)	WCW-M-30-00388-00001	0.32	3.13	0.23	0.44	WCW-M-30-00388-00002	0.32	3.13	0.20	0.39
	DST-DST		BZ-LE	WCW-M-30-00386-00003	0.32	3.13	0.26	0.34	WCW-M-30-00386-00004	0.32	3.13	0.23	0.30
			GR-LE	WCW-M-30-00386-00005	0.32	3.13	0.24	0.31	WCW-M-30-00386-00006	0.32	3.13	0.22	0.27
	DST-DST-DST		LE-LE	WCW-M-30-00250-00001	0.29	3.45	0.21	0.35	WCW-M-30-00250-00002	0.29	3.45	0.19	0.36
			LE-CL-CL	WCW-M-30-00251-00001	0.31	3.23	0.23	0.41	WCW-M-30-00251-00001	0.31	3.23	0.19	0.36
			BZ-CL-LE	WCW-M-30-00251-00002	0.31	3.23	0.24	0.30	WCW-M-30-00251-00002	0.31	3.23	0.22	0.27
			GR-CL-LE	WCW-M-30-00251-00003	0.31	3.23	0.23	0.27	WCW-M-30-00251-00003	0.31	3.23	0.20	0.24
			LE-CL-LE	WCW-M-30-00253-00001	0.27	3.70	0.19	0.32	WCW-M-30-00254-00001	0.27	3.70	0.17	0.28
LE-CL		WCW-M-30-00386-00001	0.32	3.13	0.23	0.45	WCW-M-30-00386-00002	0.32	3.13	0.21	0.40		
Vinyl Horizontal Sliding Window	DS-DS	A8	LE-CL	WCW-M-29-00308-00001	0.32	3.13	0.23	0.45	WCW-M-29-00308-00002	0.32	3.13	0.20	0.40
	DS-LAMI (PVB030)		LE-CL (Lami)	WCW-M-29-00283-00001	0.31	3.23	0.22	0.44	WCW-M-29-00283-00002	0.31	3.23	0.20	0.39
	DS-DS		BZ-LE	WCW-M-29-00308-00003	0.32	3.13	0.25	0.33	WCW-M-29-00308-00004	0.32	3.13	0.23	0.30
			GR-LE	WCW-M-29-00308-00005	0.32	3.13	0.24	0.30	WCW-M-29-00308-00006	0.32	3.13	0.22	0.27
	DS-DS-DS		LE-LE	WCW-M-29-00201-00001	0.29	3.45	0.21	0.40	WCW-M-29-00201-00002	0.29	3.45	0.19	0.36
			LE-CL-CL	WCW-M-29-00202-00001	0.30	3.33	0.21	0.41	WCW-M-29-00203-00001	0.31	3.23	0.19	0.36
			BZ-CL-LE	WCW-M-29-00202-00002	0.30	3.33	0.24	0.30	WCW-M-29-00203-00002	0.31	3.23	0.22	0.27



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### 8400 SERIES THERMAL PERFORMANCE CHART

