



METAL WINDOW CORPORATION

**Performance Testing  
Structural, Air & Water**

501 S. Isis Ave  
Inglewood, CA 90301  
310-665-0490 - Ph.  
310-641-7356 - Fax

	1500 Series	1500 Series	1500 Series	1500 Series	2000 Series	2000 Series	2000 Series	2000 Series	2000 Series	3000 Series	3500 Series	3500 Series	3500 Series	4000 Series
	Casement Fixed Casement	Fixed Hopper Fixed	Fixed (O)	Fixed Awning Fixed	Casement Fixed Casement	Fixed Hopper Fixed	Fixed (O)	Fixed Awning Fixed	Single Casement	Standard Out-Swing Door	Sliding OX	Sliding OXO	Sliding OXXO	Sliding XXX
Testing Facility	FTL	FTL	FTL	FTL	FTL	FTL	FTL	FTL	FTL	FTL	FTL	FTL	FTL	FTL
Test Date	11/13/2006	11/16/2006	11/13/2006	11/16/2006	11/10/2006	11/9/2006	11/16/2006	11/9/2006	11/17/2006	11/17/2006	5/17/2004	2/24/2005	2/20/2005	10/17/2007
Frame Size	102 X 64	52 X 104	64 X 64	52 X 104	116 X 64	64 X 108	62 X 74	64 X 108	36 X 66	48 X 96	95.50 X 95.75	141 X 96	192 X 96	180 X 120
Panel Size(s)										44.50 X 94	48.43 X 93.25	47.25 X 93.50	48.62 X 93.50	60.98 X 118.50
Sash Size	33.37 X 62.12				34.75 X 61.75				34 X 64					
Hopper Size		50.25 X 33.50				61.75 X 33.25								
Awning Size				50.25 X 33.25			61.75 X 33.25							
Fixed Size	31.37 X 60.12		60.25 X 60.25		42 X 60		58 X 70				48.43 X 93.75	47.25 X 94	48.62 X 94	
Top Fixed Size		48.25 X 32.50		48.25 X 32.25		60 X 34.25		60 X 34.25						
Bottom Fixed Size		48.25 X 32.50		48.25 X 32.25		60 X 34.25		60 X 34.25						
Rating	C - C 50	AP - C 40	FW - C 60	AP - C 60	C - C 65	AP - C 40	FW - HC 70	AP - C 60	C - HC 50		SGD - C 40	SGD - C 40	SGD - C 35	SD - LC 25
ASTM E 2068	•	•		•	•	•		•	•		•	•	•	•
ASTM E 283	•	•	•	•	•	•	•	•	•	•	•	•	•	•
ASTM E 547	•	•	•	•	•	•	•	•	•		•	•	•	•
ASTM E 330	•	•	•	•	•	•	•	•	•	•	•	•	•	•
ASTM E 331	•	•	•	•	•	•	•	•	•	•				
ASTM E 987											•	•	•	•
ASTM F 588	•	•	•	•	•	•	•	•	•					
ASTM F 842														•
CAWM 300-96											•	•	•	



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CORPORATION

## Performance Testing Thermal

501 S. Isis Ave  
Inglewood, CA 90301  
310-665-0490 - Ph.  
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	<i>1500 Series</i>	<i>1500 Series</i>	<i>2000 Series</i>	<i>2000 Series</i>	<i>3000 Series</i>	<i>3500 Series</i>	<i>4000 Series</i>
	Casement	Fixed	Casement	Fixed	Standard Out-Swing Single Door	Sliding OX	Sliding XXX
<i>Testing Facility</i>	AT	AT	AT	AT	AT	AT	AT
<i>Test Date</i>	<b>10/14/2009</b>	<b>10/16/2009</b>	<b>10/13/2009</b>	<b>10/15/2009</b>	<b>10/16/2009</b>	<b>10/20/2009</b>	<b>10/21/2009</b>
<i>Frame Size</i>	24 X 59	47 X 59	24 X 59	47 X 59	39 X 79	79 X 79	79 X 79
<i>Panel Size(s)</i>							
<i>Layer 1</i>	1/4" SB 60	1/4" SB 60	3/16" SB 60	1/4" SB 60	3/16" SB 60	3/16" SB 60	3/16" SB 60
<i>Gap</i>	AL Spacer (Argon Filled)	AL Spacer (Air Filled)	AL Spacer (Argon Filled)	AL Spacer (Air Filled)	AL Spacer (Argon Filled)	AL Spacer (Air Filled)	AL Spacer (Argon Filled)
<i>Layer 2</i>	1/4" Clear	1/4" Clear	3/16" Clear	1/4" Clear	3/16" Clear	3/16" Clear	3/16" Clear
<i>U-Factor</i>	<b>0.56</b>	<b>0.43</b>	<b>0.61</b>	<b>0.44</b>	<b>0.61</b>	<b>0.52</b>	<b>0.53</b>







