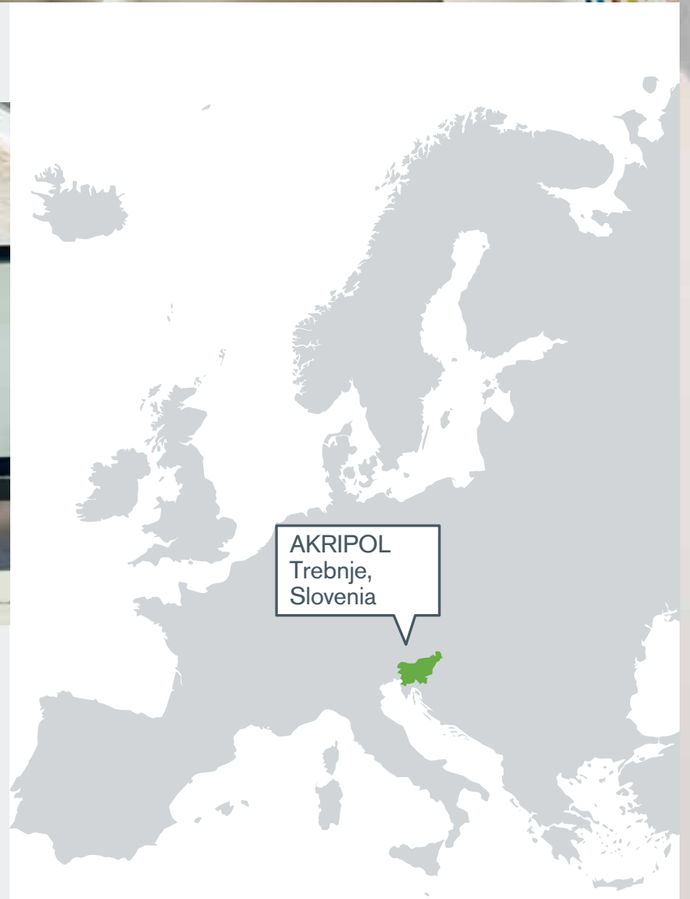

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G-LUX
GLASS FLAT-ROOFLIGHT

AKRIPOL

G-LUX by AKRIPOL

PREMIUM GLASS FLAT-ROOFLIGHT SOLUTION OVERVIEW

Energy efficient glass rooflight, simple modern, gallant design with excellent characteristics.

G-LUX adds a superb finishing touch to the project.

Thermally broken ALU frame, popular anthracite color RAL 7016 and many glazing options provide superb thermal properties, sound insulation and safety. Tested according EN standards.

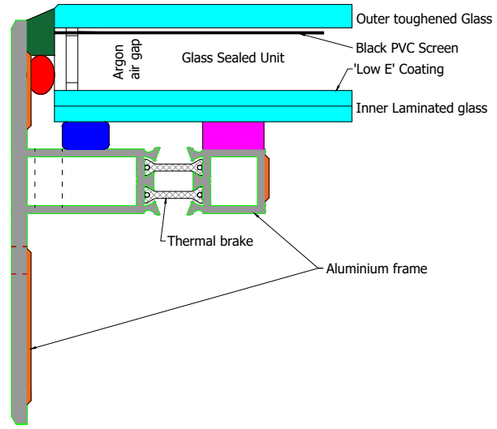
Available in countless sizes, double and triple layer versions, additional variations (SOLAR, HSL, DIFFUSED). Applications; fixed installation, daily ventilation, exit on roof, smoke&heat exhaust, walk on version, rectangular, square, round, triangle, continious (glass lightband).

Natural Daylight · Natural ventilation · Engineering · Modular · Protection · Natural Smoke and Heat Exhaust · Mechanical Engineering Solutions · Safety · Energy effecient

KEY FEATURES AND BENEFITS OF G-LUX

- Glazing to the edge of the frame.
- Good thermal and sound insulating properties.
- Safe, welded Aluminum glazing frame with thermal brake.
- Black border edge.
- Compatible with factory made GRP upstands or existing ones.
- Aluminum frame standard powder coated in RAL 7016, other RAL colors possible.
- Fast delivery for bespoke sizes (ca 4 weeks).
- 15 sizes on stock, available within 7 days.
- Easy maintenance.
- Possible factory pre-assembled systems for easy and fast installation on the building, including proffesional packaging.
- Recommended to fit roof pitch between 1–20° as standard.
- Angled and straight GRP upstands, also possible with extra inclination of 3° or 5° for flat roofs.
- Classic thermal insulation PUR thickness is 25 mm, 40 mm, 60 mm, 80 mm and 100 mm.
- Standard heights of GRP upstands 150 mm, 300 mm and 500 mm.
- Other heights and types of GRP upstands on demand.

