

Product Performance Values



Skylights

All VELUX Skylights are tested to meet the harshest weather climates around the world. Our entire product program endures rigorous VELUX testing to ensure quality and performance in every box. All products manufactured in North America are not just tested for performance, but also third party certified with unannounced factory inspections.

Testing Data

VELUX residential skylights & SUN TUNNEL® skylights are rated at 20° slope and labelled with NFRC – certified product values and NAFS testing.

Certified Energy Performance Value (NFRC) - Definitions

U-value is the thermal transmittance, the rate of heat transfer through the skylight due to temperature difference. The lower the number the more energy efficient. (U-value is the inverse of R-value)

Solar heat gain coefficient (SHGC), the fraction of incident solar radiation from the sun that gets through the skylight and into the building at a 0° incident angle.

Visual transmittance, the fraction of visual light that gets through the skylight from outside into the building.



Deck Mounted Skylights

Glass	VSS/VSE/VS ⁴		FS ⁴	
	04	i89	04	i89
Energy Star®	-	Yes	-	Yes
U-Value ¹ metric (imperial)	2.44 (0.43)	2.16 (0.38)	2.50 (0.44)	2.16 (0.38)
SHGC ²	0.23	0.22	0.26	0.25
VT ³	0.53	0.52	0.60	0.59
Class	SKG-PG65 [SKG-PG105]	SKG-PG65 [SKG-PG105]	SKG-PG70 [SKG-PG105]	SKG-PG70 [SKG-PG105]
Size Tested	S06 [M08]	S06 [M08]	S06 [M08]	S06 [M08]
Design Pressure (Pa)	+14400/-3120 (+300/-65 psf) [+19176/-5040 (+400/-105 psf)]	+14400/-3120 (+300/-65 psf) [+19176/-5040 (+400/-105 psf)]	+15800/-3360 (+330/-70 psf) [+11491/-5027 (+240/-105 psf)]	+15800/-3355 (+330/-70 psf) [+11491/-5027 (+240/-105 psf)]
Water Penetration Resistance Test Pressure (Pa)	720	720	720	720
Canadian Air Infiltration/Exfiltration	A3	A3	Fixed	Fixed

¹ U-Value - W/m²K (BTU/h ft² F) ² SHGC - Solar Heat Gain Coefficient ³ Visible Transmittance ⁴ Tested up to size S06 and (M08)

⁵ Tested up to size 4646 ⁶ Tested up to size 4646 and (2270) ⁷ Tested, but not certified

Curb Mounted Skylights

Model	VCS/VCE/VCM ⁵	VCS ⁵	FCM ⁶	FCM ⁵	FCM ⁶
Glass	04	10	04	05	29 / 30
Energy Star [®]	-	-	-	-	Yes
U-Value ¹ metric (imperial)	3.01 (0.53)	2.90 (0.51)	2.73 (0.49)	2.56 (0.49)	2.16 (0.38)
SHGC ²	0.24	0.24	0.27	0.28	0.25
VT ³	0.55	0.54	0.63	0.63	0.57 [0.58]
Size Tested	4646	4646 [2246]	4646 [2270] [4672]	4646	4646 [2270]
Class	SKG-PG55	SKG-PG60 [SKG-PG65]	SKG-PG120 [SKG-PG100] [SKG-PG70]	SKG-PG140	4646 29: SKG-PG120 4646 30: SKG-PG140 [2270 29: SKG-PG100]
Design Pressure (Pa)	+11050 / -2640 (+230 / -55 psf)	+29686 / -2880 (+620 / -60 psf) [+55062 / -3120 (+1150 / -65 psf)]	+8380 / -5750 (+175 / -120 psf) [+9600 / -4800 (+200 / -100 psf)] [+3360 / -3830 (+70 / -80 psf)]	+7190 / -6710 (+150 / -140 psf)	4646 29: +8380 / -5750 (+175 / -120 psf) 4646 30: +7190 / -6710 (+150 / -140 psf) [2270 29: +9600 / -4800 (+200 / -100 psf)]
Water Penetration Resistance Test Pressure (Pa)	720	720	720	720	720
Canadian Air Infiltration/ Exfiltration	A3	A3	Fixed	Fixed	Fixed

Deck Mounted Roof Windows

Model	GGL ⁷	GPL ⁷
Glass	66	66
Energy Star [®]	N/A	N/A
U-Value ¹ metric (imperial)	1.23 (0.22)	1.36 (0.24)
SHGC ²	0.36	0.36
VT ³	0.51	0.51
Class	RWG-PG30	RWG-PG40
Size Tested	1340x1400 frame UK08	1340x1400 frame UK08
Design Pressure (Pa)	+1440 / -1440	+1440 / -1440
Water Penetration Resistance Test Pressure (Pa)	720	720
Canadian Air Infiltration/ Exfiltration	A3	A3

Flat Roof Skylights

Model	CFP ⁷
Glass	73
Energy Star [®]	N/A
U-Value ¹ metric (imperial)	1.31 (0.23)
SHGC ²	0.5
VT ³	N/A
Class	SKG-PG100
Size Tested	1685x1685 frame (150150)
Design Pressure (Pa)	+4800 / -4800
Water Penetration Resistance Test Pressure (Pa)	730
Canadian Air Infiltration/ Exfiltration	Fixed

SUN TUNNEL[®] Skylights with Energy Kit ZTC 51⁸

Model	TGF/TMF	TGR/TMR/THR	TLR	TCR
Energy Star [®]	Yes	Yes	N/A	Yes
U-Value ¹ metric (imperial)	1.93 (0.34)	2.10 (0.37)	2.33 (0.41)	2.10 (0.37)
SHGC ²	0.22	0.26	0.34	0.26
VT ³	0.16	0.27	0.37	0.27
Class	TDDCC-PG160 [TDDCC-PG130]	TDDCC-PG165	N/A	N/A
Size Tested	356mm (014) [559mm (022)]	356mm (014)	356mm (014)	356mm (014)
Design Pressure (Pa)	+14,364 / -7661 (+300 / -160 psf) [+14,364 / -6384 Pa (+300 / -130 psf)]	+14,364 / -7980 (+300 / -165 psf)	+7182 / -8140 G34 (+150 / -170 psf)	+14,364 / -7980 (+300 / -165 psf)
Water Penetration Resistance Test Pressure (Pa)	720	720	720	720
Canadian Air Infiltration/ Exfiltration	Fixed	Fixed	Fixed	Fixed

¹ U-Value - W/m²K (BTU/h ft²F) ² SHGC - Solar Heat Gain Coefficient ³ Visible Transmittance ⁴ Tested up to size S06 and (M08)

⁵ Tested up to size 4646 ⁶ Tested up to size 4646 and 2270 ⁷ Tested, but not certified ⁸ Tested with Canadian Energy Kit installed, ZTC 51