1500 PROJECT OUT/AWNING U-VALUE, SOLAR HEAT GAIN COEFFICIENT (SHGC), VISIBLE TRANSMITTANCE (VT)

GLASS TYPES		1" OA GLASS (1/8" GLASS / 3/4" AS / 1/8" GLASS)						1" O/A GLASS (1/4" GLASS / 1/2" AS / 1/4" GLASS)					
		U-VALUE		SOLAR HEAT GAIN COEFFICIENT		VISIBLE TRANSMITTANCE		U-VALUE		SOLAR HEAT GAIN COEFFICIENT		VISIBLE TRANSMITTANCE	
		WITHOUT MUNTINS	WITH MUNTINS	WITHOUT MUNTINS	MUNTINS >1"	WITHOUT MUNTINS	MUNTINS >1"	WITHOUT MUNTINS	WITH MUNTINS	WITHOUT MUNTINS	MUNTINS >1"	WITHOUT MUNTINS	MUNTINS >1"
1	CLEAR / AIR / CLEAR	0.70	0.83	0.55	0.46	0.56	0.46	0.70	0.83	0.51	0.42	0.55	0.45
2	CLEAR / ARGON / CLEAR	0.69	0.82	0.55	0.46	0.56	0.46	0.68	0.82	0.51	0.42	0.55	0.45
3	SOLAR GREY / AIR / CLEAR	0.70	0.83	0.42	0.35	0.38	0.31	0.70	0.83	0.34	0.28	0.27	0.22
4	SOLAR GREY / ARGON / CLEAR	0.69	0.82	0.42	0.35	0.38	0.31	0.68	0.82	0.34	0.28	0.27	0.22
5	SOLAR BRONZE / AIR / CLEAR	0.70	0.83	0.45	0.38	0.42	0.34	0.70	0.83	0.38	0.32	0.33	0.27
6	SOLAR BRONZE / ARGON / CLEAR	0.69	0.82	0.45	0.38	0.42	0.34	0.68	0.82	0.38	0.32	0.33	0.27
7	SOLEX / AIR / CLEAR	0.70	0.83	0.44	0.36	0.52	0.42	0.70	0.83	0.37	0.31	0.48	0.39
8	SOLEX / ARGON / CLEAR	0.69	0.82	0.44	0.36	0.52	0.42	0.68	0.82	0.37	0.31	0.48	0.39
9	SOLARBAN 60 (#2 SURFACE) / AIR / CLEAR	0.59	0.76	0.29	0.25	0.50	0.41	0.59	0.76	0.29	0.24	0.49	0.40
10	SOLARBAN 60 (#2 SURFACE) / ARGON / CLEAR	0.56	0.73	0.29	0.25	0.50	0.41	0.56	0.74	0.29	0.24	0.49	0.40
11	SOLAR GREY / AIR / SOLARBAN 60	0.59	0.76	0.26	0.22	0.34	0.27	0.59	0.76	0.22	0.19	0.24	0.20
12	SOLAR GREY / ARGON / SOLARBAN 60	0.56	0.73	0.26	0.22	0.34	0.27	0.56	0.74	0.22	0.19	0.24	0.20
13	SOLAR BRONZE / AIR / SOLARBAN 60	0.59	0.76	0.28	0.24	0.37	0.03	0.59	0.76	0.24	0.20	0.29	0.24
14	SOLAR BRONZE / ARGON / SOLARBAN 60	0.56	0.73	0.28	0.24	0.37	0.30	0.56	0.74	0.24	0.20	0.29	0.24
15	SOLEX / AIR / SOLARBAN 60	0.59	0.76	0.30	0.26	0.46	0.38	0.59	0.76	0.27	0.23	0.43	0.35
16	SOLEX / ARGON / SOLARBAN 60	0.56	0.73	0.30	0.26	0.46	0.38	0.56	0.74	0.27	0.23	0.43	0.35
17	1/4 LOW E LAMI (SUNGATE 500 INNERLAYER)	0.83	0.94	0.49	0.41	0.57	0.46	N/A	N/A	N/A	N/A	N/A	N/A
18	1/4 CLEAR LAMI (.030 INNERLAYER)	1.06	1.11	0.57	0.47	0.61	0.50	N/A	N/A	N/A	N/A	N/A	N/A
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1500 PROJECT IN U-VALUE, SOLAR HEAT GAIN COEFFICIENT (SHGC), VISIBLE TRANSMITTANCE (VT)

