



St Hilda's Anglican School for Girls | Mosman Park, WA | Donovan Payne Architects



LIGHT ARCHITECTURE

Danpalon
Light Architecture

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DANPALON is the complete daylighting solution offering exceptional quality of light, thermal insulation and UV protection with a rich non-industrial visual appeal. The Danpalon system offers substantial physiological and psychological benefits in all work and living spaces.

DANPALON can offer to all professional architects and builders a complete creative solution. With superior technical qualities, design in confidence to create spaces of comfort and well being. Danpalon is 'Light Architecture'.

CREATE WITH NATURAL LIGHT one of the most important design elements in architecture today. Danpalon ensures that the building envelope is covered by a daylighting system providing natural light into the building space.

TRANSFORM BUILDINGS FROM DAY TO NIGHT Use the translucency or transparency of the panels in design to transform buildings into areas of light and colour; resulting in stunning effects during the day and through the night.



Emmaus College | Vermont South, Vic | Paul Archibald Architects

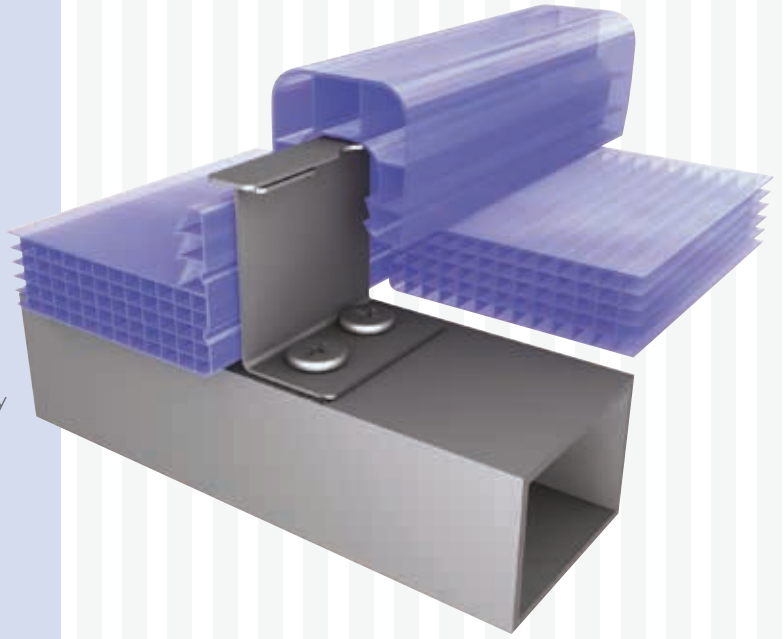
THE STANDING SEAM CONNECTION

The Heart of the Danpalon System is The Standing Seam Connection Method.

The system consists of:

- Extruded translucent panels, with a vertical standing seam at both sides of the panel
- A snap-on connector interlocking the panels
- Concealed stainless steel retention clips

The fully assembled system is free floating. Each component is free to thermally expand or contract at its own rate, eliminating 'waves' or deflections and maintaining the structural properties of the material. This technical superiority is appreciated through a wide range of quality installations throughout the world. The various colours, finishes and visual effects offer a great palette of creative options for all designers to use in realising their own unique designs.



COLOURS



Cowra Aquatic Centre | Cowra, NSW | Design West



Maritime Museum | Auckland, NZ | Pete Bossley Architects



MITA Joondalup | Perth | Meyer Shircore



Holmesglen TAFE Bridge | Melbourne | WMCQ Architects



Banksia Grove Primary | Perth | Slavin Architects

CREATE WITH LIGHT

Use the translucency or transparency of the panels in design to transform buildings into areas of light and colour, resulting in stunning effects during the day and through the night.