Style	Glass Strength	Reinforcement	Configuration	Without Grids					With Grids				
				NFRC CPD #	U-Factor	R-Value	SHGC	VT	NFRC CPD #	U-Factor	R-Value	SHGC	VT
Vinyl Horizontal Sliding Window	DS-DS-DS	A8	GR-CL-LE	WCW-M-29-00202-00003	0.30	3.33	0.22	0.27	WCW-M-29-00203-00003	0.31	3.23	0.20	0.24
			LE-CL-LE	WCW-M-29-00204-00001	0.26	3.85	0.19	0.31	WCW-M-29-00205-00001	0.27	3.70	0.17	0.28
	DST-DST		LE-CL	WCW-M-29-00308-00001	0.32	3.13	0.23	0.45	WCW-M-29-00308-00002	0.32	3.13	0.20	0.40
	DST-LAMI (PVB030)		LE-CL (Lami)	WCW-M-29-00283-00001	0.31	3.23	0.22	0.44	WCW-M-29-00283-00002	0.31	3.23	0.20	0.39
			BZ-LE	WCW-M-29-00308-00003	0.32	3.13	0.25	0.33	WCW-M-29-00308-00004	0.32	3.13	0.23	0.30
	DST-DST		GR-LE	WCW-M-29-00308-00005	0.32	3.13	0.24	0.30	WCW-M-29-00308-00006	0.32	3.13	0.22	0.27
			LE-LE	WCW-M-29-00201-00001	0.29	3.45	0.21	0.40	WCW-M-29-00201-00002	0.29	3.45	0.19	0.36
	DST-DST-DST		LE-CL-CL	WCW-M-29-00202-00001	0.30	3.33	0.21	0.41	WCW-M-29-00203-00001	0.31	3.23	0.19	0.36
			BZ-CL-LE	WCW-M-29-00202-00002	0.30	3.33	0.24	0.30	WCW-M-29-00203-00002	0.31	3.23	0.22	0.27
			GR-CL-LE	WCW-M-29-00202-00003	0.30	3.33	0.22	0.27	WCW-M-29-00203-00003	0.31	3.23	0.20	0.24
			LE-CL-LE	WCW-M-29-00204-00001	0.26	3.85	0.19	0.31	WCW-M-29-00205-00001	0.27	3.70	0.17	0.28
Vinyl Fixed Window (Picture)	DS-DS	NO	LE-CL	WCW-M-28-00216-00001	0.26	3.85	0.25	0.51	WCW-M-28-00216-00002	0.26	3.85	0.23	0.45
	DS-LAMI (PVB030)		LE-CL (Lami)	WCW-M-28-00222-00001	0.26	3.85	0.25	0.50	WCW-M-28-00222-00002	0.26	3.85	0.23	0.45
			BZ-LE	WCW-M-28-00216-00003	0.26	3.85	0.29	0.38	WCW-M-28-00216-00004	0.26	3.85	0.26	0.34
	DS-DS		GR-LE	WCW-M-28-00216-00005	0.26	3.85	0.27	0.35	WCW-M-28-00216-00006	0.26	3.85	0.25	0.31
			LE-LE	WCW-M-28-00171-00001	0.23	4.35	0.24	0.46	WCW-M-28-00171-00002	0.23	4.35	0.22	0.41
			LE-CL-CL	WCW-M-28-00105-00001	0.25	4.00	0.24	0.47	WCW-M-28-00106-00001	0.26	3.85	0.22	0.42
	DS-DS-DS		BZ-CL-LE	WCW-M-28-00105-00003	0.25	4.00	0.27	0.34	WCW-M-28-00106-00003	0.26	3.85	0.25	0.31
			GR-CL-LE	WCW-M-28-00105-00004	0.25	4.00	0.25	0.31	WCW-M-28-00106-00004	0.26	3.85	0.23	0.28
			LE-CL-LE	WCW-M-28-00109-00001	0.20	5.00	0.22	0.36	WCW-M-28-00110-00001	0.21	4.76	0.20	0.32
			3S-3S	LE-CL	WCW-M-28-00218-00001	0.28	3.57	0.25	0.50	WCW-M-28-00219-00001	0.29	3.45	0.23
	3S-LAMI (PVB030)		LE-CL (Lami)	WCW-M-28-00223-00001	0.27	3.70	0.25	0.50	WCW-M-28-00223-00002	0.27	3.70	0.23	0.45
			3S-3S	BZ-LE	WCW-M-28-00218-00002	0.28	3.57	0.25	0.33	WCW-M-28-00219-00002	0.29	3.45	0.23
	GR-LE			WCW-M-28-00218-00003	0.28	3.57	0.24	0.28	WCW-M-28-00219-00003	0.29	3.45	0.21	0.25
	LE-LE			WCW-M-28-00172-00001	0.22	4.55	0.24	0.46	WCW-M-28-00172-00002	0.22	4.55	0.22	0.41