GLASS TYPES	1" OA GLASS (1/8" GLASS / 3/4"AS / 1/8" GLASS)						1" O/A GLASS (1/4" GLASS / 1/2"AS / 1/4" GLASS)					
	U-VALUE		SOLAR HEAT GAIN COEFFICIENT		VISIBLE TRANSMITTANCE		U-VALUE		SOLAR HEAT GAIN COEFFICIENT		VISIBLE TRANSMITTANCE	
	WITHOUT MUNTINS	WITH MUNTINS	WITHOUT MUNTINS	MUNTINS >1"	WITHOUT MUNTINS	MUNTINS >1"	WITHOUT MUNTINS	WITH MUNTINS	WITHOUT MUNTINS	MUNTINS >1"	WITHOUT MUNTINS	MUNTINS >1"
1 CLEAR / AIR / CLEAR	0.72	0.85	0.53	0.44	0.55	0.45	0.72	0.85	0.50	0.41	0.54	0.44
2 CLEAR / ARGON / CLEAR	0.71	0.84	0.53	0.44	0.55	0.45	0.70	0.84	0.50	0.41	0.54	0.44
3 SOLAR GREY / AIR / CLEAR	0.72	0.85	0.41	0.34	0.37	0.30	0.72	0.85	0.33	0.28	0.27	0.22
4 SOLAR GREY / ARGON / CLEAR	0.71	0.84	0.41	0.34	0.37	0.30	0.70	0.84	0.33	0.28	0.27	0.22
5 SOLAR BRONZE / AIR / CLEAR	0.72	0.85	0.44	0.37	0.41	0.33	0.72	0.85	0.37	0.31	0.32	0.26
6 SOLAR BRONZE / ARGON / CLEAR	0.71	0.84	0.44	0.37	0.41	0.33	0.70	0.84	0.37	0.31	0.32	0.26
7 SOLEX / AIR / CLEAR	0.72	0.85	0.42	0.35	0.51	0.41	0.72	0.85	0.36	0.30	0.47	0.38
8 SOLEX / ARGON / CLEAR	0.71	0.84	0.42	0.35	0.51	0.41	0.70	0.84	0.36	0.30	0.47	0.38
9 SOLARBAN 60 (#2 SURFACE) / AIR / CLEAR	0.61	0.78	0.28	0.24	0.49	0.40	0.61	0.78	0.28	0.24	0.48	0.39
10 SOLARBAN 60 (#2 SURFACE) / ARGON / CLEAR	0.58	0.75	0.28	0.24	0.49	0.40	0.58	0.76	0.28	0.24	0.48	0.39
11 SOLAR GREY / AIR / SOLARBAN 60	0.61	0.78	0.26	0.22	0.33	0.27	0.61	0.78	0.21	0.18	0.24	0.19
12 SOLAR GREY / ARGON / SOLARBAN 60	0.58	0.75	0.26	0.22	0.33	0.27	0.58	0.76	0.21	0.18	0.24	0.19
13 SOLAR BRONZE / AIR / SOLARBAN 60	0.61	0.78	0.27	0.23	0.36	0.30	0.61	0.78	0.23	0.20	0.29	0.23
14 SOLAR BRONZE / ARGON / SOLARBAN 60	0.58	0.75	0.27	0.23	0.36	0.30	0.58	0.76	0.23	0.20	0.29	0.23
15 SOLEX / AIR / SOLARBAN 60	0.61	0.78	0.29	0.25	0.45	0.37	0.61	0.78	0.27	0.23	0.42	0.34
16 SOLEX / ARGON / SOLARBAN 60	0.58	0.75	0.29	0.25	0.45	0.37	0.58	0.76	0.27	0.23	0.42	0.34
17 1/4 LOW E LAMI (SUNGATE 500 INNERLAYER)	0.85	0.95	0.48	0.40	0.50	0.45	N/A	N/A	N/A	N/A	N/A	N/A
18 1/4 CLEAR LAMI (.030 INNERLAYER)	1.06	1.11	0.55	0.46	0.60	0.49	N/A	N/A	N/A	N/A	N/A	N/A
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2000 FIXED U-VALUE, SOLAR HEAT GAIN COEFFICIENT (SHGC), VISIBLE TRANSMITTANCE (VT)