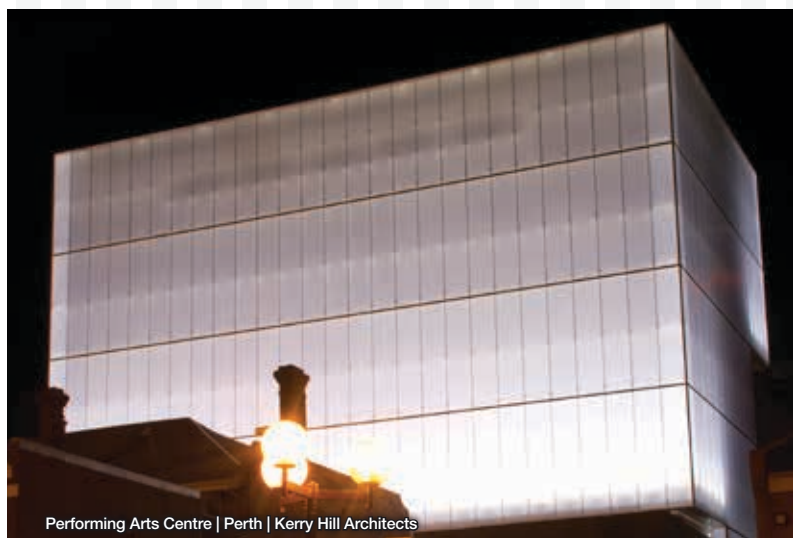
Wellington Zoo Ampitheatre | Wellington, NZ | Jasmax Architects



Burnie Makers Mark Workshop | Tasmania | Terroir Architects



Chislm College | Melbourne | Cox Architecture



Performing Arts Centre | Perth | Kerry Hill Architects



Majau Sports Hall | Bruges, France | BL2 Architects

DANPALON, THE FREEDOM OF EXPRESSION

Freedom to create – Danpalon allows designers to explore new aesthetic dimensions. Silk-screen printing and painting... by associating the image to light, Danpalon creates evolutionary spaces, where the decoration of the Danpalon is transformed by light.



RTA Crashlab | Huntingwood, NSW | Hassell Architects



Centro Shopping Centre | Port Pirie, SA | Hames Sharley Architects



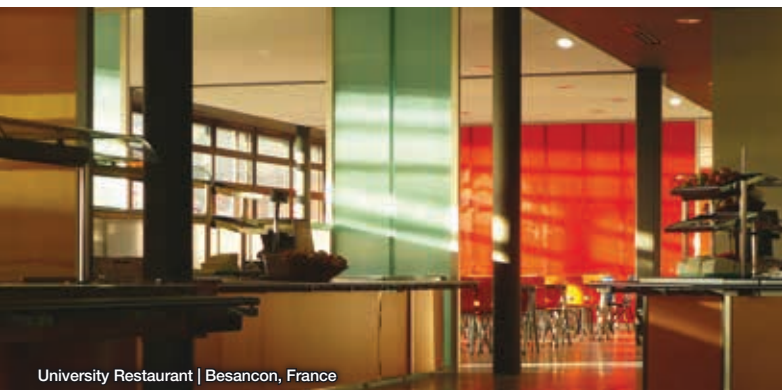
Bonhomme de Neige | France | M. Daufresne Architect



"Barcode", Recall Archive Facility | Sydney | Lacoste & Stevenson Architects

DANPALON CREATES THE SCENE

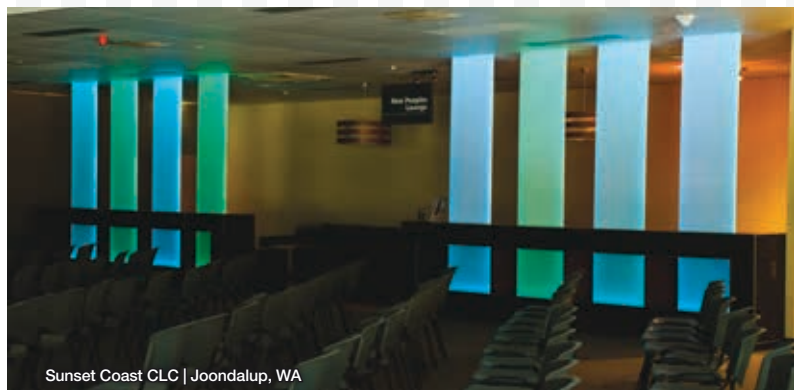
Internal spaces can be brought to life with Danpalon and light effects, creating an appealing environment. The clean lines of Danpalon, coupled with coloured panels and sympathetic lighting can create a space, giving the feeling of openness and light. Create new atmospheres – live in light with Danpalon.



