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FOSHAN YT ALUMINUM CO., LTD.

COMPUTER SIMULATION REPORT

SCOPE OF WORK
AWNING WINDOW (80 SERIES) – NFRC 100 / NFRC 200 / NFRC 500 AND AFRC TECHNICAL PROTOCOLS AND PROCEDURES MANUAL

REPORT NUMBER
250818006SHF-001

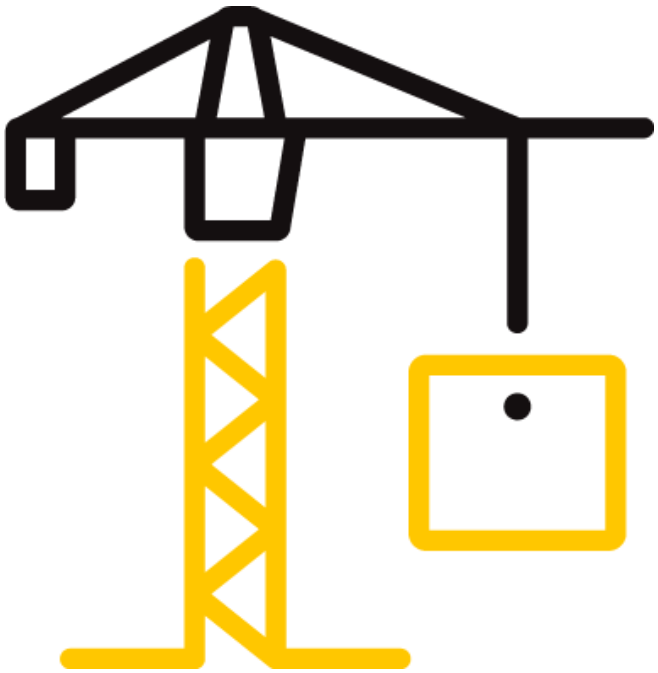
TEST DATE(S)
2025-10-08 – 2025-10-11

ISSUE DATE
2025-10-16

RECORD RETENTION END DATE
2031-10-11

PAGES
12

DOCUMENT CONTROL NUMBER
LFT-APAC-SHF-OP-10p (September 1, 2022)
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TEST REPORT

Issue Date: 2025-10-16 Intertek Report No.: 250818006SHF-001

REPORT ISSUED TO

Foshan YT Aluminum Co., Ltd.
Factory Building A, Cha Yuantou and Bukit Mertajam (local name) of Guanyao Hongxing Panbian Village Joint Stock Cooperative Economic Cooperative, Nanhai District, Foshan City, Self-numbered No. 5 (residence declaration)

SECTION 1

SCOPE

Intertek Building & Construction (B&C) was contracted by Foshan YT Aluminum Co., Ltd. to perform U Factor, Solar Heat Gain Coefficient, Visible Transmittance, Condensation Resistance simulations in accordance with NFRC 100 / NFRC 200 / NFRC 500 (the National Fenestration Rating Council) and AFRC Technical Protocols and Procedures Manual (the Australian Fenestration Rating Council), at Intertek Testing Services Shenzhen Ltd. Shanghai Fengxian Branch No. 6958 Daye Road, Fengxian District, Shanghai, China.

This report does not constitute certification of this product nor an opinion or endorsement by this laboratory. This report and related test records that are retained such as drawings, datasheets, representative samples of test specimens, or other pertinent project documentation will be serviced by Intertek B&C for the entire test record retention period. At the end of this retention period, such materials shall be discarded without notice and the service life of this report by Intertek B&C will expire.

For INTERTEK B&C:

COMPLETED BY:	Zac Zhang	**REVIEWED BY:**	Fred Bao
TITLE:	Project Engineer – Intertek B&C	**TITLE:**	Technical Manager – Intertek B&C
SIGNATURE:	Zac Zhang	**SIGNATURE:**	
DATE:	2025-10-16	**DATE:**	2025-10-16

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SECTION 2
TEST METHOD(S)

The products were evaluated in accordance with the following:

NFRC 100 Procedure for Determining Fenestration Product U-Factors

NFRC 200*:* Procedure for Determining Fenestration Product Solar Heat Gain Coefficient and Visible Transmittance at Normal Incidence

NFRC 500*:* Procedure for Determining Fenestration Product Condensation Resistance Values

AFRC Technical Protocols and Procedures Manual

SECTION 3
TEST PROCEDURE

The total product, including specific frame, spencer, and glass details, was modelled using NFRC approved software.

FRAME AND EDGE MODELING	THERM 7.4.4.0
CENTER-OF-GLASS MODELING	WINDOW 7.4.14.0
TOTAL PRODUCT CALCULATIONS	WINDOW 7.4.14.0
SPECTRAL DATA LIBRARY	IGDB 104.0

Modelling Assumptions / Technical Interpretations

Any modelling assumptions and technical interpretations required to model this product are listed below.