GLASS TYPES	1" OA GLASS (1/8" GLASS / 3/4"AS / 1/8" GLASS)						1" O/A GLASS (1/4" GLASS / 1/2"AS / 1/4" GLASS)					
	U-VALUE		SOLAR HEAT GAIN COEFFICIENT		VISIBLE TRANSMITTANCE		U-VALUE		SOLAR HEAT GAIN COEFFICIENT		VISIBLE TRANSMITTANCE	
	WITHOUT MUNTINS	WITH MUNTINS	WITHOUT MUNTINS	MUNTINS >1"	WITHOUT MUNTINS	MUNTINS >1"	WITHOUT MUNTINS	WITH MUNTINS	WITHOUT MUNTINS	MUNTINS >1"	WITHOUT MUNTINS	MUNTINS >1"
1 CLEAR / AIR / CLEAR	0.60	0.81	0.65	0.53	0.53	0.55	0.59	0.81	0.61	0.49	0.68	0.54
2 CLEAR / ARGON / CLEAR	0.58	0.79	0.65	0.53	0.69	0.55	0.57	0.80	0.61	0.49	0.68	0.54
3 SOLAR GREY / AIR / CLEAR	0.60	0.81	0.50	0.41	0.69	0.37	0.59	0.81	0.40	0.32	0.34	0.27
4 SOLAR GREY / ARGON / CLEAR	0.58	0.79	0.50	0.41	0.47	0.37	0.57	0.80	0.40	0.32	0.34	0.27
5 SOLAR BRONZE / AIR / CLEAR	0.60	0.81	0.54	0.44	0.52	0.41	0.59	0.81	0.44	0.36	0.40	0.32
6 SOLAR BRONZE / ARGON / CLEAR	0.58	0.79	0.54	0.44	0.52	0.41	0.57	0.80	0.44	0.36	0.40	0.32
7 SOLEX / AIR / CLEAR	0.60	0.81	0.52	0.42	0.64	0.51	0.59	0.81	0.43	0.35	0.59	0.47
8 SOLEX / ARGON / CLEAR	0.58	0.79	0.52	0.42	0.64	0.51	0.57	0.80	0.43	0.35	0.59	0.47
9 SOLARBAN 60 (#2 SURFACE) / AIR / CLEAR	0.46	0.72	0.34	0.28	0.62	0.49	0.45	0.72	0.33	0.27	0.60	0.48
10 SOLARBAN 60 (#2 SURFACE) / ARGON / CLEAR	0.42	0.69	0.34	0.28	0.62	0.49	0.41	0.70	0.33	0.27	0.60	0.48
11 SOLAR GREY / AIR / SOLARBAN 60	0.46	0.72	0.30	0.25	0.41	0.33	0.45	0.72	0.25	0.21	0.30	0.24
12 SOLAR GREY / ARGON / SOLARBAN 60	0.42	0.69	0.30	0.25	0.41	0.33	0.41	0.70	0.25	0.21	0.30	0.24
13 SOLAR BRONZE / AIR / SOLARBAN 60	0.46	0.72	0.32	0.27	0.46	0.37	0.45	0.72	0.27	0.23	0.36	0.29
14 SOLAR BRONZE / ARGON / SOLARBAN 60	0.42	0.69	0.32	0.27	0.46	0.37	0.41	0.70	0.27	0.23	0.36	0.29
15 SOLEX / AIR / SOLARBAN 60	0.46	0.72	0.35	0.29	0.57	0.45	0.45	0.72	0.32	0.26	0.52	0.42
16 SOLEX / ARGON / SOLARBAN 60	0.42	0.69	0.35	0.29	0.57	0.45	0.41	0.70	0.32	0.26	0.52	0.42
17 1/4 LOW E LAMI (SUNGATE 500 INNERLAYER)	0.75	0.91	0.58	0.47	0.70	0.56	N/A	N/A	N/A	N/A	N/A	N/A
18 1/4 CLEAR LAMI (.030 INNERLAYER)	1.03	1.11	0.68	0.55	0.75	0.60	N/A	N/A	N/A	N/A	N/A	N/A
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2000 CASEMENT U-VALUE, SOLAR HEAT GAIN COEFFICIENT (SHGC), VISIBLE TRANSMITTANCE (VT)

