

GLAZING

Optional functions

To satisfy the requirements of architects and the different regulations, SKYDOME® offers you a vast range of glazing.

— STRUCTURED POLYCARBONATE

Types of glazing		Heat transfer coefficient Ug (W/m ² .K)		TL D65 ⁽²⁾	FS or g ⁽²⁾	Reaction to fire	R _w R _A =R _w +C R _{A,Tr} =R _w +C _{Tr} (dB) ⁽³⁾	R _w (C _g C _{Tr}) (dB) ⁽⁴⁾	LIA dB(A) ⁽⁴⁾
		U _{hor} ⁽¹⁾	U _{vert} ⁽¹⁾						
S.PC 10	Transparent 4-wall S.PC 10	2.7	2.5	73%	69%	B,s1,d0	R _w =17 dB	ND	ND
	Opal 4-wall S.PC 10	2.7	2.5	57%	60%	B,s1,d0	R _w =17 dB	ND	ND
	Opal IR 4-wall S.PC 10	2.7	2.5	47%	51%	B,s1,d0	R _w =17 dB	ND	ND
	Aluminium grey 4-wall S.PC 10	2.7	2.5	0%	ND	B,s2,d0	R _w =17 dB	ND	ND
	S.PC 10 with transparent Lumira™ Aerogel	1.93	ND	71%	66%	B,s1,d0	ND	ND	ND
	S.PC 10 with opal Lumira™ Aerogel	1.93	ND	53%	52%	B,s1,d0	ND	ND	ND
S.PC 16	Transparent multi-wall S.PC 16	2.0	1.8	64%	77%	B,s1,d0	R _w =19 dB, R _A =19 dB R _{A,Tr} =17 dB	17(-2;-2)	77
	Opal multi-wall S.PC 16	2.0	1.8	54%	55%	B,s1,d0		17(-2;-2)	77
	Opal Confort multi-wall S.PC 16	2.0	1.8	46%	55%	B,s1,d0		17(-2;-2)	77
	Aluminium grey multi-wall S.PC 16	2.0	1.8	0%	55%	B,s1,d0		17(-2;-2)	77
	Opal IR Control multi-wall S.PC 16	2.0	1.8	42%	43%	B,s2,d0		17(-2;-2)	77
	S.PC 16 with transparent Lumira™ Aerogel	1.31	ND	67%	67%	B,s1,d0	R _w =21 dB, R _A =21 dB	19(0;-1)	69
	S.PC 16 with opal Lumira™ Aerogel	1.31	ND	57%	57%	B,s1,d0	R _{A,Tr} =19 dB	19(0;-1)	69
S.PC 32	Transparent multi-wall S.PC 32	1.4	1.25	64%	57%	B,s1,d0	R _w =19 dB, R _A =18 dB R _{A,Tr} =18 dB	20(-2;-1)	75
	Transparent multi-wall S.PC 32 (2 sheets of transparent S.PC 16)	1.4	1.25	37%	38%	B,s2,d0		20(-2;-1)	75
	Opal multi-wall S.PC 32 (2 sheets of opal S.PC 16)	1.4	1.3	25%	27%	B,s2,d0		20(-2;-1)	75
	Aluminium grey multi-wall S.PC 32	1.4	1.3	0%	21%	B,s2,d0		20(-2;-1)	75
	Transparent multi-wall S.PC 32+	0.8	ND	43%	45%	B,s2,d0	R _w =21 dB, R _A =21 dB R _{A,Tr} =20 dB	21(0;0)	72
S.PC + DOME	Transparent S.PC 32 & Solid PC single dome	0.8	ND	ND	ND	B,s2,d0	ND	25(-1;-3)	63
	Opal S.PC 32 & Solid PC single dome	0.8	ND	ND	ND	B,s2,d0	ND	25(-1;-3)	63
	Transparent S.PC 32+ & Solid PC single dome	0.8	ND	ND	ND	B,s2,d0	ND	26(-1;-3)	61
ACOUSTIK' LIGHT	Acoustik' Light Transparent S.PC 10 & transparent PCP 6	2.1	ND	54%	37%	B,s2,d0	R _w =27 dB, R _A =26 dB R _{A,Tr} =26 dB	25(-1;-1)	66

For information: S.PC = Structured Polycarbonate, PC = Polycarbonate, PMMA = Polymethyl Methacrylate

⁽¹⁾ According to §2.31 of the Th-Bat. rules.