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				NFRC CPD #	U-Factor	R-Value	SHGC	VT	NFRC CPD #	U-Factor	R-Value	SHGC	VT
Vinyl Fixed Window (Picture)	DST-DST	NO	LE-CL	WCW-M-28-00216-00001	0.26	3.85	0.25	0.51	WCW-M-28-00216-00002	0.26	3.85	0.23	0.45
	DST-LAMI (PVB030)		LE-CL (Lami)	WCW-M-28-00222-00001	0.26	3.85	0.25	0.50	WCW-M-28-00222-00002	0.26	3.85	0.23	0.45
	DST-DST		BZ-LE	WCW-M-28-00216-00003	0.26	3.85	0.29	0.38	WCW-M-28-00216-00004	0.26	3.85	0.26	0.34
			GR-LE	WCW-M-28-00216-00005	0.26	3.85	0.27	0.35	WCW-M-28-00216-00006	0.26	3.85	0.25	0.31
			LE-LE	WCW-M-28-00171-00001	0.23	4.35	0.24	0.46	WCW-M-28-00171-00002	0.23	4.35	0.22	0.41
	DST-DST-DST		LE-CL-CL	WCW-M-28-00105-00001	0.25	4.00	0.24	0.47	WCW-M-28-00106-00001	0.26	3.85	0.22	0.42
			BZ-CL-LE	WCW-M-28-00105-00003	0.25	4.00	0.27	0.34	WCW-M-28-00106-00003	0.26	3.85	0.25	0.31
			GR-CL-LE	WCW-M-28-00105-00004	0.25	4.00	0.25	0.31	WCW-M-28-00106-00004	0.26	3.85	0.23	0.28
			LE-CL-LE	WCW-M-28-00109-00001	0.20	5.00	0.22	0.36	WCW-M-28-00110-00001	0.21	4.76	0.20	0.32
	3ST-3ST		LE-CL	WCW-M-28-00218-00001	0.28	3.57	0.25	0.50	WCW-M-28-00219-00001	0.29	3.45	0.23	0.45
	3ST-LAMI (PVB030)		LE-CL (Lami)	WCW-M-28-00223-00001	0.27	3.70	0.25	0.50	WCW-M-28-00223-00002	0.27	3.70	0.23	0.45
			3ST-3ST	BZ-LE	WCW-M-28-00218-00002	0.28	3.57	0.25	0.33	WCW-M-28-00219-00002	0.29	3.45	0.23
	GR-LE			WCW-M-28-00218-00003	0.28	3.57	0.24	0.28	WCW-M-28-00219-00003	0.29	3.45	0.21	0.25
	LE-LE			WCW-M-28-00172-00001	0.22	4.55	0.24	0.46	WCW-M-28-00172-00002	0.22	4.55	0.22	0.41
Vinyl Out-Swing Casement Window	DS-DS	NO	LE-CL	WCW-M-31-00125-00001	0.26	3.85	0.21	0.41	WCW-M-31-00125-00002	0.26	3.85	0.19	0.37
	DS-LAMI (PVB030)		LE-CL (Lami)	WCW-M-31-00127-00001	0.26	3.85	0.21	0.40	WCW-M-31-00127-00002	0.26	3.85	0.19	0.36
	DS-DS		BZ-LE	WCW-M-31-00125-00003	0.26	3.85	0.23	0.31	WCW-M-31-00125-00004	0.26	3.85	0.21	0.28
			GR-LE	WCW-M-31-00125-00005	0.26	3.85	0.22	0.28	WCW-M-31-00125-00006	0.26	3.85	0.20	0.25
			LE-LE	WCW-M-31-00095-00001	0.23	4.35	0.19	0.37	WCW-M-31-00095-00002	0.23	4.35	0.18	0.33
	DS-DS-DS		LE-CL-CL	WCW-M-31-00069-00002	0.25	4.00	0.19	0.37	WCW-M-31-00079-00002	0.26	3.85	0.18	0.33
			BZ-CL-LE	WCW-M-31-00069-00003	0.25	4.00	0.22	0.28	WCW-M-31-00079-00003	0.26	3.85	0.20	0.25
			GR-CL-LE	WCW-M-31-00069-00004	0.25	4.00	0.21	0.25	WCW-M-31-00079-00004	0.26	3.85	0.19	0.23
			LE-CL-LE	WCW-M-31-00071-00001	0.21	4.76	0.17	0.29	WCW-M-31-00081-00001	0.22	4.55	0.16	0.26
	DST-DST		LE-CL	WCW-M-31-00125-00001	0.26	3.85	0.21	0.41	WCW-M-31-00125-00002	0.26	3.85	0.19	0.37
	DST-LAMI (PVB030)		LE-CL (Lami)	WCW-M-31-00127-00001	0.26	3.85	0.21	0.40	WCW-M-31-00127-00002	0.26	3.85	0.19	0.36



