

TEST REPORT

Report No.: D0315.01-301-44

Rendered to:

INTERNATIONAL WINDOW
Fullerton, California

PRODUCT TYPE: Sliding Glass Door
SERIES/MODEL: 5820W

SPECIFICATION:

*AAMA/WDMA/CSA 101/I.S.2/A440-08, NAFS - North American Fenestration
Standard/Specification for Windows, Doors, and Skylights*

CAWM 301-90, Forced Entry Resistance Test for Windows.

Title	Summary of Results
Primary Product Designator	Class LC – PG25 – Size tested 2439 x 2439 (96 x 96) – Type SD
Design Pressure	±1200 Pa (±25.06 psf)
Air Infiltration	0.4 L/s/m ² (0.08 cfm/ft ²)
Water Penetration Resistance Test Pressure	290 Pa (6.06 psf)

Test Completion Date: 11/18/2014

Reference must be made to Report No. D0315.01-301-44 dated 03/31/14 for complete test specimen description and detailed test results.



1.0 Report Issued To: International Window
1551 East Orangethrope Avenue
Fullerton, California 92831

2.0 Test Laboratory: Architectural Testing, Inc.
2524 East Jensen Avenue
Fresno, California 93706
(559) 233 - 8705

3.0 Project Summary:

3.1 Series/Model: 5820W

3.2 Product Type: Sliding Glass Door

Compliance Statement: Results obtained are tested values and were secured by using the designated test methods. The specimen tested successfully met the performance requirements for a rating of **Class LC - PG25 - Size tested 2439 x 2439 (96 x 96) - Type SD.**

3.3 Test Dates: 07/29/2013 - 11/18/2013

3.4 Test Record Retention End Date: All test records for this report will be retained until November 18, 2017.

3.5 Test Location: Architectural Testing, Inc. test facility in Fresno, California.

3.6 Test Sample Source: The test specimen was provided by the client. Representative samples of the test specimen will be retained by Architectural Testing until the test record retention end date.

3.7 Drawing Reference: The test specimen drawings have been reviewed by Architectural Testing and are representative of the test specimen reported herein. Test specimen construction was verified by Architectural Testing per the drawings located in Appendix B. Any deviations are documented herein or on the drawings.

3.8 List of Official Observers:

<u>Name</u>	<u>Company</u>
Jay Ratliff	Architectural Testing, Inc.
David Douglass	Architectural Testing, Inc.

4.0 Test Specifications:

AAMA/WDMA/CSA 101/I.S.2/A440-08, *NAFS - North American Fenestration Standard/Specification for Windows, Doors, and Skylights.*

CAWM 300-96, *Forced Entry Resistance Test for Sliding Glass Doors.*

5.0 Test Specimen Description:

5.1 Product Sizes:

Overall Area: 5.95 m ² (64.0 ft ²)	Width		Height	
	millimeters	inches	millimeters	inches
Overall size	2439	96	2439	96
Active panel	1247	49-1/8	2380	93-3/4
Screen	1230	48-7/16	2398	94-3/8

5.2 Frame Construction:

Frame Member	Material	Description
Head, sill, jambs	PVC	Extruded
Fixed interlock stile	PVC	Extruded
Sight line adapters	PVC	Extruded, snap fit into head and sill
Roller track insert	Aluminum	Extruded, snap fit into sill
Screen track insert	PVC	Extruded, snap fit into sill

	Joinery Type	Detail
Frame corners	Mitered	Fully welded
Fixed interlock stile	Coped	Fastened at each end using two #8 x 3" Phillips flat head screws through the frame; coped to frame and sightline adapters; sealed with silicone.

5.0 Test Specimen Description: (Continued)

5.3 Panel Construction:

Panel Member	Material	Description
Rails, stiles	PVC	Extruded

	Joinery Type	Detail
All corners	Mitered	Fully welded

5.4 Weatherstripping:

Description	Quantity	Location
0.270" high polypile with plastic center fin	1 row	Active rails and stiles
	1 row	fixed meeting stile

5.5 Glazing: *No conclusions of any kind regarding the adequacy or inadequacy of the glass in any glazed test specimen(s) can be made.*

Glass Type	Spacer Type	Interior Lite	Exterior Lite	Glazing Method
11/16" IG	Aluminum	3/16" tempered	3/16" tempered	Set from the exterior onto double-sided foam tape and secured with a PVC snap-fit glazing bead.

Location	Quantity	Daylight Opening		Glass Bite
		millimeters	inches	
Active panel	1	1135 x 2275	44-11/16 x 89-5/8	9/16"
Fixed lite	1	1136 x 2270	44-3/4 x 89-3/8	9/16"

5.0 Test Specimen Description: (Continued)

5.6 Drainage:

Drainage Method	Size	Quantity	Location
Weep slot	11/16" x 1/8"	2	2" from each end of sill, through exterior sill face and two interior webs.
Weep slot	1/2" x 1/4"	2	7-1/2" apart at midspan of sill, through exterior sill face and two interior webs.
Weep slot	1/2" x 3/16"	2	2" from each jamb corner, through bottom of interior sill track.
Weep hole	1/2" dia.	2	6-3/4" apart at midspan of sill, through bottom of interior sill track.
Weep notch	1/2" wide	2	6-3/4" apart at midspan of sill, through the vertical internal web below each 1/2" dia. hole.
Weep slot	1/2" x 1/8"	2	1" from each jamb corner, through bottom of screen track.
Weep slot	1/2" x 1/8"	2	4-1/2" from each corner of the bottom rail glazing track, through both layers.
Roller track held back	3/8"	2	Each end of roller track
Screen track held back	1/2"	2	Each end of screen track

5.7 Hardware:

Description	Quantity	Location
Lock	1	Jamb stile, 38-1/2" from bottom, secured with the handle screws through holes in the reinforcement.
Keeper	1	Lock jamb, fastened through frame into rough opening using two #8 x 3" Phillips pan head screws.
Adjustable roller carriage	2	Each end of bottom rail.
Anti-Lift	1	Snap-fit to head 6" from the lock jamb.