⁽²⁾ Regular light transmission factor TL D65 and total solar transmission factor FS (TST or g) according to EN 410.

⁽³⁾ Glazing insulation to airborne noise R_w, pink noise R_A (neighbourhood, airport and industrial activities) and road noise R_{A,Tr} measured in the laboratory according to NF EN ISO 140.

— MAIN ADVANTAGES OF LUMIRA™ AEROGEL

+ Unmatched thermal insulation

$U_g = 0.8 \text{ W/m}^2\text{K}$ for a 32 mm wall

+ Diffuse light

LUMIRA™ aerogel by SKYDÔME® absorbs external light and redistributes uniform light inside without direct radiation, reducing glare, areas of directional light and cast shadows.

+ Excellent light transmission

+ Minimal heat transmission

LUMIRA™ aerogel by SKYDÔME® provides maximum thermal protection by reducing heat loss and improving the solar factor. The thermal efficiency of buildings achieved with Lumira aerogel by SKYDÔME® is 4.5 times higher than that of buildings using standard window products.

+ Reduced noise transmission

Thanks to Lumira™ aerogel by SKYDÔME®, transmission of noise and vibrations is inhibited, resulting in noise reduction of up to 22 dB. The tranquillity of the indoor areas is thus enhanced and project managers have greater freedom in the design of multi-functional buildings.

+ Moisture resistant

Lumira™ aerogel by SKYDÔME® is hydrophobic, water-repellent and resistant to moisture and the development of mould inside the cells.

+ UV resistant

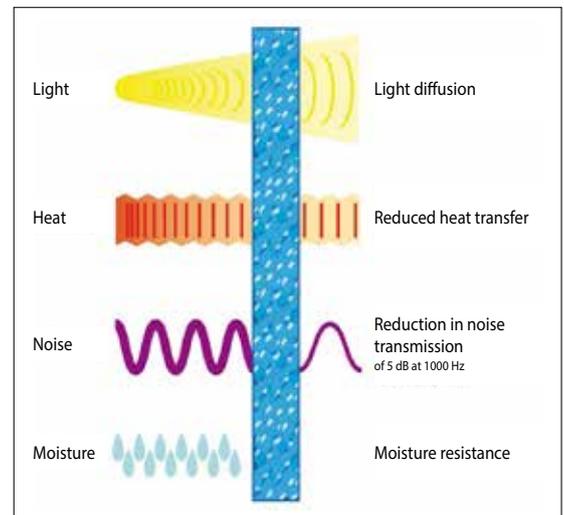
Its particles do not yellow or lose their light transmission and thermal properties due to ageing.

+ Energy savings generated

By improving light diffusion and reducing heat loss, Lumira™ aerogel by SKYDÔME® limits the need to use artificial light, heating, ventilation and air conditioning.

+ Integration into all architectural projects

It can be used on all types of constructions and buildings, both for roofs and façades, allowing aesthetics and functionality to be combined in the building and giving a certain degree of architectural freedom in design.



— WHAT IS LUMIRA™ AEROGEL?



LUMIRA™ aerogel by SKYDÔME® is a new material combining a high light transmittance value with excellent insulation and energy performance properties. Incorporated in the SKYDÔME® arches, skylights, cladding and glass roofs, LUMIRA™ technology boosts the thermal and acoustic insulation properties of skylights, minimises heat loss, diffuses uniform light and reduces the solar factor.