G-LUX STRUCTURE, CHARACTERISTICS



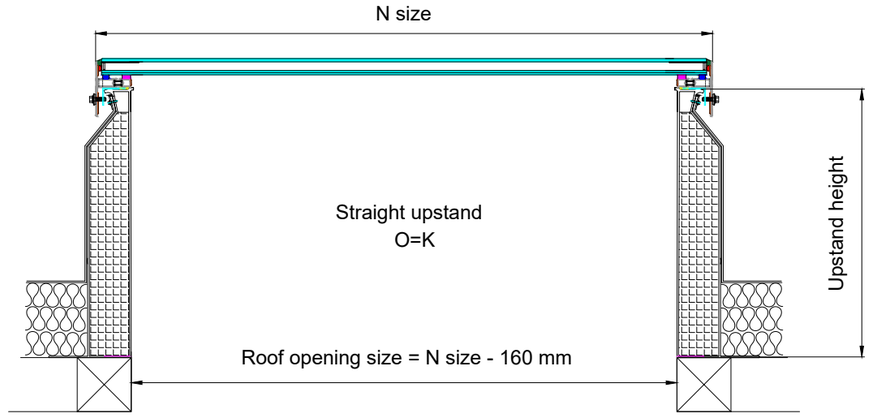
2 LAYERED GLASS

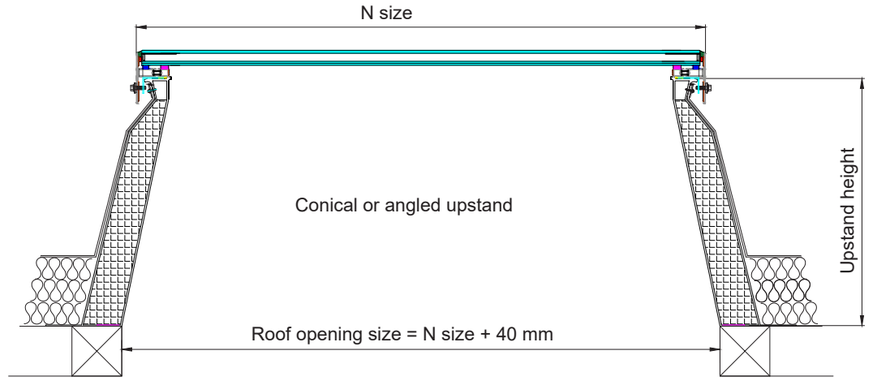
Legend	Outer pane	Cavity (mm)	Inner pane	Light transmis-sion (LT) (%)	Solar g Value	Shading Coef-ficient	Centre Pane Ug Value (EN673) (W/m²K)	Direct Airborne Sound Insulation (Rw)	Glass Weight (kg/m²)
	ESG 6 mm clear	16	44.2 PVB clear	80	0,62	0,71	1,1	37	36
	ESG 6 mm clear	16	44.2 PVB white mat	59	0,59	0,68	1,1	37	36
	ESG 6 mm SOLAR	16	44.2 PVB clear	69	0,37	0,43	1,0	37	36
	ESG 6 mm clear	16	55.4 PVB clear	79	0,62	0,71	1,1	39	42
	ESG 6 mm clear	16	55.4 PVB white mat	59	0,59	0,68	1,1	39	42
	ESG 6 mm SOLAR	16	55.4 PVB clear	68	0,37	0,43	1,0	39	42
	ESG 8 mm clear	16	55.4 PVB clear	78	0,61	0,70	1,1	41	47
	ESG 8 mm clear	16	55.4 PVB white mat	58	0,58	0,67	1,1	41	47
	ESG 8 mm SOLAR	16	55.4 PVB clear	67	0,37	0,43	1,0	41	47
	ESG 10 mm clear	16	55.4 PVB clear	77	0,60	0,69	1,1	41	52
	ESG 10 mm clear	16	55.4 PVB white mat	58	0,57	0,66	1,1	41	52
	ESG 10 mm SOLAR	16	55.4 PVB clear	67	0,36	0,41	1,0	41	52

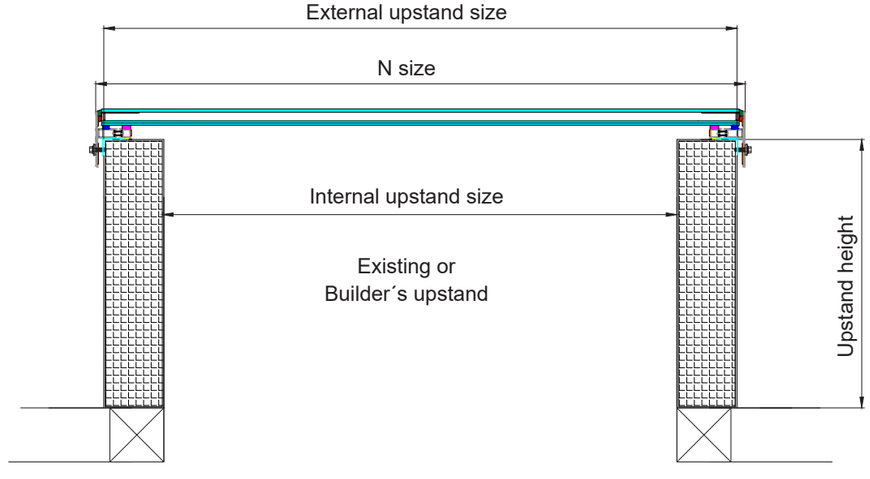
3 LAYERED G-LUX

- Glazing to the edge of the frame like at classic 2 layered G-LUX.
- Superior thermal and sound insulating properties.
- Aluminum frame standard powder coated in RAL 7016, other RAL colors possible.
- Solar possible.
- Dimensions and glass configuration on request.