1) To prevent air infiltration, tape was applied to all interior sash crack locations.

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SECTION 4
SIMULATION SPECIMEN DESCRIPTION

SERIES / MODEL	Awning Window (80 Series)
PRODUCT TYPE	Awning, single (Projecting)
FRAME MATERIAL	Aluminum Alloy (Painted) / Thermal Breaks
SASH MATERIAL	Aluminum Alloy (Painted) / Thermal Breaks
STANDARD SIZE	1500 mm (Width) x 600 mm (Height)

SPACER OPTIONS				
TYPE	***PRIMARY SEAL***	***SECONDARY SEAL***	***SPACER BAR***	***DESICCANT***
Warm Spacer	Polyisobutylene (PIB)	Silicone	Polyamide (Nylon)	Molecular Sieve

THERMAL BREAKS	
TYPE	***MATERIAL***
PA66GF25	Polyamide (Nylon) 66% + Fiberglass Fill 25%

GRID OPTIONS		
GRID SIZE	***GRID TYPE***	***GRID PATTERN***
None	None	None

REINFORCEMENT OPTIONS	
LOCATION	***MATERIAL***
None	None

GAS FILLING TECHNIQUE	
FILL TYPE	***MATERIAL***
90% Argon + 10% Air	Single Probe

EDGE-OF-GLASS CONSTRUCTION	
INTERIOR CONDITION	Silicone between glazing bead and glass
EXTERIOR CONDITION	Silicone between frame leg and glass

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WEATHERSTRIPPING		
TYPE	***QUANTITY***	***LOCATION***
EPDM Gasket	3 rows	Upper and lower sash and frame

FRAME / SASH MATERIALS FINISH	
INTERIOR	Painted Aluminum Alloy
EXTERIOR	Painted Aluminum Alloy

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SECTION 5
SIMULATION RESULTS

Awning Window (80 Series), Warm Spacer (Nylon)
Glass: IGDB 2980, 5 mm / Argon 90% + Air 10%, 20 mm / IGDB 2950, 5 mm (Low-E at Surface 3#)

U-Factor (W/m^2-K)	Solar Heat Gain Coefficient (SHGC)	Visible Transmittance (VT)	Condensation Resistance (CR)
2.614	0.283	0.415	48.6

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SECTION 6
DRAWINGS

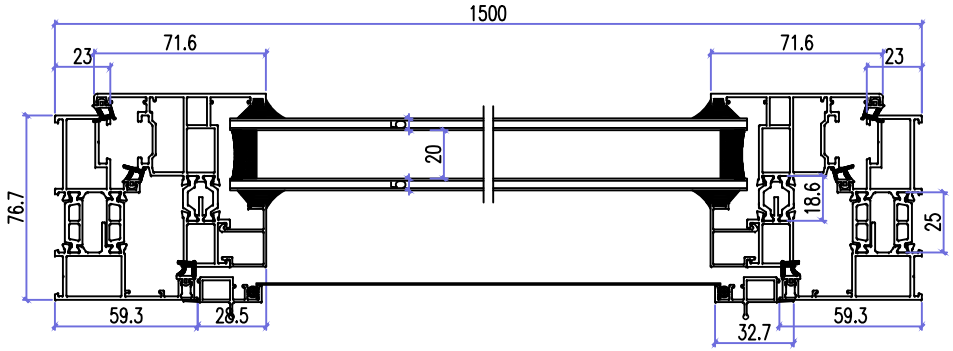
The drawings which follow have been reviewed by Intertek B&C and are representative of the simulation results reported herein.