— DOMES

Types of glazing	Heat transfer coefficient Ug (W/m ² .K)		TL D65 ⁽²⁾	FS or g ⁽²⁾	Reaction to fire	R _w R _A =R _w +C R _{A,Tr} =R _w +C _{tr} (dB) ⁽³⁾	R _w (C;C _{tr}) (dB) ⁽⁴⁾	LIA dB(A) ⁽⁴⁾
	U _{hor} ⁽¹⁾	U _{vert} ⁽¹⁾						
Transparent PMMA single dome	5.3	4.5	92%	ND	E	ND	ND	ND
Opal PMMA single dome	5.3	4.5	83%	ND	E	ND	ND	ND
Transparent solid PC single dome	5.3	4.5	91%	92%	B,s1,d0	ND	ND	ND
Opal solid PC single dome	5.3	4.5	84%	86%	B,s1,d0	ND	ND	ND
Transparent PMMA double dome <i>Transp. upper dome + transp. lower dome</i>	2.8	2.5	84%	ND	E	ND	15(0;-1)	ND
Opal PMMA double dome <i>Opal upper dome + transp. lower dome</i>	2.8	2.5	78%	ND	E	ND	15(0;-1)	ND
Solid PC double dome, 1200 joules <i>Opal PMMA PC upper dome + transp. solid PC lower dome</i>	2.8	2.5	66%	ND	B,s2,d0	ND	15(0;-1)	ND
Double dome, 1200 joules <i>Opal PMMA upper dome + transp. solid PC lower dome</i>	2.8	2.5	ND	ND	E	ND	15(0;-1)	ND
Opal PMMA triple dome <i>Opal PMMA upper dome + transp. PMMA int. dome + transp. PMMA lower dome</i>	2.0	1.95	61%	ND	E	ND	20(0;-2)	63
Opal solid PC triple dome <i>Opal PMMA PC upper dome + transp. solid PC int. dome + transp. solid PC lower dome</i>	2.0	1.95	61%	ND	B,s2,d0	ND	20(0;-2)	63

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⁽²⁾ Regular light transmittance TL D65 and total solar transmittance factor FS (TST or g) according to EN 410.

⁽³⁾ Glazing insulation to airborne noise R_w, pink noise RA (neighbourhood, airport and industrial activities) and road noise RA,Tr measured in the laboratory according to NF EN ISO 140.

⁽⁴⁾ The system's noise reduction indexes R and sound intensity levels LIA generated by rain measured in the laboratory according to NF EN ISO 140.

— CHOICE OF COLOURS (BY REQUEST)



CHOICE OF DOMES



Dropped edge dome



Dropped edge pyramid dome



Dropped edge circular dome



Flat edge dome



Flat edge pyramid dome

AVAILABILITY OF DOMES ACCORDING TO SIZE

Dimensions (cm)	Opal PMMA triple dome	Opal PMMA double dome		Transparent PMMA double dome		Opal double dome, 1200 joules		Opal solid PC double dome, 1200 joules		Opal PMMA pyramid double dome		Opal circular dome
	Flat edges	Flat edges	Dropped edges	Flat edges	Dropped edges	Flat edges	Dropped edges	Flat edges	Dropped edges	Flat edges	Dropped edges	Dropped edges
40 x 40			✓				✓	✓	✓			
50 x 50	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	
60 x 60		✓	✓			✓	✓	✓	✓			
72 x 72		✓	✓			✓	✓	✓	✓			
75 x 75	✓		✓				✓		✓	✓	✓	
80 x 80	✓	✓	✓			✓	✓	✓	✓	✓		✓
85 x 85	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓
90 x 90	✓	✓	✓			✓	✓	✓	✓	✓		
100 x 100	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓
110 x 110	✓	✓	✓			✓	✓	✓	✓	✓	✓	
115 x 115			✓				✓		✓			
120 x 120	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓
130 x 130	✓	✓	✓			✓	✓	✓	✓	✓	✓	
140 x 140	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓
150 x 150	✓	✓	✓	✓						✓		
160 x 160	✓	✓	✓	✓						✓		✓
180 x 180	✓	✓	✓	✓						✓	✓	✓
200 x 200	✓	✓		✓						✓		
50 x 100		✓	✓			✓	✓	✓	✓			
70 x 100	✓	✓	✓			✓	✓	✓	✓	✓		
100 x 140	✓	✓	✓	✓		✓	✓	✓	✓	✓		
100 x 150	✓	✓	✓	✓		✓	✓	✓	✓	✓		
100 x 200	✓	✓		✓						✓		
120 x 150		✓	✓			✓	✓	✓	✓			
120 x 160		✓	✓			✓	✓	✓	✓			
120 x 180		✓				✓		✓				
120 x 200	✓	✓										
120 x 240		✓										
140 x 200	✓									✓		

