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IPSWICH BAY GLASS CO., INC.

COMPUTER SIMULATION REPORT

SCOPE OF WORK
CURTAIN WALL - NFRC 100/200/500

REPORT NUMBER
S7745.01-116-45 R1

TEST DATE
08/27/25

ISSUE DATE
08/27/25

REVISION DATE
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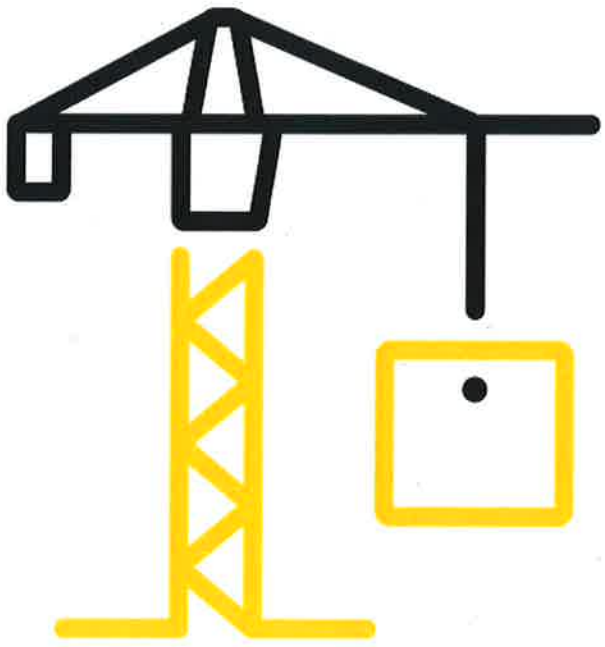

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TEST REPORT FOR IPSWICH BAY GLASS CO., INC.
Report No: S7745.01-116-45 R1
Date: 09/10/25

REPORT ISSUED TO
IPSWICH BAY GLASS CO., INC.
420 Newburyport Turnpike
P.O. Box 511
Rowley, Massachusetts 01969

SECTION 1
SUMMARY

SERIES/MODEL: Curtain Wall

Architectural Testing, Inc. (an Intertek company) dba Intertek Building & Construction (B&C) was contracted to perform U-Factor, Solar Heat Gain Coefficient, Visible Transmittance and Condensation Resistance simulations in accordance with the National Fenestration Rating Council (NFRC).

This report does not constitute certification of this product nor an opinion or endorsement by this laboratory. Intertek B&C will service this report for the entire test record retention period. The test record retention period ends five years after the test date. Test records, such as detailed drawings, datasheets, representative samples of test specimens, or other pertinent project documentation, will be retained for the entire test record retention period.

FOR INTERTEK B&C:

COMPLETED BY:	Tyler Noun	REVIEWED BY:	Eric S. Leitner
TITLE:	Simulation Technician	TITLE:	Manager - Simulations and Thermal Testing, SIRC
SIGNATURE:		SIGNATURE:	Digitally Signed by: Eric S. Leitner
DATE:	09/10/25	DATE:	09/10/25

TN:tn

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SECTION 2

TEST METHODS

The products were evaluated in accordance with the following:

ANSI/NFRC 100-2023, *Procedure for Determining Fenestration Product U-Factors*

ANSI/NFRC 200-2023, *Procedure for Determining Fenestration Product Solar Heat Gain Coefficient and Visible Transmittance at Normal Incidence*

NFRC 500-2017, *Procedure for Determining Fenestration Product Condensation Resistance Values*

**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.*

Ratings 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 Certificate of Authorization (CA) by an NFRC accredited Inspection Agency (IA) are to be used for labeling purposes. The ratings values were rounded in accordance with NFRC 601, NFRC Unit and Measurement Policy.

Intertek B&C is an NFRC accredited simulation laboratory and all simulations were conducted in full compliance with NFRC approved procedures and specifications. The values included in this report are not considered in compliance with ANSI/NFRC 100, ANSI/NFRC 200, and/or NFRC 500 unless the associated validation test requirements have been satisfied, as applicable.