Legend	Outer pane	Cavity (mm)	Intermediate pane	Cavity (mm)	Inner pane	Light transmission (LT) (%)	Solar g Value	Shading Coefficient	Centre Pane Ug Value (EN673) (W/m²K)	Direct Airborne Sound Insulation (Rw)	Glass Weight (kg/m²)
	ESG 6 mm clear	16	ESG 6 mm clear	16	44.2 PVB clear	72	0,57	0,66	0,9	39	51
	ESG 6 mm clear	16	ESG 6 mm clear	16	44.2 PVB white mat	54	0,54	0,62	0,9	39	51
	ESG 6 mm SOLAR	16	ESG 6 mm clear	16	44.2 PVB clear	62	0,34	0,39	0,5	39	51
	ESG 6 mm clear	16	ESG 6 mm clear	16	55.4 PVB clear	71	0,56	0,64	0,8	41	57
	ESG 6 mm clear	16	ESG 6 mm clear	16	55.4 PVB white mat	53	0,54	0,62	0,8	41	57
	ESG 6 mm SOLAR	16	ESG 6 mm clear	16	55.4 PVB clear	61	0,34	0,39	0,5	41	57
	ESG 8 mm clear	16	ESG 6 mm clear	16	55.4 PVB clear	71	0,55	0,63	0,8	43	62
	ESG 8 mm clear	16	ESG 6 mm clear	16	55.4 PVB white mat	53	0,53	0,61	0,8	43	62
	ESG 8 mm SOLAR	16	ESG 6 mm clear	16	55.4 PVB clear	61	0,34	0,39	0,5	43	62
	ESG 10 mm clear	16	ESG 6 mm clear	16	55.4 PVB clear	70	0,54	0,62	0,8	45	67
	ESG 10 mm clear	16	ESG 6 mm clear	16	55.4 PVB white mat	52	0,52	0,60	0,8	45	67
	ESG 10 mm SOLAR	16	ESG 6 mm clear	16	55.4 PVB clear	60	0,33	0,38	0,5	45	67







DAILY VENTILATION

- Daily ventilation; 24/48V or 230V chain drive (classic stroke 350 mm) with Akripol GRP upstands and motors.
- Also manual opening mechanism on smaller sizes possible.
- Other types and possibilities on demand.

Daily ventilation with 2 layered G-LUX

Size N (mm)	560	660	760	860	960	1060	1160	1260	1360	1460	1560	1660	1760	1860	1960	2060	2160
660	X	X															
760	*V	*V	*V														
860	*	*	*	*													
960	*	*	*	*	*												
1060	*	*	*	*	*	*											
1160	*	*	*	*	*	*	*										
1260	*	*	*	*	*	*	*	*									
1360	*	*	*	*	*	*	*	*	*								
1460	*	*	*	*	*	*	*	*	**	**							
1560	*	*	*	*	*	*	*	*	**	**	**						
1660	*	*	*	*	*	*	*	**	**	**	**	**					
1760	*	*	*	*	*	*	*	**	**	**	**	**	***V				
1860	*	*	*	*	*	*	**	**	**	**	**	**	***V	***V			
1960	*	*	*	*	*	*	**	**	**	**	**	**	***V	***V	***V		
2060	*	*	*	*	*	**	**	**	**	**	**	**	***V	***V	***V	***V	
2160	*	*	*	*	**	**	**	**	**	**	**	***	***	***	***	***	***
2260	**	**	**	**	**	**	**	**	**	**	***	***	***	***	***	***	
2360	**	**	**	**	**	**	**	**	**	***	***	***	***	***	***		
2460	**	**	**	**	**	**	**	**	***	***	***	***	***	***			
2560	**	**	**	**	**	**	**	**	***	***	***	***	***	X			
2660	**	**	**	**	**	**	**	***	***	***	***	***	X				
2760	**	**	**	**	**	**	**	***	***	***	***	***					
2860	**	**	**	**	**	**	**	***	***	***	***	***					
2960	**	**	**	**	**	**	***	***	***	***	***	***					
3060	**	***	***	***	***	***	***	***	***	***	***	X					
3160	***	***	***	***	***	***	***	***	***	***	X	X					
3260	***	***	***	***	***	***	***	***	***	X	X	X					

ESG 6 mm / 16 arg / laminated 4 + 4 foil 0,76 PVB
ESG 6 mm / 16 arg / laminated 5 + 5 foil 1,52 PVB
ESG 8 mm / 16 arg / laminated 5 + 5 foil 1,52 PVB
ESG 10 mm / 16 arg / laminated 5 + 5 foil 1,52 PVB