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Style	Glass Strength	Reinforcement	Configuration	Without Grids					With Grids				
				NFRC CPD #	U-Factor	R-Value	SHGC	VT	NFRC CPD #	U-Factor	R-Value	SHGC	VT
Vinyl Out-Swing Casement Window	DST-DST	NO	BZ-LE	WCW-M-31-00125-00003	0.26	3.85	0.23	0.31	WCW-M-31-00125-00004	0.26	3.85	0.21	0.28
			GR-LE	WCW-M-31-00125-00005	0.26	3.85	0.22	0.28	WCW-M-31-00125-00006	0.26	3.85	0.20	0.25
			LE-LE	WCW-M-31-00095-00001	0.23	4.35	0.19	0.37	WCW-M-31-00095-00002	0.23	4.35	0.18	0.33
	DST-DST-DST		LE-CL-CL	WCW-M-31-00069-00002	0.25	4.00	0.19	0.37	WCW-M-31-00079-00002	0.26	3.85	0.18	0.33
			BZ-CL-LE	WCW-M-31-00069-00003	0.25	4.00	0.22	0.28	WCW-M-31-00079-00003	0.26	3.85	0.20	0.25
			GR-CL-LE	WCW-M-31-00069-00004	0.25	4.00	0.21	0.25	WCW-M-31-00079-00004	0.26	3.85	0.19	0.23
			LE-CL-LE	WCW-M-31-00071-00001	0.21	4.76	0.17	0.29	WCW-M-31-00081-00001	0.22	4.55	0.16	0.26
Vinyl Awning Window	DS-DS	NO	LE-CL	WCW-M-32-00134-00001	0.27	3.70	0.21	0.41	WCW-M-32-00134-00002	0.27	3.70	0.19	0.37
	DS-LAMI (PVB030)		LE-CL (Lami)	WCW-M-32-00136-00001	0.26	3.85	0.21	0.40	WCW-M-32-00136-00002	0.26	3.85	0.19	0.36
	DS-DS		BZ-LE	WCW-M-32-00134-00003	0.27	3.70	0.23	0.31	WCW-M-32-00134-00004	0.27	3.70	0.21	0.28
			GR-LE	WCW-M-32-00134-00005	0.27	3.70	0.22	0.28	WCW-M-32-00134-00006	0.27	3.70	0.20	0.25
			LE-LE	WCW-M-32-00109-00001	0.24	4.17	0.19	0.37	WCW-M-32-00109-00002	0.24	4.17	0.18	0.33
	DS-DS-DS		LE-CL-CL	WCW-M-32-00087-00002	0.25	4.00	0.19	0.37	WCW-M-32-00097-00002	0.26	3.85	0.18	0.33
			BZ-CL-LE	WCW-M-32-00087-00003	0.25	4.00	0.22	0.28	WCW-M-32-00097-00003	0.26	3.85	0.20	0.25
			GR-CL-LE	WCW-M-32-00087-00004	0.25	4.00	0.21	0.25	WCW-M-32-00097-00004	0.26	3.85	0.19	0.23
			LE-CL-LE	WCW-M-32-00089-00001	0.22	4.55	0.18	0.29	WCW-M-32-00099-00001	0.22	4.55	0.16	0.26
	DST-DST		LE-CL	WCW-M-32-00134-00001	0.27	3.70	0.21	0.41	WCW-M-32-00134-00002	0.27	3.70	0.19	0.37
	DST-LAMI (PVB030)		LE-CL (Lami)	WCW-M-32-00136-00001	0.26	3.85	0.21	0.40	WCW-M-32-00136-00002	0.26	3.85	0.19	0.36
	DST-DST		BZ-LE	WCW-M-32-00134-00003	0.27	3.70	0.23	0.31	WCW-M-32-00134-00004	0.27	3.70	0.21	0.28
			GR-LE	WCW-M-32-00134-00005	0.27	3.70	0.22	0.28	WCW-M-32-00134-00006	0.27	3.70	0.20	0.25
			LE-LE	WCW-M-32-00109-00001	0.24	4.17	0.19	0.37	WCW-M-32-00109-00002	0.24	4.17	0.18	0.33
	DST-DST-DST		LE-CL-CL	WCW-M-32-00087-00002	0.25	4.00	0.19	0.37	WCW-M-32-00097-00002	0.26	3.85	0.18	0.33
			BZ-CL-LE	WCW-M-32-00087-00003	0.25	4.00	0.22	0.28	WCW-M-32-00097-00003	0.26	3.85	0.20	0.25
			GR-CL-LE	WCW-M-32-00087-00004	0.25	4.00	0.21	0.25	WCW-M-32-00097-00004	0.26	3.85	0.19	0.23
			LE-CL-LE	WCW-M-32-00089-00001	0.22	4.55	0.18	0.29	WCW-M-32-00099-00001	0.22	4.55	0.16	0.26



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### 8400 SERIES THERMAL PERFORMANCE CHART

Energy Star Certified in All 50 States



#### Additional Notes

- 1) All thermal performance values listed above are based upon the use of Tin-Plate Intercept Spacer (CU-D)
- 2) All thermal performance values listed above are based upon the use of Argon Gas
- 3) The use of Capillary Tubes will eliminate the availability of Argon Gas
- 4) U-Factor listed was determined in accordance with NFRC 100
- 5) SHGC (Solar Heat Gain Coefficient) listed was determined in accordance with NFRC 200
- 6) VT (Visible Transmittance) listed was determined in accordance with NFRC 200
- 7) All Insulated Glass Units (IGU's) are certified in accordance with ASTM E 2190, per NFRC requirement
- 8) For Turtle Glass, utilize Gray Tint (GR) - Low E (LE) glass configuration
- 9) Energy Star Certification status is based upon Energy Star Version 6, effective 01/01/2015