GLASS TYPES	1" OA GLASS (1/8" GLASS / 3/4" AS / 1/8" GLASS)						1" O/A GLASS (1/4" GLASS / 1/2" AS / 1/4" GLASS)					
	U-VALUE		SOLAR HEAT GAIN COEFFICIENT		VISIBLE TRANSMITTANCE		U-VALUE		SOLAR HEAT GAIN COEFFICIENT		VISIBLE TRANSMITTANCE	
	WITHOUT MUNTINS	WITH MUNTINS	WITHOUT MUNTINS	MUNTINS >1"	WITHOUT MUNTINS	MUNTINS >1"	WITHOUT MUNTINS	WITH MUNTINS	WITHOUT MUNTINS	MUNTINS >1"	WITHOUT MUNTINS	MUNTINS >1"
1 CLEAR / AIR / CLEAR	0.73	0.88	0.53	0.43	0.54	0.44	0.73	0.88	0.49	0.40	0.53	0.43
2 CLEAR / ARGON / CLEAR	0.72	0.87	0.53	0.43	0.54	0.44	0.71	0.87	0.49	0.40	0.53	0.43
3 SOLAR GREY / AIR / CLEAR	0.73	0.88	0.40	0.34	0.36	0.29	0.73	0.88	0.32	0.27	0.26	0.21
4 SOLAR GREY / ARGON / CLEAR	0.72	0.87	0.40	0.34	0.36	0.29	0.71	0.87	0.32	0.27	0.26	0.21
5 SOLAR BRONZE / AIR / CLEAR	0.73	0.88	0.43	0.36	0.40	0.33	0.73	0.88	0.36	0.30	0.32	0.26
6 SOLAR BRONZE / ARGON / CLEAR	0.72	0.87	0.43	0.36	0.40	0.33	0.71	0.87	0.36	0.30	0.32	0.26
7 SOLEX / AIR / CLEAR	0.73	0.88	0.42	0.35	0.50	0.40	0.73	0.88	0.35	0.29	0.46	0.37
8 SOLEX / ARGON / CLEAR	0.72	0.87	0.42	0.35	0.50	0.40	0.71	0.87	0.35	0.29	0.46	0.37
9 SOLARBAN 60 (#2 SURFACE) / AIR / CLEAR	0.63	0.81	0.28	0.23	0.48	0.39	0.62	0.82	0.28	0.23	0.47	0.38
10 SOLARBAN 60 (#2 SURFACE) / ARGON / CLEAR	0.60	0.79	0.28	0.23	0.48	0.39	0.59	0.80	0.28	0.23	0.47	0.38
11 SOLAR GREY / AIR / SOLARBAN 60	0.63	0.81	0.25	0.21	0.32	0.26	0.62	0.82	0.21	0.18	0.23	0.19
12 SOLAR GREY / ARGON / SOLARBAN 60	0.60	0.79	0.25	0.21	0.32	0.26	0.59	0.80	0.21	0.18	0.23	0.19
13 SOLAR BRONZE / AIR / SOLARBAN 60	0.63	0.81	0.27	0.23	0.36	0.29	0.62	0.82	0.23	0.19	0.28	0.23
14 SOLAR BRONZE / ARGON / SOLARBAN 60	0.60	0.79	0.27	0.23	0.36	0.29	0.59	0.80	0.23	0.19	0.28	0.23
15 SOLEX / AIR / SOLARBAN 60	0.63	0.81	0.29	0.24	0.44	0.36	0.62	0.82	0.26	0.22	0.41	0.33
16 SOLEX / ARGON / SOLARBAN 60	0.60	0.79	0.29	0.24	0.44	0.36	0.59	0.80	0.26	0.22	0.41	0.33
17 1/4 LOW E LAMI (SUNGATE 500 INNERLAYER)	0.85	0.97	0.47	0.39	0.55	0.44	N/A	N/A	N/A	N/A	N/A	N/A
18 1/4 CLEAR LAMI (.030 INNERLAYER)	1.06	1.12	0.54	0.45	0.59	0.48	N/A	N/A	N/A	N/A	N/A	N/A
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2000 PROJECT OUT U-VALUE, SOLAR HEAT GAIN COEFFICIENT (SHGC), VISIBLE TRANSMITTANCE (VT)

GLASS TYPES	1" OA GLASS (1/8" GLASS / 3/4"AS / 1/8" GLASS)						1" O/A GLASS (1/4" GLASS / 1/2"AS / 1/4" GLASS)					
	U-VALUE		SOLAR HEAT GAIN COEFFICIENT		VISIBLE TRANSMITTANCE		U-VALUE		SOLAR HEAT GAIN COEFFICIENT		VISIBLE TRANSMITTANCE	
	WITHOUT MUNTINS	WITH MUNTINS	WITHOUT MUNTINS	MUNTINS >1"	WITHOUT MUNTINS	MUNTINS >1"	WITHOUT MUNTINS	WITH MUNTINS	WITHOUT MUNTINS	MUNTINS >1"	WITHOUT MUNTINS	MUNTINS >1"
1 CLEAR / AIR / CLEAR	0.73	0.88	0.53	0.43	0.54	0.44	0.73	0.88	0.49	0.40	0.53	0.43
2 CLEAR / ARGON / CLEAR	0.72	0.87	0.53	0.43	0.54	0.44	0.71	0.87	0.49	0.40	0.53	0.43
3 SOLAR GREY / AIR / CLEAR	0.73	0.88	0.40	0.34	0.36	0.29	0.73	0.88	0.32	0.27	0.26	0.21
4 SOLAR GREY / ARGON / CLEAR	0.72	0.87	0.40	0.34	0.36	0.29	0.71	0.87	0.32	0.27	0.26	0.21
5 SOLAR BRONZE / AIR / CLEAR	0.73	0.88	0.43	0.36	0.40	0.33	0.73	0.88	0.36	0.30	0.32	0.26
6 SOLAR BRONZE / ARGON / CLEAR	0.72	0.87	0.43	0.36	0.40	0.33	0.71	0.87	0.36	0.30	0.32	0.26
7 SOLEX / AIR / CLEAR	0.73	0.88	0.42	0.35	0.50	0.40	0.73	0.88	0.35	0.29	0.46	0.37
8 SOLEX / ARGON / CLEAR	0.72	0.87	0.42	0.35	0.50	0.40	0.71	0.87	0.35	0.29	0.46	0.37
9 SOLARBAN 60 (#2 SURFACE) / AIR / CLEAR	0.63	0.81	0.28	0.23	0.48	0.39	0.62	0.81	0.28	0.23	0.47	0.38
10 SOLARBAN 60 (#2 SURFACE) / ARGON / CLEAR	0.60	0.79	0.28	0.23	0.48	0.39	0.59	0.79	0.28	0.23	0.47	0.38
11 SOLAR GREY / AIR / SOLARBAN 60	0.63	0.81	0.25	0.21	0.32	0.26	0.62	0.81	0.21	0.18	0.23	0.19
12 SOLAR GREY / ARGON / SOLARBAN 60	0.60	0.79	0.25	0.21	0.32	0.26	0.59	0.79	0.21	0.18	0.23	0.19
13 SOLAR BRONZE / AIR / SOLARBAN 60	0.63	0.81	0.27	0.23	0.36	0.29	0.62	0.81	0.23	0.19	0.28	0.23
14 SOLAR BRONZE / ARGON / SOLARBAN 60	0.60	0.79	0.27	0.23	0.36	0.29	0.59	0.79	0.23	0.19	0.28	0.23
15 SOLEX / AIR / SOLARBAN 60	0.63	0.81	0.29	0.24	0.44	0.36	0.62	0.81	0.26	0.22	0.41	0.33
16 SOLEX / ARGON / SOLARBAN 60	0.60	0.79	0.29	0.24	0.44	0.36	0.59	0.79	0.26	0.22	0.41	0.33
17 1/4 LOW E LAMI (SUNGATE 500 INNERLAYER)	0.85	0.97	0.47	0.39	0.55	0.44	N/A	N/A	N/A	N/A	N/A	N/A
18 1/4 CLEAR LAMI (.030 INNERLAYER)	1.06	1.12	0.54	0.45	0.59	0.48	N/A	N/A	N/A	N/A	N/A	N/A
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2000 PROJECT IN U-VALUE, SOLAR HEAT GAIN COEFFICIENT (SHGC), VISIBLE TRANSMITTANCE (VT)