University Restaurant | Besancon, France



Si Heung Gymnasium | Seoul, Korea | Rem Koolhaas



Sunset Coast CLC | Joondalup, WA



HIA | Hong Kong, China



Nike Store | Melbourne | Woods Bagot



Tremblay Gymnasium | France | B + C Architects



Optus Offices | Sydney | Hassell Architects



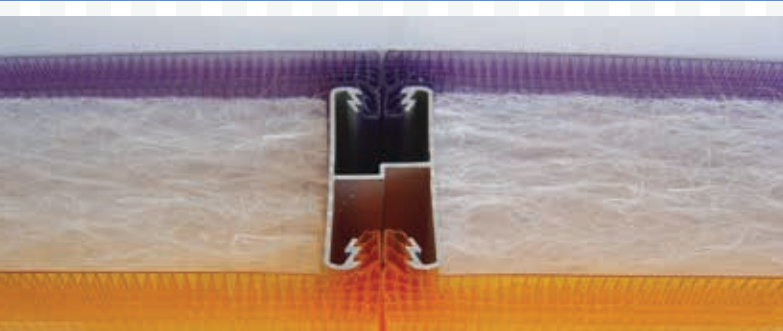
Durham University | Stockton, UK | PH Partnerships

THERMAL INSULATION WITH LIGHT

Danpatherm is the first thermal insulating system using a translucent material. Two or more panels can be used with a range of connections to offer the desired result.

The Danpatherm + version also incorporates a translucent 'Light Diffuser' in between the Danpalon panels for optimum 'U' and 'R' Values.

The two-layer design also empowers the architect increased control over light, solar transmittance, colors and insulation levels



Cardiovascular Rehabilitation Clinic | La Rochelle, France | J. Luc Cortella, Architect



Burnie Makers Mark Workshop | Tasmania | Terroir Architects

ENABLES INCREASED CONTROL OVER LIGHT, SOLAR TRANSMITTANCE, COLOURS AND INSULATION

SOFTLITE FOR ANTIGLARE

Danpalon Softlite is a matt finish material designed to reduce transmitted and reflected glare particularly through brighter panels.

It also nulls the neon effect phenomenon. The Softlite solution can be added to all Danpalon colours on either one or both sides of the panels.



Prince Alfred College | Adelaide, SA | Walter Brooke Architects



Mendizorroza Tennis Courts | Basque Country, Spain

DANPALON SOFTLITE PROVIDES A COMFORTABLE, MORE EVENLY DIFFUSED LIGHT TRANSMISSION.

COMPACT



Law Courts | Adelaide, SA



Domestic pergola | Mt Osmond, SA | Anton Johnson Architect

The Compact system consists of:

- ① Transparent 4mm Compact panel
- ② Transparent Polycarbonate Connector
- ③ Aluminium Connector
- ④ Transparent Polycarbonate Spacer

Danpalon Compact is a 4mm thick solid panel that provides a 'glass-like' appearance with the benefits of polycarbonate such as strength, insulating qualities, flexibility, lightweight and 99.9% UV protection. The Danpalon standing-seam connection system allows architects complete freedom to design spectacular glazed areas of unlimited size and shape. The entire assembly uses no caulking or adhesives, eliminating the difficulties of sealant and adhesive bond failure common to traditional systems. The Danpalon connection system is mechanical, dry and 100% effective.

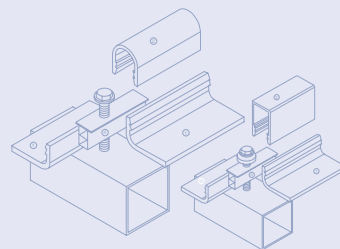


DANPALON'S UNIQUE SYSTEM

The standing seam connecting method. The Danpalon system consists of:

- Main transparent panels, extruded with a vertical standing seam at both sides of the panel.
- A snap-on connector (aluminium or transparent polycarbonate) interlocking the panels.
- A transparent polycarbonate spacer profile for 4mm Compact or concealed stainless steel Knee Fasteners for Multicell.