LEGEND:
* 1 pcs of chain drive motor with 500N power and 350mm stroke possible in 24/48V or 230V
* V 1 pcs of chain drive motor with 500N power and 350mm stroke only in 24/48V possible
** 2 pcs of chain drive motor with 500N power and 350mm stroke possible in 24/48V or 230V
*** 3 pcs of chain drive motor with 500N power and 350mm stroke possible in 24/48V or 230V
***V 3 pcs of chain drive motor with 500N power and 350mm stroke only in 24/48V possible
X Ventilation not possible

Daily ventilation with 3 layered G-LUX

Size N (mm)	560	660	760	860	960	1060	1160	1260	1360	1460	1560	1660	1760	1860	1960	2060	2160
660	X	X															
760	*V	*V	*V														
860	*	*	*	*													
960	*	*	*	*	*												
1060	*	*	*	*	*	*											
1160	*	*	*	*	*	*	*										
1260	*	*	*	*	*	*	*	**V									
1360	*	*	*	*	*	*	**V	**V	**V								
1460	*	*	*	*	*	**	**	**	**	**							
1560	*	*	*	*	**	**	**	**	**	**	**						
1660	*	*	*	**	**	**	**	**	**	**	**	**					
1760	*	*	**	**	**	**	**	**	**	**	**	***V	***V				
1860	*	*	**	**	**	**	**	**	**	**	***V	***V	***V	***V			
1960	*	**	**	**	**	**	**	**	**	***V	***V	***V	***V	***V	***V		
2060	*	**	**	**	**	**	**	**	***V	***V	***V	***V	***V	***V	***V	X	
2160	*	**	**	**	**	**	**	**	***	***	***	***	***	***	X	X	X
2260	**	**	**	**	**	**	**	***	***	***	***	***	***	X	X	X	
2360	**	**	**	**	**	**	**	***	***	***	***	***	X	X	X		
2460	**	**	**	**	**	**	***	***	***	***	***	***	X	X			
2560	**	**	**	**	**	**	***	***	***	***	***	***	X	X			
2660	**	**	**	**	**	***	***	***	***	***	***	X	X				
2760	**	**	**	**	**	***	***	***	***	***	***	X					
2860	**	**	**	**	***	***	***	***	***	***	X	X					
2960	**	**	**	**	***	***	***	***	***	***	X	X					
3060	**	***	***	***	***	***	***	***	***	X	X	X					
3160	***	***	***	***	***	***	***	***	***	X	X	X					
3260	***	***	***	***	***	***	***	***	X	X	X	X					

ESG 6 mm / 16 arg / ESG 6 mm / 16 arg / laminated 4+4 foil 0,76 PVB
ESG 6 mm / 16 arg / ESG 6 mm / 16 arg / laminated 5+5 foil 1,52 PVB
ESG 8 mm / 16 arg / ESG 6 mm / 16 arg / laminated 5+5 foil 1,52 PVB
ESG 10 mm / 16 arg / ESG 6 mm / 16 arg / laminated 5+5 foil 1,52 PVB

LEGEND:
* 1 pcs of chain drive motor with 500N power and 350mm stroke possible in 24/48V or 230V
* V 1 pcs of chain drive motor with 500N power and 350mm stroke only in 24/48V possible
** 2 pcs of chain drive motor with 500N power and 350mm stroke possible in 24/48V or 230V
**V 2pcs of chain drive motor with 500N power and 350mm stroke only in 24/48V possible
*** 3 pcs of chain drive motor with 500N power and 350mm stroke possible in 24/48V or 230V
***V 3 pcs of chain drive motor with 500N power and 350mm stroke only in 24/48V possible
X Ventilation not possible

NSHEV OPENING

Product advantages

- EC-Certificate of Conformity according to EN12101-2 (CE-mark).
- 24V & 48V motors.
- SOLO or TANDEM version (depending on skydome size).
- Rugged, powerful and fast gear motor with low noise.
- 3 layered glass on request.

System properties

- WL 2000
- Max. snow load classification SL1000.
- Re 1000 (double purpose).
- Roof opening size: from 700 x 700 mm up to 1200 x 2500 mm.
- Opening angle 140°.

Important advantages of the 48 V technology

- Activation of twice as many opening systems with one control panel.
- Installation is significantly more effortless.
- Cost -saving due to smaller cable diameters.
- Cuts down project costs.
- Safe also in case of high snow loads.
- Control panels for NSHEV with Integration of standard components like smoke or heat detectors, buttons and sensors, wind/ rain sensors etc.

