

CLIENT: Viewmax Windows and Doors Ltd.
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Test Report No: T1342-4d

Issue Date: November 19, 2019

SAMPLE ID: Viewmax Windows and Doors Ltd. E3 Series Sidelite and Transom.

SAMPLING DETAIL: Test sample information was submitted directly to QAI for evaluation.

DATE OF RECEIPT: Documentation was received on October 28, 2019 from Viewmax Windows and Doors Ltd.

TESTING PERIOD: Evaluation was conducted November 13, 2019 through November 19, 2019.

AUTHORIZATION: Proposal 19SO05101 signed by Nenad Lihtar on September 23, 2019.

TEST PROCEDURE: Thermal simulation evaluation was performed following the methods outlined in the following standard:

CSA A440.2-19 Fenestration Energy Performance.

TEST RESULTS: Based on evaluation conducted by QAI, energy performance values for Viewmax Windows and Doors Ltd. E3 Series Sidelite and Transom products are as found in Test Results section of this report for glazing options evaluated.

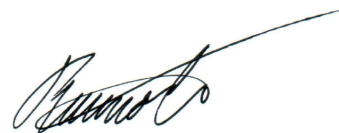
Prepared By



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Signed for and on behalf of QAI Laboratories, Ltd.

Reviewed By



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Fenestration Reviewer

TEST METHODS:

CSA A440.2-19

QAI Laboratories Ltd. (QAI) has performed energy performance thermal modeling in accordance with CSA A440.2-19. This thermal modeling was performed using software THERM 7.4 and WINDOW 7.4, with inputs outlined below for the noted E3 Series Sidelite and Transom fenestration products evaluated.

Table 1. Viewmax Windows and Doors Ltd. E3 Series Sidelite and Transom products evaluated to CSA A440.2-19.

PRODUCT	WIDTH (mm)	HEIGHT (mm)
E3 Series Sidelite	600	2000
E3 Series Transom	2000	600

Viewmax Windows and Doors Ltd. E3 Series Sidelite and Transom Windows noted above were evaluated to AAMA/WDMA/CSA 101/I.S.2/A440-17 NAFS and CSA A440S1-19 for Air Leakage used for Energy Rating (ER) Calculation. Table 2 below lists the Air Leakage results.

Table 2. Viewmax Windows and Doors Ltd. E3 Series Sidelite and Transom Window products evaluated to AAMA/WDMA/CSA 101/I.S.2/A440-17 NAFS and CSA A440S1-19.

PRODUCT	QAI NAFS Reports No.	Test Sample Size (mm)		Air Leakage (L/s/m ²)	
		Width	Height	Infiltration	Exfiltration
E3 Series Sidelite*	T1342-3b dated: Oct. 10, 2019	2438	2032	0.11	0.13
E3 Series Transom*	T1342-3b dated: Oct. 10, 2019	2438	2032	0.11	0.13

*Note – Air leakage use from picture window report of identical construction to the Sidelite and Transom. The picture window report meets gateway size for both Sidelite and Transom.

For the above noted products, the U-value, Solar Heat Gain Coefficient (SHGC), Visual Transmittance (VT) and Energy Rating (ER) were determined for the glazing options outlined in the Test Results section below, in accordance with CSA A440.2-19 with the software noted.

All drawings used in the modeling of the above noted fenestration products can be found in Appendix A to this report.

TEST RESULTS SUMMARY:

**E3 Series Sidelite
Size: 600 mm x 2000 mm**

Model Code	Number of Layers	Exterior Layer (mm)	Middle Layer (mm)	Interior Layer (mm)	Emissivity Surface 1	Emissivity Surface 2	Emissivity Surface 3	Emissivity Surface 4	Emissivity Surface 5	Emissivity Surface 6	Cavity 1 and 2 (mm)	Spacer Bar Type	Grille Bar	Visual Transmittance Total Product	Product U-Value (W/m ² K)	Product SHGC	Energy Rating (ER)
VMW-E3-SL-5,55T(2)-16AR95SW-5,CL	2	5 CSG Double Silver LowE (CEV11-55T)	-	5 Clear	-	0.050	-	-	-	-	16.0 95% Argon	SW	-	0.33	1.61	0.20	16
VMW-E3-SL-5,55T(2)-5,55T(4)-5CL-12AR95SW	3	5 CSG Double Silver LowE (CEV11-55T)	5 CSG Double Silver LowE (CEV11-55T)	5 Clear	-	0.050	-	0.050	-	-	12.0 95% Argon	SW	-	0.18	1.08	0.14	24

# of Glass Layers	E3 Series Sidelite – Frame Representative Values (used for SHGC and VT calculations)							
	Model Code:	U-factor Center-of-glass (1000 mm x 1000 mm IGU)	U-factor Total Product	Dividers	SHGC ₀	SHGC ₁	VT ₀	VT ₁
3	VMW-E3-SL-5,55T(2)-5,55T(4)-5CL-12AR95SW	0.729230	1.078330	NONE	0.005130	0.711181	0.000000	0.706051
				<1"	0.007447	0.642370	0.000000	0.634923
				≥1"	0.009645	0.577069	0.000000	0.567424

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E3 Series Transom
Size: 600 mm x 2000 mm

Model Code	Number of Layers	Exterior Layer (mm)	Middle Layer (mm)	Interior Layer (mm)	Emissivity Surface 1	Emissivity Surface 2	Emissivity Surface 3	Emissivity Surface 4	Emissivity Surface 5	Emissivity Surface 6	Cavity 1 and 2 (mm)	Spacer Bar Type	Grille Bar	Visual Transmittance Total Product	Product U-Value (W/m ² K)	Product SHGC	Energy Rating (ER)
VMW-E3-TR-5,55T(2)-16AR95SW-5,CL	2	5 CSG Double Silver LowE (CEV11-55T)	-	5 Clear	-	0.050	-	-	-	-	16.0 95% Argon	SW	-	0.33	1.64	0.20	15
VMW-E3-TR-5,55T(2)-5,55T(4)-5CL-12AR95SW	3	5 CSG Double Silver LowE (CEV11-55T)	5 CSG Double Silver LowE (CEV11-55T)	5 Clear	-	0.050	-	0.050	-	-	12.0 95% Argon	SW	-	0.18	1.09	0.14	24

# of Glass Layers	E3 Series Transom Window – Frame Representative Values (used for SHGC and VT calculations)							
	Model Code:	U-factor Center-of-glass (1000 mm x 1000 mm IGU)	U-factor Total Product	Dividers	SHGC ₀	SHGC ₁	VT ₀	VT ₁
3	VMW-E3-TR-5,55T(2)-5,55T(4)-5CL-12AR95SW	0.729230	1.048941	NONE	0.005239	0.711290	0.000000	0.706051
				<1"	0.007556	0.642479	0.000000	0.634923
				≥1"	0.009755	0.577178	0.000000	0.567424

See notes on the following page.