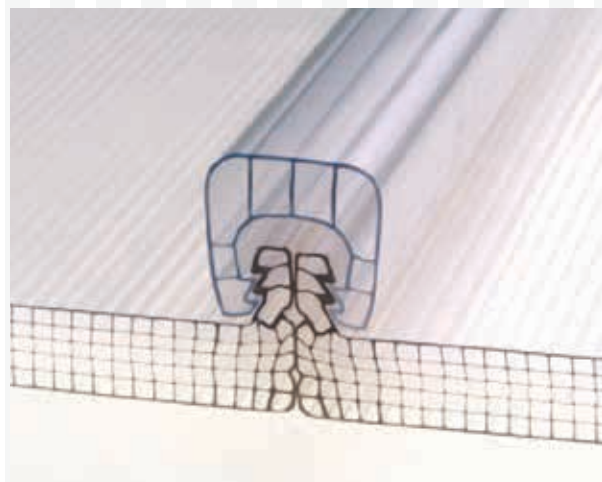
The system's installed module width is 600mm. The system is free floating. Every component is free to thermally expand or contract at its own rate, eliminating 'waves' or deflections and maintaining the structural properties for the life of the material.





St Francis School | Lockleys, SA | Paul Campbell Architects

Danpalon Multicell provides exceptional quality of light, a rich non-industrial visual appeal and delivers superior durability, thermal insulation and 99.9% UV protection. Danpalon multicell panels with this unique and innovative co-extrusion technology are available in a range of thicknesses and widths and offer a more superior alternative than other materials. The smaller spans between the rib supports give you the best combination of translucency and strength. The regular multicell structure transmits an even diffusion of light.



SUPERIOR LIGHT AND VISUAL APPEARANCE

LONGER LIFE

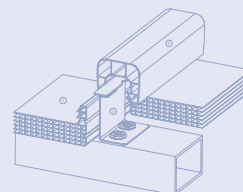
Danpalon also offers a co-extruded UV protection layer that results in longer panel life.

HIGH THERMAL INSULATION

The Danpalon Multicell design features more cells and layers which gives the panel significantly less thermal conductivity.

HIGH IMPACT AND WEATHER RESISTANCE

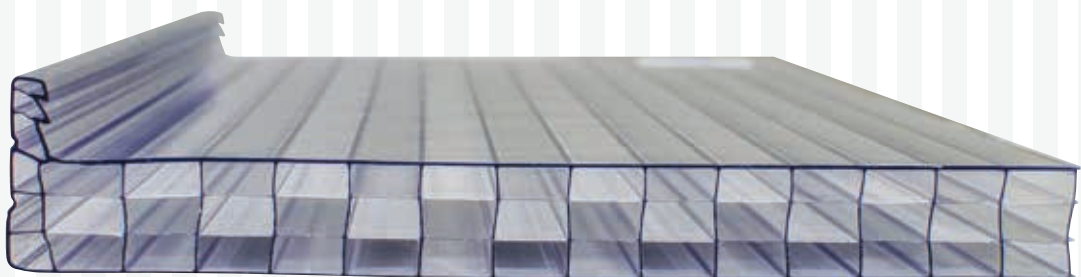
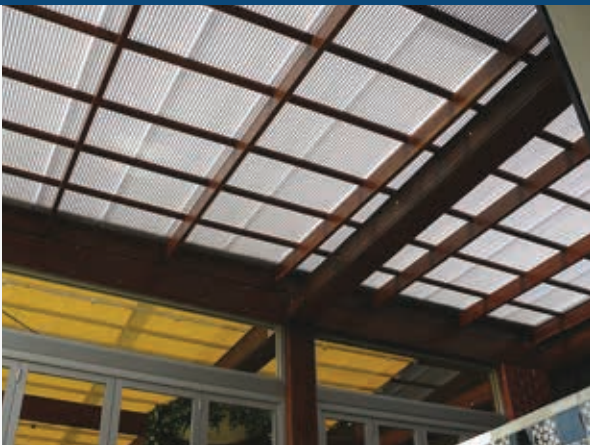
Due to the tightness between the vertical supports, Multicell offers the highest resistance to impact and hail damage. The high concentration of cells provides Danpalon Multicell with improved mechanical properties and rigidity.



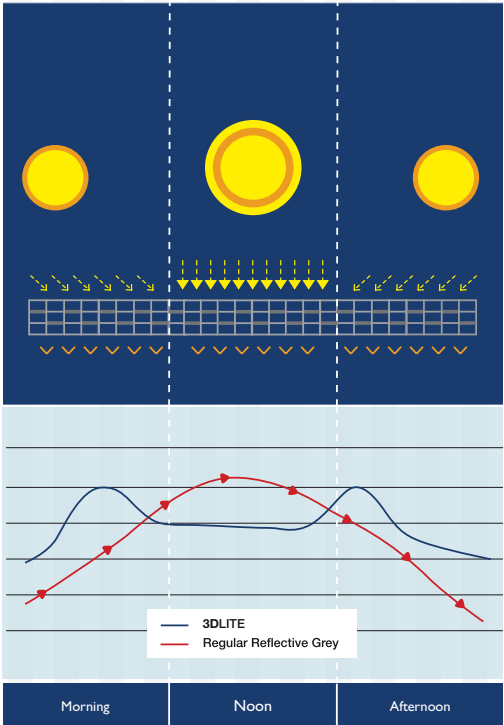
Domestic pool cover | Perth, WA

The Multicell system consists of:

- ① Extruded translucent panels, with a vertical standing seam at both sides of the panel
- ② A snap-on connector interlocking the panels
- ③ Concealed stainless steel retention clips



Daylight Time Level



3D LITE features a combination of transparent and opaque internal louvres, creating unique visual and thermal transmission properties. The 22mm deep panels can capture low angle sunlight while blocking overhead sun in the hottest part of the day. It allows visual transparency from certain angles while still maintaining exceptionally low solar transmission levels.



Front View



Side View

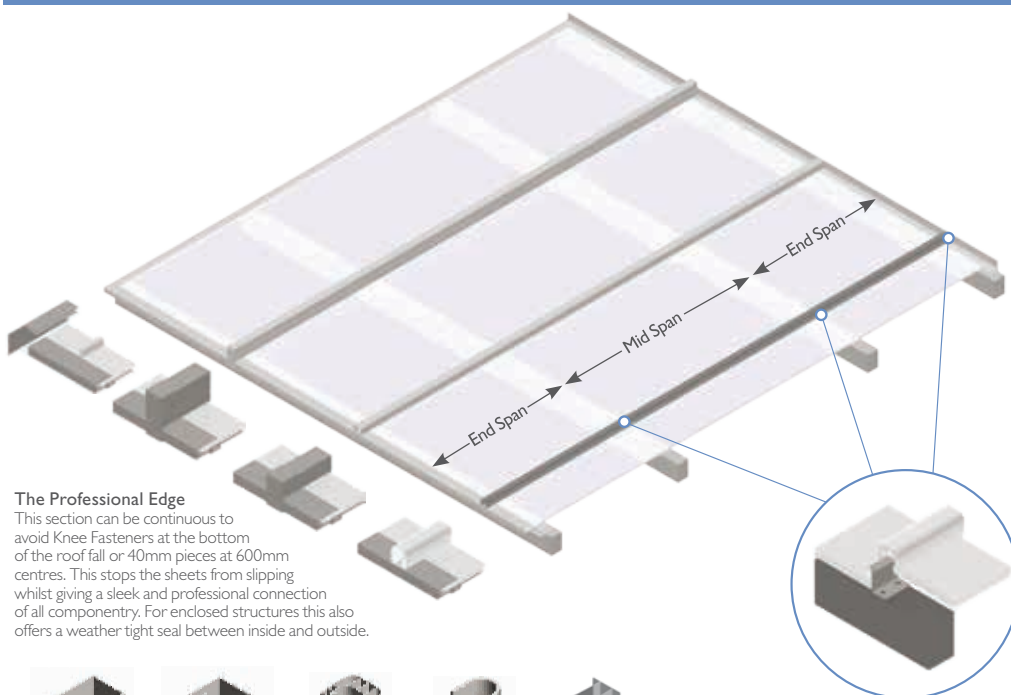


Brighton Primary School | Perth | Slavin Architects

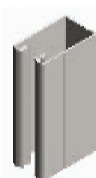
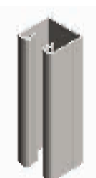
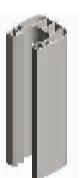
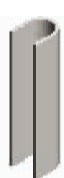
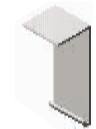
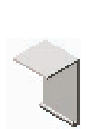
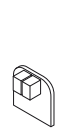
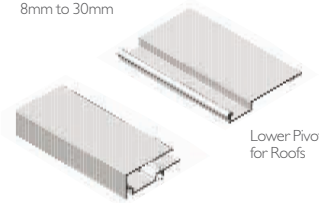


Pembroke School | Kensington Park, SA | Grieve Gillett Dimitty Andersen Architects

TRADITIONAL ACCESSORIES

**The Professional Edge**

This section can be continuous to avoid Knee Fasteners at the bottom of the roof fall or 40mm pieces at 600mm centres. This stops the sheets from slipping whilst giving a sleek and professional connection of all componentry. For enclosed structures this also offers a weather tight seal between inside and outside.