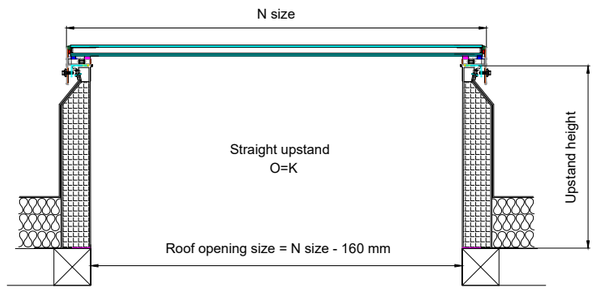
Dimensions of G-LUX for NSHEV with geometric surface in m^2 (without windshileds)

Size N (mm) (*)	[Geometric surface of each dimension Ag in m^2]											
	860		960		1060		1160		1260		1360	
860	S (3L)	0,49										
960	S (3L)	0,56	S (3L)	0,64								
1060	S (3L)	0,63	S (3L)	0,72	S (3L)	0,81						
1160	S (3L)	0,70	S (3L)	0,80	S (3L)	0,90	S (3L)	1,00				
1260	S	0,77	S	0,88	S	0,99	S	1,10	S	1,21		
1360	S	0,84	S	0,96	S	1,08	S	1,20	S	1,32	S	1,44
1460	T 3L	0,91	T 3L	1,04	T 3L	1,17	T 3L	1,30	T 3L	1,43	T 3L	1,56
1560	T 3L	0,98	T 3L	1,12	T 3L	1,26	T 3L	1,40	T 3L	1,54	T 3L	1,68
1660	T 3L	1,05	T 3L	1,20	T 3L	1,35	T 3L	1,50	T 3L	1,65	T 3L	1,80
1760	T 3L	1,12	T 3L	1,28	T 3L	1,44	T 3L	1,60	T 3L	1,76	T 3L	1,92
1860	T 3L	1,19	T 3L	1,36	T 3L	1,53	T 3L	1,70	T 3L	1,87	T 3L	2,04
1960	T 3L	1,26	T 3L	1,44	T 3L	1,62	T 3L	1,80	T 3L	1,98	T 3L	2,16
2060	T	1,33	T	1,52	T	1,71	T	1,90	T	2,09	T	2,28
2160	T	1,40	T	1,60	T	1,80	T	2,00	T	2,20	T	2,40
2260	T	1,47	T	1,68	T	1,89	T	2,10	T	2,31	T	2,52
2360	T	1,54	T	1,76	T	1,98	T	2,20	T	2,42	T	2,64
2460	T	1,61	T	1,84	T	2,07	T	2,30	T	2,53	T	2,76
2560	T	1,68	T	1,92	T	2,16	T	2,40	T	2,64	T	2,88
2660	T	1,75	T	2,00	T	2,25	T	2,50	T	2,75	T	3,00

Legend:
S single motor
T only tandem
3L also 3 layered glass version
(*) intermediate dimensions included

ROUND SHAPE

- Standard G-LUX detail (ALU frame with thermal brake) and black border of 84 mm.
- Possible for ventilation, electric or manual opening on request.
- Fits to standard GRP upstand in heights 150 mm, 300 mm, 500 mm or other nonstandard options by AKRIPOL (availability on request).
- Available standard sizes in table below (other on request).
- Available in 2 layered and 3 layered glass.
- Recommended to fit roof pitch between 5–20° as standard.



Size N - nominal size round (mm)	2-layer, glass structure	3-layer, glass structure
Ø 760	6T / 16Ar / 44.2	6T / 16Ar / 6T / 16Arg / 44.2
Ø 860	6T / 16Ar / 44.2	6T / 16Ar / 6T / 16Arg / 44.2
Ø 960	6T / 16Ar / 44.2	6T / 16Ar / 6T / 16Arg / 44.2
Ø 1060	6T / 16Ar / 44.2	6T / 16Ar / 6T / 16Arg / 44.2
Ø 1160	6T / 16Ar / 44.2	6T / 16Ar / 6T / 16Arg / 44.2
Ø 1260	6T / 16Ar / 55.4	6T / 16Ar / 6T / 16Arg / 55.4
Ø 1360	6T / 16Ar / 55.4	6T / 16Ar / 6T / 16Arg / 55.4
Ø 1460	6T / 16Ar / 55.4	6T / 16Ar / 6T / 16Arg / 55.4
Ø 1560	6T / 16Ar / 55.4	6T / 16Ar / 6T / 16Arg / 55.4
Ø 1660	8T / 16Ar / 55.4	8T / 14Ar / 6T / 14Arg / 55.4
Ø 1760	8T / 16Ar / 55.4	8T / 14Ar / 6T / 14Arg / 55.4
Ø 1860	10T / 16Ar / 55.4	10T / 12Ar / 8T / 12Arg / 55.4
Ø 1960	10T / 16Ar / 55.4	10T / 12Ar / 8T / 12Arg / 55.4

CONTIONIOUS, MODULAR G-LUX UNITS

Technical Data

Glazing:

- Double-glazed as standard – triple glazed by special order.
- Standard double-glazed glass specification.
- SOLAR version possible.
- Specification of glass inside the table.

Frame:

Rooflight frame is manufactured with fully thermally broken design, welded aluminium frame and joint detail. All visible aluminium is polyester powder coated to RAL 7016 Anthracite Grey as standard (colours available on request).