GLASS TYPES	1" OA GLASS (1/8" GLASS / 3/4"AS / 1/8" GLASS)						1" O/A GLASS (1/4" GLASS / 1/2"AS / 1/4" GLASS)					
	U-VALUE		SOLAR HEAT GAIN COEFFICIENT		VISIBLE TRANSMITTANCE		U-VALUE		SOLAR HEAT GAIN COEFFICIENT		VISIBLE TRANSMITTANCE	
	WITHOUT MUNTINS	WITH MUNTINS	WITHOUT MUNTINS	MUNTINS >1"	WITHOUT MUNTINS	MUNTINS >1"	WITHOUT MUNTINS	WITH MUNTINS	WITHOUT MUNTINS	MUNTINS >1"	WITHOUT MUNTINS	MUNTINS >1"
1 CLEAR / AIR / CLEAR	0.74	0.88	0.53	0.44	0.55	0.44	0.73	0.88	0.49	0.41	0.53	0.43
2 CLEAR / ARGON / CLEAR	0.72	0.87	0.53	0.44	0.55	0.44	0.72	0.87	0.49	0.41	0.53	0.43
3 SOLAR GREY / AIR / CLEAR	0.74	0.88	0.41	0.34	0.37	0.30	0.73	0.88	0.33	0.27	0.27	0.22
4 SOLAR GREY / ARGON / CLEAR	0.72	0.87	0.41	0.34	0.37	0.30	0.72	0.87	0.33	0.27	0.27	0.22
5 SOLAR BRONZE / AIR / CLEAR	0.74	0.88	0.44	0.36	0.41	0.33	0.73	0.88	0.36	0.30	0.32	0.26
6 SOLAR BRONZE / ARGON / CLEAR	0.72	0.87	0.44	0.36	0.41	0.33	0.72	0.87	0.36	0.30	0.32	0.26
7 SOLEX / AIR / CLEAR	0.74	0.88	0.42	0.35	0.50	0.41	0.73	0.88	0.35	0.29	0.46	0.37
8 SOLEX / ARGON / CLEAR	0.72	0.87	0.42	0.35	0.50	0.41	0.72	0.87	0.35	0.29	0.46	0.37
9 SOLARBAN 60 (#2 SURFACE) / AIR / CLEAR	0.63	0.81	0.28	0.23	0.48	0.39	0.62	0.81	0.28	0.23	0.47	0.38
10 SOLARBAN 60 (#2 SURFACE) / ARGON / CLEAR	0.60	0.79	0.28	0.23	0.48	0.39	0.59	0.79	0.28	0.23	0.47	0.38
11 SOLAR GREY / AIR / SOLARBAN 60	0.63	0.81	0.25	0.21	0.32	0.26	0.62	0.81	0.21	0.18	0.24	0.19
12 SOLAR GREY / ARGON / SOLARBAN 60	0.60	0.79	0.25	0.21	0.32	0.26	0.59	0.79	0.21	0.18	0.24	0.19
13 SOLAR BRONZE / AIR / SOLARBAN 60	0.63	0.81	0.27	0.23	0.36	0.29	0.62	0.81	0.23	0.19	0.28	0.23
14 SOLAR BRONZE / ARGON / SOLARBAN 60	0.60	0.79	0.27	0.23	0.36	0.29	0.59	0.79	0.23	0.19	0.28	0.23
15 SOLEX / AIR / SOLARBAN 60	0.63	0.81	0.29	0.24	0.45	0.36	0.62	0.81	0.26	0.22	0.41	0.33
16 SOLEX / ARGON / SOLARBAN 60	0.60	0.79	0.29	0.24	0.45	0.36	0.59	0.79	0.26	0.22	0.41	0.33
17 1/4 LOW E LAMI (SUNGATE 500 INNERLAYER)	0.85	0.97	0.47	0.39	0.55	0.45	N/A	N/A	N/A	N/A	N/A	N/A
18 1/4 CLEAR LAMI (.030 INNERLAYER)	1.07	1.13	0.55	0.45	0.59	0.48	N/A	N/A	N/A	N/A	N/A	N/A
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3000 SWING DOOR U-VALUE, SOLAR HEAT GAIN COEFFICIENT (SHGC), VISIBLE TRANSMITTANCE (VT)