5.0 Test Specimen Description: (Continued)

5.8 Reinforcement:

Drawing Number	Location	Material
50192	Fixed meeting stile	Aluminum
50192	Lock stile	Aluminum
SP3551	Active meeting stile	Steel

5.9 Screen Construction:

Frame Material	Corner Construction	Mesh Type	Mesh Attachment
Extruded Aluminum	Mitered, and fastened to corner keys with two #8 x 3/4" Phillips flat head screws	Fiberglass	Vinyl spline

6.0 Installation:

The specimen was installed into a Douglas fir wood buck. The rough opening allowed for a 1/4" – 3/8" shim space. The exterior perimeter of the window was sealed to the test buck with silicone.

Location	Anchor Description	Anchor Location
Mounting fin	#8 x 3" Phillips flat head screw	Through nominal 2x2 wood furring strip and mounting fin, spaced 4" from the corners and 16" on center.



7.0 Test Results: The temperature during testing was 23°C (73°F). The results are tabulated as follows:

Title of Test	Results	Allowed	Note
Operating Force, per ASTM E 2068	Initiate motion: 89 N (20 lbf) Maintain motion: 44 N (10 lbf) Latches: 9 N (2 lbf)	135 N (30.3 lbf) max. 90 N (20.2 lbf) max. 100 N (22.5 lbf) max.	
Air Leakage, Infiltration per ASTM E 283 at 75 Pa (1.57 psf)	0.4 L/s/m ² (0.08 cfm/ft ²)	1.5 L/s/m ² (0.3 cfm/ft ²) max.	1
Water Penetration, per ASTM E 547	N/A	N/A	2
Uniform Load Deflection, per ASTM E 330 <u>taken at meeting stile</u> +1200 Pa (+25.06 psf) -1200 Pa (-25.06 psf)	57.5 mm (2.27") 57.8 mm (2.28")	Report Only	3, 4, 5
Uniform Load Structural, per ASTM E 330 <u>taken at meeting stile</u> +1800 Pa (+37.59 psf) -1800 Pa (-37.59 psf)	1.7 mm (0.07") 2.0 mm (0.08")	9.6 mm (0.38") max. 9.6 mm (0.38") max.	4, 5
Forced Entry Resistance, per ASTM F 842, Type: A - Grade: 25	Pass	No entry	
Forced Entry Resistance, per CAWM-300	Pass	No entry	
Thermoplastic Corner Weld	Pass	Meets as stated	
Deglazing, per ASTM E 987 Operating direction, 320 N (70 lbf) Remaining direction, 230 N (50 lbf)	Pass Pass	Meets as stated Meets as stated	
Optional Performance			
Water Penetration, per ASTM E 547 at 290 Pa (6.06 psf)	Pass	No leakage	6

7.0 Test Results: (Continued)

Note 1: *The tested specimen meets (or exceeds) the performance levels specified in AAMA/WDMA/CSA 101/I.S.2/A440 for air leakage resistance.*

Note 2: *The client opted to start at a pressure higher than the minimum required. Test results are reported under Optional Performance.*

Note 3: *The deflections reported are not limited by AAMA/WDMA/CSA 101/I.S.2/A440 for this product designation. The deflection data is recorded in this report for special code compliance and information only.*

Note 4: *Loads were held for 10 seconds.*

Note 5: *Tape and film were used to seal against air leakage during structural testing. In our opinion, the tape and film did not influence the results of the test.*

Note 6: *With and without insect screen.*

Architectural Testing will service this report for the entire test record retention period. Test records that are retained such as detailed drawings, datasheets, representative samples of test specimens, or other pertinent project documentation will be retained by Architectural Testing, Inc. for the entire test record retention period.

This report does not constitute certification of this product nor an opinion or endorsement by this laboratory. It is the exclusive property of the client so named herein and relates only to the specimen(s) tested. This report may not be reproduced, except in full, without the written approval of Architectural Testing, Inc.

For ARCHITECTURAL TESTING, Inc.

David Douglass
Project Manager

Leaton Kirk
Director – Regional Operations

DD: ms

Attachments (pages): This report is complete only when all attachments listed are included.

Appendix-A: Alteration Addendum (1)

Appendix-B: Drawings (16)

This report produced from controlled document template ATI 00438, issued 01/31/12.



Architectural Testing

Test Report No.: D0315.01-301-44
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Record Retention End Date: 11/18/17

Appendix A

Alteration Addendum

Note: No alterations were required.



Architectural Testing

Test Report No.: D0315.01-301-44
Report Date: 03/31/14
Record Retention End Date: 11/18/17

Appendix B

Drawings

Note: *Complete drawings packet on file with Architectural Testing, Inc.*