



Fenestration Testing Laboratory, Inc.

8148 N.W. 74th Avenue Medley, Florida 33166 Phone: (305) 885-3328 Fax: (305) 885-3329 Toll Free: (844) FTL-TEST (385-8378)
E-mail: clientservices@ftl-inc.com Web: www.ftl-inc.com

Report Date: 01/09/2020
Simulation Date: 01/07/2020
Expiration Date: 01/07/2025
Report Number: 10869
Project Number: 19-9167
Revision Number: 0

Thermal Simulation Report

Manufacture: Shanghai Superhouse Bldg, Co. Ltd

Address: No. 10 Hangfan RD, Pudong
New Area, Shanghai, China

Specifications: ANSI/NFRC 100-2017: Procedure for Determining Fenestration Product U-Factor
ANSI/NFRC 200-2017: Procedure for Determining Fenestration Product Solar Heat Gain
Coefficients and Visible Transmittance at Normal Incidence.
NFRC 500-2017: Procedure for Determining Fenestration Product Condensation Resistance Values

Software: Therm 7.4.3.0, Window v7.4.8, Simulation Manual, Optics 6
Spectral Data Library: IGDB v66.0

Baseline Product Validation

The baseline product must be tested in accordance with NFRC 102 "Test Procedure for Measuring the Steady-State Thermal Transmittance of Fenestration Systems" to validate the U Values indicated. NFRC 100-2017 states "The baseline product is the individual product selected for validation testing". The individual product selected as the baseline product shall have a simulated U-factor within 0.10 Btu/h-ft²·F or 20% of the lowest simulated U-factor, whichever is greater.

Product Description	Product Number	Pane Thickness #1	Pane Thickness #2	Gap	Gap Fill	Emissivity Surface #	Spacer	U Factor

Door Test Size: 2000 mm (79") by 2000 mm (79") high



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Model Designation:	Series; SP100 Sliding Glass Door
Operator Code:	DDSG
Simulated Model Size:	2000 mm (79") by 2000 (79") high

Frame and Panel Construction	
Frame Material and Finish:	(AL) painted aluminum alloy with non-thermally broken members
Panel Material and Finish:	(AL) painted aluminum alloy with non-thermally broken members

Glazing Number	Laminates created in Optics
30000	5052-090PVB-5012
30001	5080-090PVB-5012
30002	5044-090PVB-5012
30003	5020-090PVB-5012
30004	5052-090SGP-1629
30005	5052-090SGP-5012
30006	5080-090SGP-5012
30007	5044-090SGP-5012
30008	5020-090SGP-5012
30009	5052-090SGP-8388

Spacer Type	Sealant Primary	Sealant Secondary	Desiccant
All metal	Butyl rubber	Polysulphide	Silica gel (loose fill)

Edge of Glass Construction	
Interior Condition:	Silicone
Exterior Condition:	Silicone

Gas Type	Filling Technique	Gas Fill Percentage
Argon	Single Probe	90%

Weather Stripping		
Quantity	Description	Location
Single Row	Mohair	Perimeter of frame on the interior and exterior of each panel track
Single Row	Mohair	Threshold
Single Row	Mohair	Interlock stile on the exterior and interior



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Hardware		
Quantity	Description	Location
None	None	None

Only continuous elements which require modeling are listed

Reinforcement	
Material	Location
None	None

Dividers/Grids		
Grid Size	Material	Grid Pattern
None	None	None
<i>Note: any deviations in grid pattern are noted here</i>		