Appendix – A

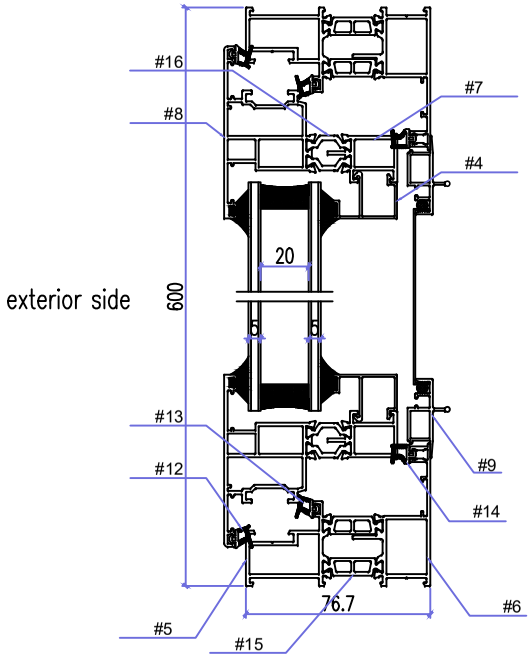
Bill of Materials

Part Identification	Part Number	Material
Head and Side Jambs	#1,#2	Painted Aluminum Alloy
Crimping	#4	Painted Aluminum Alloy
Outer frame 1	#5	Painted Aluminum Alloy
Outer frame 2	#6	Painted Aluminum Alloy
Sash Frame 1	#7	Painted Aluminum Alloy
Sash Frame 2	#8	Painted Aluminum Alloy
Fly screen frame	#9	Painted Aluminum Alloy
Handcrank Handle	#10	Plastic and Stainless Steel
Hinges	#11	Stainless Steel
Seals – Outer frames 1	#12	EPDM
Seals – Outer frames 1	#13	EPDM
Seals – Sash	#14	EPDM
Insulation strips – Outer frames	#15	Nylon
Insulation strips – Sash	#16	Nylon
Hollow Glass	#17	Silicon dioxide
Warm edge spacer	#18	Aluminum and plastic

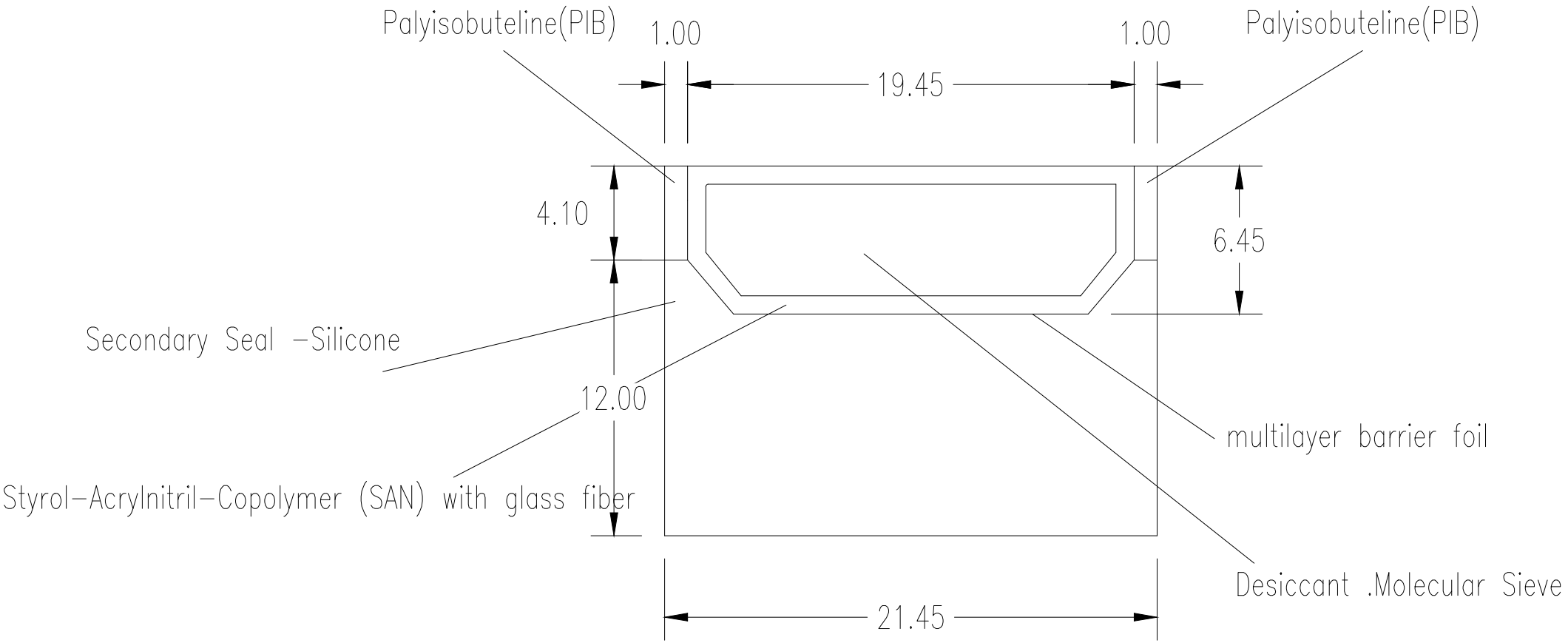
exterior side



#2



#3


Palyisobuteline(PIB)
1.00
19.45
1.00
Palyisobuteline(PIB)
4.10
6.45
Secondary Seal –Silicone
12.00
multilayer barrier foil
Styrol–Acrylnitril–Copolymer (SAN) with glass fiber
Desiccant .Molecular Sieve
21.45

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SECTION 7
REVISION LOG

REVISION #	DATE	PAGES	REVISION
0	2025-10-16	N/A	Original Report Issue