GLASS TYPES	1" OA GLASS (3/16" GLASS / 5/8" AS / 3/16" GLASS)						1" O/A GLASS (1/4" GLASS / 1/2" AS / 1/4" GLASS)					
	U-VALUE		SOLAR HEAT GAIN COEFFICIENT		VISIBLE TRANSMITTANCE		U-VALUE		SOLAR HEAT GAIN COEFFICIENT		VISIBLE TRANSMITTANCE	
	WITHOUT MUNTINS	WITH MUNTINS	WITHOUT MUNTINS	MUNTINS >1"	WITHOUT MUNTINS	MUNTINS >1"	WITHOUT MUNTINS	WITH MUNTINS	WITHOUT MUNTINS	MUNTINS >1"	WITHOUT MUNTINS	MUNTINS >1"
1 CLEAR / AIR / CLEAR	0.74	N/A	0.46	N/A	0.48	N/A	0.74	N/A	0.45	N/A	0.47	N/A
2 CLEAR / ARGON / CLEAR	0.73	N/A	0.46	N/A	0.48	N/A	0.72	N/A	0.45	N/A	0.47	N/A
3 SOLAR GREY / AIR / CLEAR	0.74	N/A	0.33	N/A	0.27	N/A	0.74	N/A	0.30	N/A	0.24	N/A
4 SOLAR GREY / ARGON / CLEAR	0.73	N/A	0.33	N/A	0.27	N/A	0.72	N/A	0.30	N/A	0.24	N/A
5 SOLAR BRONZE / AIR / CLEAR	0.74	N/A	0.36	N/A	0.31	N/A	0.74	N/A	0.33	N/A	0.28	N/A
6 SOLAR BRONZE / ARGON / CLEAR	0.73	N/A	0.36	N/A	0.31	N/A	0.72	N/A	0.33	N/A	0.28	N/A
7 SOLEX / AIR / CLEAR	0.74	N/A	0.34	N/A	0.43	N/A	0.74	N/A	0.32	N/A	0.41	N/A
8 SOLEX / ARGON / CLEAR	0.73	N/A	0.34	N/A	0.43	N/A	0.72	N/A	0.32	N/A	0.41	N/A
9 SOLARBAN 60 (#2 SURFACE) / AIR / CLEAR	0.64	N/A	0.26	N/A	0.43	N/A	0.64	N/A	0.26	N/A	0.42	N/A
10 SOLARBAN 60 (#2 SURFACE) / ARGON / CLEAR	0.61	N/A	0.26	N/A	0.43	N/A	0.61	N/A	0.26	N/A	0.42	N/A
11 SOLAR GREY / AIR / SOLARBAN 60	0.64	N/A	0.21	N/A	0.24	N/A	0.64	N/A	0.20	N/A	0.21	N/A
12 SOLAR GREY / ARGON / SOLARBAN 60	0.61	N/A	0.21	N/A	0.24	N/A	0.61	N/A	0.20	N/A	0.21	N/A
13 SOLAR BRONZE / AIR / SOLARBAN 60	0.64	N/A	0.23	N/A	0.28	N/A	0.64	N/A	0.21	N/A	0.25	N/A
14 SOLAR BRONZE / ARGON / SOLARBAN 60	0.61	N/A	0.23	N/A	0.28	N/A	0.61	N/A	0.21	N/A	0.25	N/A
15 SOLEX / AIR / SOLARBAN 60	0.64	N/A	0.25	N/A	0.38	N/A	0.64	N/A	0.24	N/A	0.37	N/A
16 SOLEX / ARGON / SOLARBAN 60	0.61	N/A	0.25	N/A	0.38	N/A	0.61	N/A	0.24	N/A	0.37	N/A
17 1/4 LOW E LAMI (SUNGATE 500 INNERLAYER)	0.85	N/A	0.43	N/A	0.49	N/A	N/A	N/A	N/A	N/A	N/A	N/A
18 1/4 CLEAR LAMI (.030 INNERLAYER)	1.04	N/A	0.50	N/A	0.53	N/A	N/A	N/A	N/A	N/A	N/A	N/A
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22 FOR ALL MUNTIN IN VALUES USE DEFAULT TABLE												
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4000 MULTI-SLIDE U-VALUE, SOLAR HEAT GAIN COEFFICIENT (SHGC), VISIBLE TRANSMITTANCE (VT)