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SECTION 3
TEST PROCEDURE

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

FRAME AND EDGE MODELING	THERM 7.8.71
CENTER-OF-GLASS MODELING	WINDOW 7.8.71
TOTAL PRODUCT CALCULATIONS	WINDOW 7.8.71
SPECTRAL DATA LIBRARY	IGDB 107

Modeling Assumptions / Technical Interpretations

Any modeling 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.

SECTION 4
SIMULATION SPECIMEN DESCRIPTION

SERIES/MODEL	Curtain Wall
PRODUCT TYPE	Curtain Wall
FRAME MATERIAL	AT - Aluminum w/ Thermal Breaks
SASH MATERIAL	NA - Not Applicable
STANDARD SIZE	2000mm x 2000mm

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SECTION 4 (Continued)

SIMULATION SPECIMEN DESCRIPTION

SPACER OPTIONS			
TYPE	*PRIMARY SEAL*	*SECONDARY SEAL*	*CODE*
H.B. Fuller/Kommerling Kodispace 4SG Spac	Silicone	-	TP-S

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

REINFORCEMENT OPTIONS	
LOCATION	*MATERIAL*
None	-

GAS FILLING TECHNIQUE	
FILL TYPE	*METHOD*
90% Argon	Single Probe

EDGE-OF-GLASS CONSTRUCTION	
INTERIOR CONDITION	EPDM gasket against glass
EXTERIOR CONDITION	EPDM gasket against glass

WEATHERSTRIPPING		
TYPE	*QUANTITY*	*LOCATION*
None	-	-

FRAME/SASH MATERIALS FINISH	
INTERIOR	Painted Aluminum
EXTERIOR	Painted Aluminum

VALIDATION MATRIX*	
PRODUCT LINE	*REPORT NUMBER*
None	-

**These products are part of a validation matrix. Only one is required for validation testing.*

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SECTION 5

SPECIALTY PRODUCTS TABLE

The specialty products method allows the manufacturer to determine the overall product SHGC and VT for any glazing option. The center of glass SHGC and/or VT must be determined using WINDOW 7.8.71. The method calculates overall product SHGC and VT indexed on center of glass properties. All values used in the calculations are truncated to six decimal place precision.

	No Dividers	Dividers < 1	Dividers > 1
SHGC0	0.004101	0.007501	0.010687
SHGC1	0.881406	0.780986	0.686885
VT0	0.000000	0.000000	0.000000
VT1	0.877305	0.773485	0.676197

$$SHGC = SHGC0 + SHGCc\ (SHGC1 - SHGC0)$$

$$VT = VT0 + VTc\ (VT1 - VT0)$$

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SECTION 6
SIMULATION RESULTS

TOTAL PRODUCT CALCULATIONS (Curtain Wall)														
Option Number	Pane Thickness 1 (in)	Gap Width 1 (in)	Pane Thickness 2 (in)	Gap Width 2 (in)	Pane Thickness 3 (in)	Gap Width 3 (in)	Pane Thickness 4 (in)	Gap Fill	Low-e (Surface #)	Tint	Spacer	Grid Type
	U-Factor (Btu/Hr-Ft2-F)			Solar Heat Gain Coefficient (SHGC) Grids (None / <1 / >=1)					Visible Transmittance (VT) Grids (None / <1 / >=1)		Condensation Resistance (CR)	
1	SN68 / ARG90 / ThermL (6mm/6mm) 1" IG											
	0.221	0.500	0.223					ARG90	0.039(#2) / 0.154(#4)	CL	TP-S	N
	U-Factor 0.23			SHGC(N) 0.32					VT(N) 0.58		CR 55	
2	SN68 / ARG90 / SN68 / ARG90 / ThermL (6mm/6mm) 1-3/4" IG											
	0.221	0.500	0.221	0.500	0.223			ARG90	0.039(#2) / 0.039(#4) / 0.154(#6)	CL	TP-S	N
	U-Factor 0.14			SHGC(N) 0.25					VT(N) 0.44		CR 70	

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SECTION 7

DRAWINGS / BILL OF MATERIALS

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