✓ : Available

ALUMINIUM COVER

Cover	Types of glazing	Heat transfer coefficient Ug (W/m ² .K)		TL D65 ⁽²⁾	FS or g ⁽²⁾	Reaction to fire	R _w R _{A,Tr} = R _w + C _{tr} (dB) ⁽³⁾	R _w (C _v , C _{tr}) (dB) ⁽⁴⁾	LIA dB(A) ⁽⁴⁾
		U _{hor} ⁽¹⁾	U _{vert} ⁽¹⁾						
	40 mm aluminium cover	0.85	ND	0%	ND	ND	ND	23(-1;-3)	63

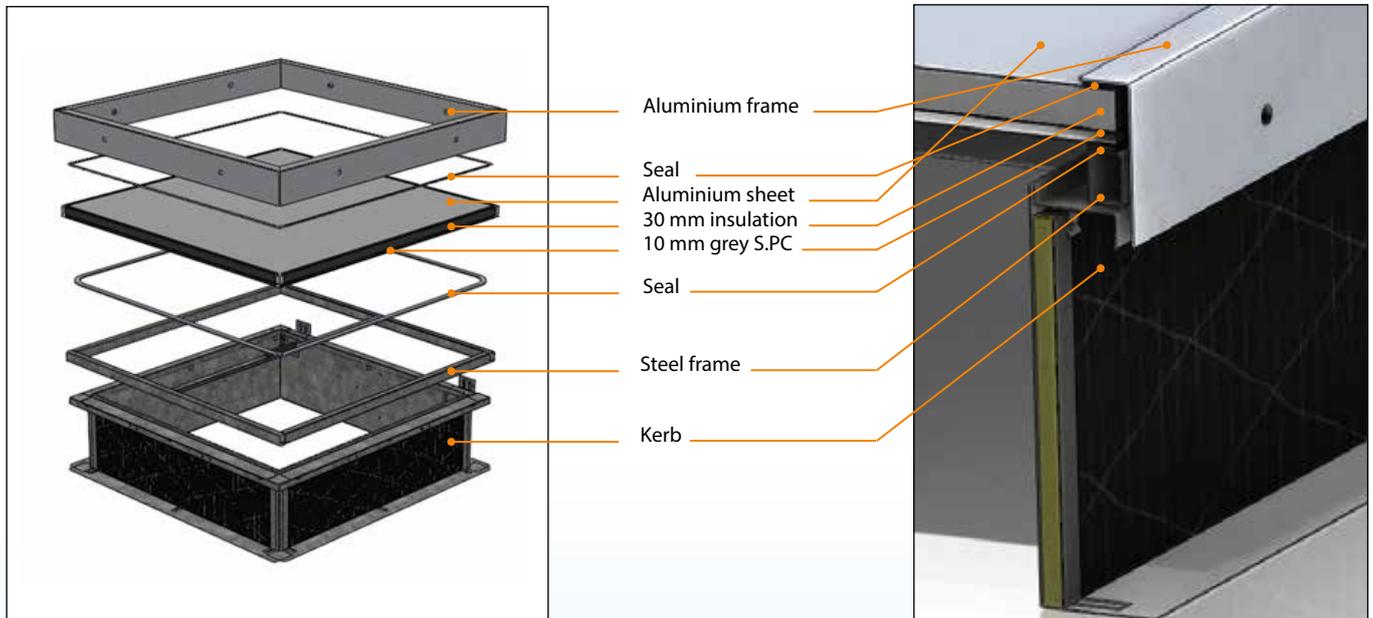
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⁽⁴⁾ The system's noise reduction indexes R and sound intensity levels LIA generated by rain measured in the laboratory according to NF EN ISO 140.

COMPONENTS OF THE 40 MM ALUMINIUM COVER



The 40 mm aluminium cover is composed of:

- an aluminium frame
- a seal between the frame and the glazing
- assembled glazing composed of:
 - an aluminium sheet
 - 30 mm insulation
 - a sheet of 10 mm grey structured polycarbonate
- a seal between the glazing and the frame

The total thickness is 40 mm ± 5%.

The aluminium cover adapts to the devices in our thermal insulation range: contact us.