Performance – Rooflight:

Refer to glass specification and performance chart and data related to relevant unit size.
Only fixed version.

Roof Pitch

Recommended to fit roof pitch between 5–20° as standard.

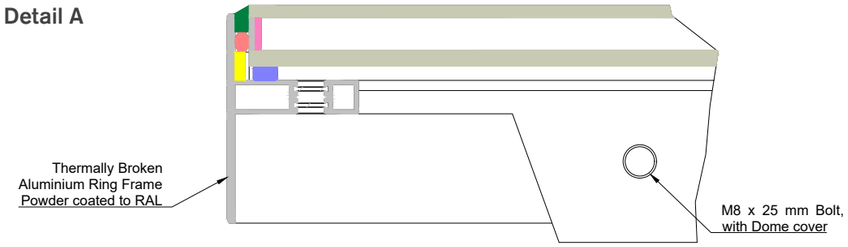
Segment GRP or steel upstands

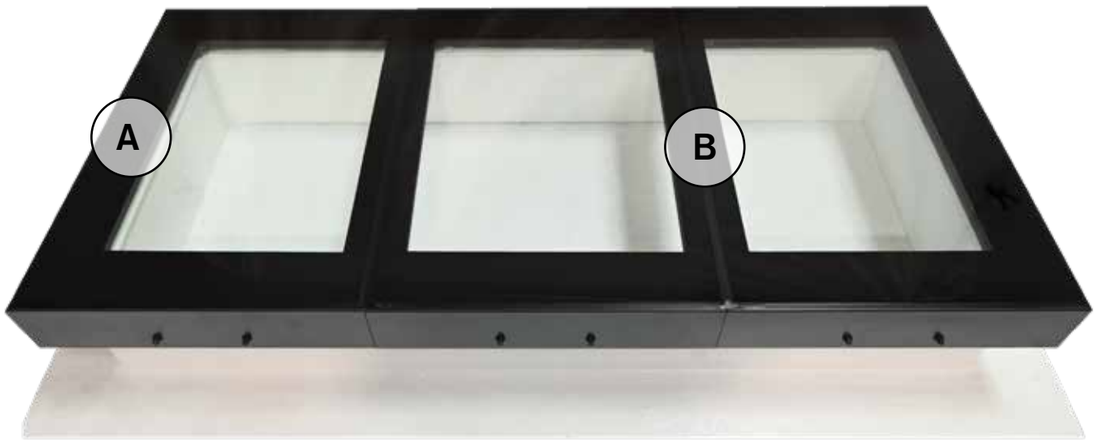
Upstand could be already prepared by customer.

Features & Benefits

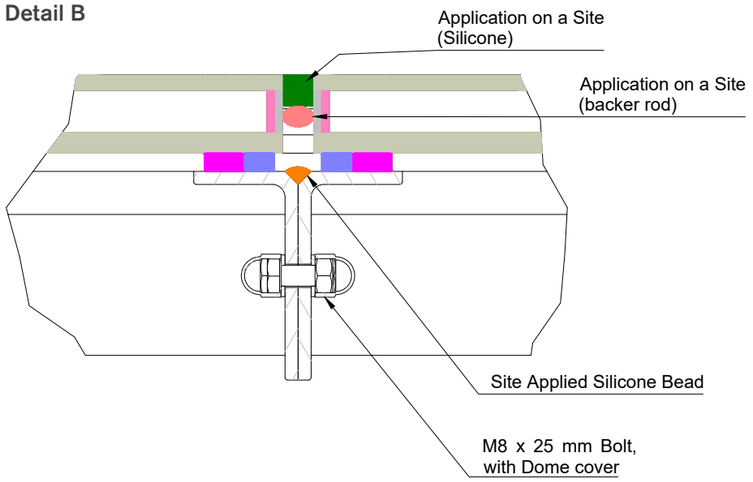
- Modular system allows multiple glazed sections to be linked together with no external capping .
- Flush glaze glass-to-edge design.
- Good thermal and sound insulation properties.
- Non-Fragility CWCT Class 2 (dependant on size).
- Secure, welded thermally broken glazing frame with self-supporting joints.
- Aluminium frame powder coated to any RAL colour.
- Available in bespoke sizes and glass specification.