Modeling Assumptions: Glazing was grouped per NFRC 100 section 4.2.4.1



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Simulated Data

Product Description	Product ID Number	Grouping ID Number	Pane Thickness #1	Pane Thickness #2	Pane Thickness #3	Gap #1	Gap #2	Gap Fill #1 & 2	Gap Fill #1 & 2	Emissivity Surface #2	Tint	Total Product U-Factor	Condensation Resistance	Total Product SHGC NG	Total Product VT NG
5mm CL - Air - 5mm CL	1	00	0.197	0.197		0.500		AIR			CL	0.68		0.58	0.62
6mm CL - Air - 6mm CL		01	0.236	0.236		0.500		AIR			CL	0.68		0.56	0.62
6mm CL - Air - 6mm CL - Air - 6mm CL	2	00	0.236	0.236	0.236	0.250	0.250	AIR	AIR		CL	0.56		0.35	0.48
6mm LowE- Air - 6mm CL	3	00	0.236	0.236		0.500		AIR		0.084	CL	0.55		0.24	0.37
6mm LowE- Air - 6mm CL - Air - CL	4	00	0.236	0.236	0.236	0.250	0.250	AIR	AIR	0.084	CL	1.00		0.57	0.66
5mm Double Low-E- Air - 5mm CL	5	00	0.197	0.197		0.500		AIR		0.050	CL	1.00		0.57	0.67
6mm Double Low-E- Air - 6mm CL - Air - 6mm CL	6	00	0.236	0.236	0.236	0.250	0.250	AIR	AIR	0.028	CL	1.00		0.43	0.34
6mm Triple Low-E- Air - 6mm CL - Air - 6mm CL	7	00	0.236	0.236	0.236	0.250	0.250	AIR	AIR	0.022	CL	1.00		0.45	0.42
6mm CL - 090SGP - 6mm CL	8	00	0.535								CL	1.00		0.46	0.40
6mm CL - 090PVB - 6mm CL		01	0.539								CL	1.00		0.46	0.58
6mm Gray - 090PVB - 6mm CL		02	0.535								GY	1.00		0.43	0.33
6mm Blue - 090PVB - 6mm CL		03	0.535								BL	1.00		0.45	0.42
6mm Bronze - 090PVB - 6mm CL		04	0.535								BZ	1.00		0.45	0.40
6mm Solexia - 090PVB - 6mm CL		05	0.535								GR	1.00		0.46	0.58
6mm Gray - 090SGP - 6mm CL		06	0.536								GY	0.65		0.53	0.59
6mm Blue - 090SGP - 6mm CL		07	0.536								BL	0.65		0.53	0.60
6mm Bronze - 090SGP - 6mm CL		08	0.536								BZ	0.99		0.37	0.55
6mm Solexia - 090SGP - 6mm CL		09	0.536								GR	0.99		0.29	0.28
6mm CL - Arg - 6mm CL - 090SGP - 6mm CL	9	00	0.236	0.535		0.350		ARG			CL	0.99		0.26	0.46
6mm CL - Arg - 6mm CL - 090PVB - 6mm CL		01	0.236	0.539		0.350		ARG			CL	0.99		0.23	0.33
6mm SB60 - 090SGP - 6mm CL	10	00	0.536								CL	0.69		0.24	0.27
6mm SB60 - 090SGP - 6mm Gray		01	0.536								GY	0.69		0.22	0.18
6mm SB70XL - 090SGP - 6mm CL	11	00	0.536								CL	0.53		0.23	0.35
6mm SB70XL - 090SGP - 6mm Blue		01	0.536								BL	0.52		0.32	0.53
6mm Gray - 090SGP - 6mm Triple Low-E	12	00	0.549								GY	0.52		0.23	0.47
6mm Gray - 090SGP - 6mm Double Low-E	13	00	0.547								GY	0.68		0.58	0.62
5mm Double Low-E-Arg-6mm CL 090PVB - 6mm CL	14	00	0.197	0.539		0.350		ARG		0.050	CL	0.68		0.56	0.62
5mm SB60 - Arg - 6mm CL 090SGP - 6mm CL	15	00	0.197	0.535		0.350		ARG		0.035	CL	0.56		0.35	0.48
5mm SB70XL - Arg - 6mm CL 090SGP - 6mm CL	16	00	0.197	0.535		0.350		ARG		0.018	CL	0.55		0.24	0.37