GLASS TYPES	1" O/A GLASS (3/16" GLASS / 5/8" AS / 3/16" GLASS)						1" O/A GLASS (1/4" GLASS / 1/2" AS / 1/4" GLASS)					
	U-VALUE		SOLAR HEAT GAIN COEFFICIENT		VISIBLE TRANSMITTANCE		U-VALUE		SOLAR HEAT GAIN COEFFICIENT		VISIBLE TRANSMITTANCE	
	WITHOUT MUNTINS	WITH MUNTINS	WITHOUT MUNTINS	MUNTINS >1"	WITHOUT MUNTINS	MUNTINS >1"	WITHOUT MUNTINS	WITH MUNTINS	WITHOUT MUNTINS	MUNTINS >1"	WITHOUT MUNTINS	MUNTINS >1"
1 CLEAR / AIR / CLEAR	0.74	0.88	0.53	0.44	0.55	0.44	0.73	0.88	0.49	0.41	0.53	0.43
2 CLEAR / ARGON / CLEAR	0.72	0.87	0.53	0.44	0.55	0.44	0.72	0.87	0.49	0.41	0.53	0.43
3 SOLAR GREY / AIR / CLEAR	0.74	0.88	0.41	0.34	0.37	0.30	0.73	0.88	0.33	0.27	0.27	0.22
4 SOLAR GREY / ARGON / CLEAR	0.72	0.87	0.41	0.34	0.37	0.30	0.72	0.87	0.33	0.27	0.27	0.22
5 SOLAR BRONZE / AIR / CLEAR	0.74	0.88	0.44	0.36	0.41	0.33	0.73	0.88	0.36	0.30	0.32	0.26
6 SOLAR BRONZE / ARGON / CLEAR	0.72	0.87	0.44	0.36	0.41	0.33	0.72	0.87	0.36	0.30	0.32	0.26
7 SOLEX / AIR / CLEAR	0.74	0.88	0.42	0.35	0.50	0.41	0.73	0.88	0.35	0.29	0.46	0.37
8 SOLEX / ARGON / CLEAR	0.72	0.87	0.42	0.35	0.50	0.41	0.72	0.87	0.35	0.29	0.46	0.37
9 SOLARBAN 60 (#2 SURFACE) / AIR / CLEAR	0.63	0.81	0.28	0.23	0.48	0.39	0.62	0.81	0.28	0.23	0.47	0.38
10 SOLARBAN 60 (#2 SURFACE) / ARGON / CLEAR	0.60	0.79	0.28	0.23	0.48	0.39	0.59	0.79	0.28	0.23	0.47	0.38
11 SOLAR GREY / AIR / SOLARBAN 60	0.63	0.81	0.25	0.21	0.32	0.26	0.62	0.81	0.21	0.18	0.24	0.19
12 SOLAR GREY / ARGON / SOLARBAN 60	0.60	0.79	0.25	0.21	0.32	0.26	0.59	0.79	0.21	0.18	0.24	0.19
13 SOLAR BRONZE / AIR / SOLARBAN 60	0.63	0.81	0.27	0.23	0.36	0.29	0.62	0.81	0.23	0.19	0.28	0.23
14 SOLAR BRONZE / ARGON / SOLARBAN 60	0.60	0.79	0.27	0.23	0.36	0.29	0.59	0.79	0.23	0.19	0.28	0.23
15 SOLEX / AIR / SOLARBAN 60	0.63	0.81	0.29	0.24	0.45	0.36	0.62	0.81	0.26	0.22	0.41	0.33
16 SOLEX / ARGON / SOLARBAN 60	0.60	0.79	0.29	0.24	0.45	0.36	0.59	0.79	0.26	0.22	0.41	0.33
17 1/4 LOW E LAMI (SUNGATE 500 INNERLAYER)	0.85	0.97	0.47	0.39	0.55	0.45	N/A	N/A	N/A	N/A	N/A	N/A
18 1/4 CLEAR LAMI (.030 INNERLAYER)	1.07	1.13	0.55	0.45	0.59	0.48	N/A	N/A	N/A	N/A	N/A	N/A
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