VMS (VELUX Modular Skylight)
Thermal and Other Testing
Technical Data

July 2016

VMS Modules - Thermal Performance Test Results					
Glazing Type	**Glazing Description**	**Module Type**	**U-Factor** arg/xenon	**SHGC**	**VT** clr/wht
Type 10	Low Energy Dual Pane at 20° above horiz. 8mm Temp exterior with Lami interior	Fixed (HFC)	0.34/0.25	0.46	0.64/0.46
	Low Energy Dual Pane at vertical 8mm Temp exterior with Lami interior	Fixed (HFC)	0.28/0.23	0.46	0.64/0.46
Type 11	Low Energy with HanGlas Dual Pane at 20° 8mm Temp exterior with Lami interior	Fixed (HFC)	0.33/0.24	0.25	0.46/0.33
	Low Energy with HanGlas Dual Pane at vert. 8mm Temp exterior with Lami interior	Fixed (HFC)	0.27/0.22	0.24	0.46/0.33
Type 16	Super Low Energy Triple Pane at 20° 8mm Temp, 8mm center and Lami interior	Fixed (HFC)	0.21/ -	0.36	0.55/0.40
	Super Low Energy Triple Pane at vert. 8mm Temp, 8mm center and Lami interior	Fixed (HFC)	0.16/ -	0.36	0.56/0.40
Type 10	Low Energy Dual Pane at 20° above horiz. 8mm Temp exterior with Lami interior	Venting (HVC)	0.35/0.25	0.46	0.64/0.46
	Low Energy Dual Pane at vertical 8mm Temp exterior with Lami interior	Venting (HVC)	0.29/0.24	0.46	0.64/0.46
Type 11	Low Energy with HanGlas Dual Pane at 20° 8mm Temp exterior with Lami interior	Venting (HVC)	0.34/0.24	0.24	0.46/0.33
	Low Energy with HanGlas Dual Pane at vert. 8mm Temp exterior with Lami interior	Venting (HVC)	0.28/0.24	0.24	0.46/0.33
Type 16	Super Low Energy Triple Pane at 20° 8mm Temp, 8mm center and Lami interior	Venting (HVC)	0.22/ -	0.36	0.55/0.40
	Super Low Energy Triple Pane at vert. 8mm Temp, 8mm center and Lami interior	Venting (HVC)	0.17/ -	0.36	0.56/0.40

Tested in accordance with NFRC requirements per standards NFRC 100-2010, NFRC 200-2010 and NFRC 500-2010

VMS Product Performance - Other Test Results			
HFC/HVC Module Type 11 Glazing 1m x 2.4m	Acoustics Testing per ASTM E 90 and ASTM E 413	STC (Interior Noise)	37
	Acoustics Testing per ASTM E 90 and ASTM E 1332	OITC (Exterior Noise)	28
	Burning Brand Test ASTM E 108	Class B Burning Brand	Passed
HFC/HVC Module Type 16T Glazing 1m x 1.8m	Acoustics Testing per ASTM E 90 and ASTM E 413	STC (Interior Noise)	40
	Acoustics Testing per ASTM E 90 and ASTM E 1332	OITC (Exterior Noise)	34
HFC Module Type 11 Glazing 1m x 2.4m	OSHA Fall Resistance test where 200 lb weight dropped from 6 ft height with no damage to panes to comply with OSHA 29CFR 1910.23(e)(8)	OSHA Fall Resistance	1200 lb-ft
HFC Module Type 11T Glazing 1m x 3m	OSHA Fall Resistance test where 200 lb weight was dropped from 6 ft height with no damage to comply with OSHA 29CFR 1910.23(e)(8), and CalOSHA Fall Resistance test where 400 lb weight was resisted for 60 seconds per CCR Title 8, Section 3212	OSHA Fall Resistance CalOSHA Fall Resistance	1200 lb-ft 400 lbs
Pultruded Composite VMS Frame	Self Ignition Temperature ASTM D 1929		500° C
	Flash Ignition Temperature ASTM D 1929		410° C
	Average Smoke Density Rating ASTM D 2843		7.0
	Linear Rate of Burn ASTM D 635		Class CC1
Bracket Loads (Ridgelight, Longlight and lower Northlight)	Loaded In-Line	Average Maximum	3,925.7 lbs.
		Allowable Load	1,260 lbs.
	Loaded at 45° angle	Average Maximum	3,243.8 lbs.
		Allowable Load	1,545 lbs.