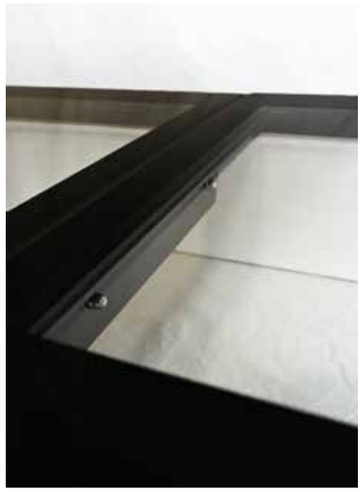
Detail A





Detail B





Size N (mm)	Unit Width																
	2000	2250	2500	2750	3000	3250	3500	3750	4000	4250	4500	4750	5000	5250	5500	5750	6000
800				*	*	*	*	*	*	*	*	*	*	*	*	*	*
1000			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
1200			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
1400		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
1600		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
1800	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
2000	**/HSL	**/HSL	**/HSL	**/HSL	**/HSL	**/HSL	**/HSL	**/HSL	**/HSL	**/HSL	**/HSL	**/HSL	**/HSL	**/HSL	**/HSL	**/HSL	**/HSL
2200	***/HSL	***/HSL	***/HSL	***/HSL	***/HSL	***/HSL	***/HSL	***/HSL	***/HSL	***/HSL	***/HSL	***/HSL	***/HSL	***/HSL	***/HSL	***/HSL	***/HSL
2400	***/HSL	***/HSL	***/HSL	***/HSL	***/HSL	***/HSL	***/HSL	***/HSL	***/HSL	***/HSL	***/HSL	***/HSL	***/HSL	***/HSL	***/HSL	***/HSL	***/HSL
2600	***/HSL	***/HSL	***/HSL	***/HSL	***/HSL	***/HSL	***/HSL	***/HSL	***/HSL	***/HSL	***/HSL	***/HSL	***/HSL	***/HSL	***/HSL	***/HSL	***/HSL
2800	***/HSL	***/HSL	***/HSL	***/HSL	***/HSL	***/HSL	***/HSL	***/HSL	***/HSL	***/HSL	***/HSL	***/HSL	***/HSL	***/HSL	***/HSL	***/HSL	***/HSL
3000	***/HSL	***/HSL	***/HSL	***/HSL	***/HSL	***/HSL	***/HSL	***/HSL	***/HSL	***/HSL	***/HSL	***/HSL	***/HSL	***/HSL	***/HSL	***/HSL	***/HSL

2 section
3 section
4 section
5 section
6 section

LEGEND:
* ESG 6 mm / 16 arg / laminated 4 + 4 foil 0,76 PVB
** ESG 6 mm / 16 arg / laminated 5 + 5 foil 1,52 PVB
** ESG 8 mm / 16 arg / laminated 5 + 5 foil 1,52 PVB
HSL Optional extra cost: inner pane could be Heat Strengthened Laminate

Standard proposal of sizes and numbers of sections with glass structure.
Other project sizes on request.

SMART G-LUX WITH ELECTRIC SWITCH FOIL (CLEAR / DIFFUSED EFFECT)

Electrochromic glass foil (also known as smart glass, switch film, smart film,...) is electronically tintable glass foil used for every type of window. Switchable glass foil you can switch to "open and closed". "Open" (power on) makes the G-LUX transparent and gives, therefore, no privacy. 'Closed" (power off) gives an etched glass effect, providing complete privacy.

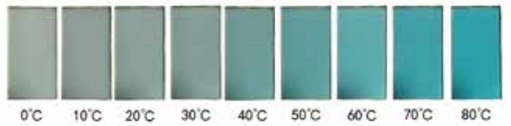
- You need power supply 230V.
- Electric transformer you get beside G-LUX.

SMART G-LUX WITH SELF TANING GLASS

Dynamic self-tint PVB film: This product is one thermochromic pvb film which is used for lamination of glass. It has the function of deepening the color as the temperature increases, and at the same time has the function of heat insulation and ultraviolet protection, which is widely used in building roofs, doors and windows.

Dynamic self-tint interlayer film, it is one special PVB film with thermochromic function, this film can block 99% UV and 75% IR, green energy saving material. Dynamic self-tint interlayer film will change to dark color with the sun light temperature increasing, soft sunshine, no glaze, perfect sunshade material.