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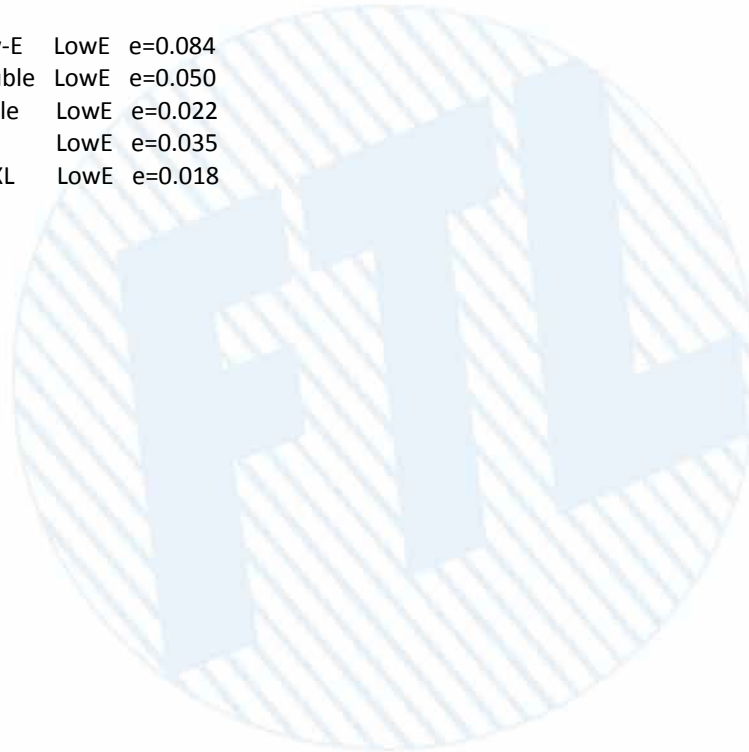
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Low E Coatings Used:

China Southern Glass Low-E	LowE	e=0.084
China Southern Glass Double	LowE	e=0.050
China Southern Glass Triple	LowE	e=0.022
Vitro Formerly PPG SB60	LowE	e=0.035
Vitro Formerly PPG SB70XL	LowE	e=0.018





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Remarks
<p>“Rating values included in this report are for submittals to an NFRC licensed IA and are not meant to be used directly for labeling purposes. Only those values identified on a valid Certification Authorization Report (CAR) by an NFRC accredited inspection agency (IA) are to be used for labeling purposes.”</p> <p>“The values included in this report are not considered in compliance with NFRC 100, NFRC 200, and/or NFRC 500 unless the associated validation test requirements have been satisfied, as applicable.”</p> <p>“The Condensation Resistance results obtained from this procedure are for controlled laboratory conditions and do not include the effects of air movement through the specimen, solar radiation, and the thermal bridging that may occur due to the specific design and construction of the fenestration system opening.”</p> <p>Simulations were conducted in full compliance with NFRC requirements. Simulation relates only to the simulated Fenestration product.</p> <p>Rounding is per requirements of NFRC 601, NFRC Unit and Measurement Policy.</p> <p>U factors, Solar Heat Gain Coefficients, Visible Transmittance and Condensation Resistance values are calculated with a default frame absorption of 0.30 for all products other than glazed walls and slope glazing which have a frame absorption of 0.50.</p> <p>Drawings referenced in this document are an integral part of this report, therefore, are required when distributing this test report. Simulation results obtained represent the actual value of the simulated specimen and does not constitute opinion, endorsement or certification by this laboratory.</p> <p>This test report is considered the exclusive property of the client named herein and is applicable to the specimen simulated. This report may not be reproduced without the approval of Fenestration Testing Laboratory, Inc and if so must be in full.</p>

Revision History Table			
Revision	Description	Author	Effective Date
0	Initial Release	Jorge Palomares	

Simulation Conducted by

Jorge Palomares

Simulator

Jose Sanchez

Simulator- in- Responsible- Charge



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Appendix

Fenestration Simulated Product Drawings and Bill of Material