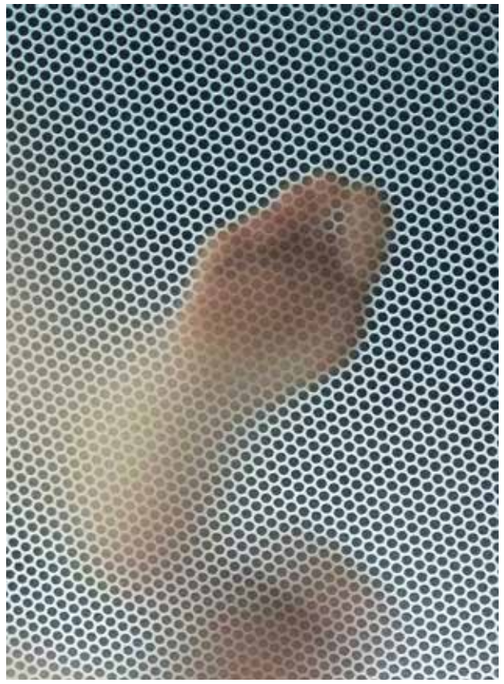
Color varies with temperature

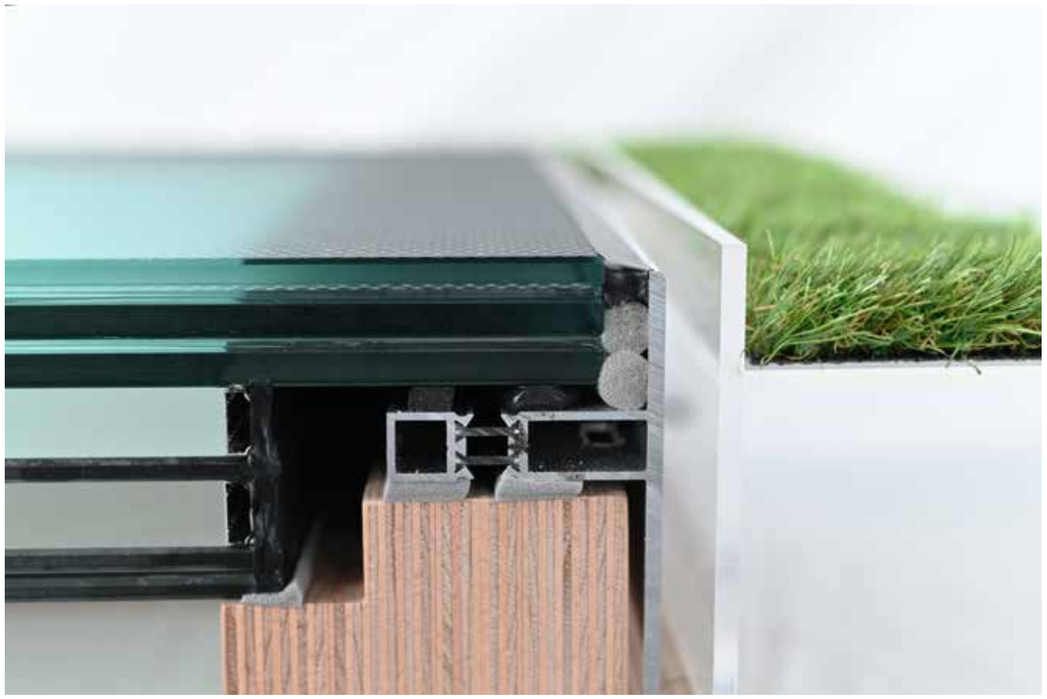


WALK ON EDITION

Walk-On Glass is a toughened glass with a certified anti-slip surface. It is manufactured from layers of toughened glass which are bonded together to create a safe, strong surface. Walk-on glass looks really impressive whether featured in commercial or residential interior or exterior design. Could be produced also with adding an extra Insulating glass (IG) which consists of two or more glass window panes, separated by a space to reduce heat transfer across a product.

- Special G-LUX edition for »walk on« application.
- Combination of safety glass and classic G-LUX aluminium frame.
- Only fixed version.
- Upstand or some support for walk on glass must be provided by the client.
- Calculation and anty-slip performance of walk on glass is carried out for each project separately (just glass).





Testings:

Calculation for Walk On glazing (DIN 18008-5)
Slip resistance certified with BCR - Tortus method: μ > 0,40*
Slip resistance certified to DIN 51130: classification R 13**
Slip resistance certified to DIN 51097: classification C ***
Slip resistance certified with method BOT 3000 to AINSI A1 37-1:2012: > 0,42****
Resistance to surface abrasion certified to UNI EN ISO 10545-7:2000: PEI III *****

TESTING & CERTIFICATION

Requirement	Result	Classification
Wind Load	Class 2 A4 P1 1600Pa P2 800Pa P3 2400Pa	BS EN 12210 BS 6375-1:2015
Water Tightness	Class 7a (300Pa)	6375-1 : 2015 4
Impact Resistance	CWCT Class 2	CWCT TN 66 & 67
Overall Weathertightness Rating	1600	BS EN 6375-1 : 2015
Fall through protection	pass	GS BAU-18
External fire performance	Broof (t1)	EN 13501-5

Fall through protected and tested G-LUX products, which has purpose to protect and prevent people to fall through the glass product.

CLEANING & MAINTENANCE

Any maintenance of rooflights must be carried out strictly in accordance with the relevant 'Health and Safety' regulations.

Glazing: G-LUX are 'Non-Fragile' but should not be trafficked. Wash and rinse glazing at intervals, to be determined by the owner. Use a solution of 5% mild soap of detergent cleaning solution sprayed on to wash the glazing surface. Follow immediately with clean water and promptly remove excess rinse water with a clean squeegee. DO NOT use abrasive cloth, sponges, cleaner or solvent acid-based solution on the glazing. Should stronger cleaning compounds be needed to remove stubborn stains, consult Akripol for recommendations.

Electric motors: Must be installed by a qualified electrician. Test annually by an Approved Electrical Installations Testing Company. Physically check fixing brackets to ensure fixings are secure.

Note
We reserve the right to make technical changes. For more information on G-LUX and other Akripol products, visit www.akripol.si.

Bigger sizes of G-LUX units, because of its weight, will require offloading by a mechanical means, i.e. a forklift. Please note the driver cannot offload these goods by hand. Vehicle mounted offloading facilities (HIAB) is available by prior arrangement at extra cost. This applies to any product above 1.5 square metres.