Connector HD
54mm x 32mmConnector Std
30mm x 32mmConnector
Poly StdConnector
Poly 4mmSpacer Clear
Poly 4mmF Section
8mm to 30mmConnector
End Cap HDConnector
End Cap StdConnector
End Cap PolyKnee Fastener
Heavy DutyKnee Fastener
TrapezoidEnd Cap
8mm to 30mmLower Pivot
for Roofs

Residence | Sydney | Fitzpatrick & Partners

		COMPACT 4mm	HONEYCOMB 8mm	HONEYCOMB 10mm	MULTICELL 12mm	MULTICELL 16mm
POLY CONNECTOR	MID SPAN	900	900	1100	1100	1300
	END SPAN	700	700	800	800	900
30mm ALUMINIUM CONNECTOR	MID SPAN	1400	1400	1600	1600	1600
	END SPAN	1000	1000	1200	1200	1200
54mm ALUMINIUM CONNECTOR	MID SPAN	N/A	1600	1800	1800	1800
	END SPAN	N/A	1200	1400	1400	1400

ROOF FALL

A minimum pitch of 5° is recommended (87mm/1000mm). Having sufficient fall allows natural weather action to assist in keeping the sheets clean.

NOTE: End spans occur at both the top and bottom of a roof fall. For curved roofs and roofs with a slope greater than 25°, purlin spacings can be increased. These spans are based on a design wind speed of 41m/s which equates to a 1kPa wind load.

FREESPAN™ SYSTEM



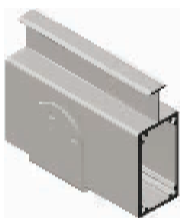
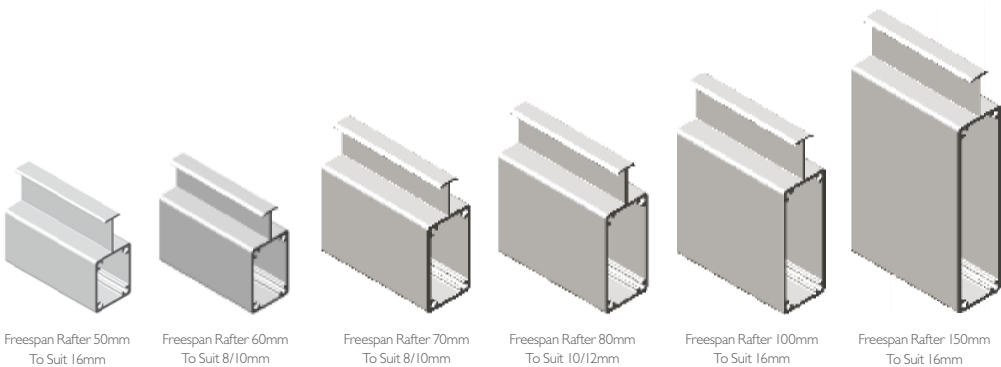
Domestic pergola | Victoria | Statkas Architecture

Photographer: Matthew Mallett

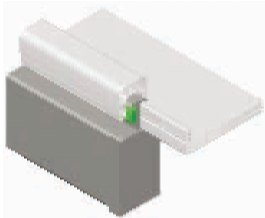


Crown Plaza | Brisbane | Ainsley Bell & Murchison Architects

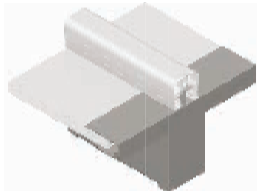
FREESPAN™ ACCESSORIES



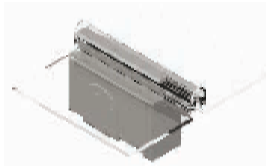
Saddle Bracket Attachment



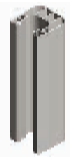
Side Detail



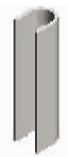
Assembly



DP4 Detail



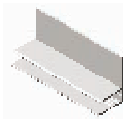
Connector Poly Std



Connector Poly 4mm



Bar End Cap 60mm to 150mm



F Section 8mm to 16mm



End Cap 8mm to 16mm



Connector End Cap Poly

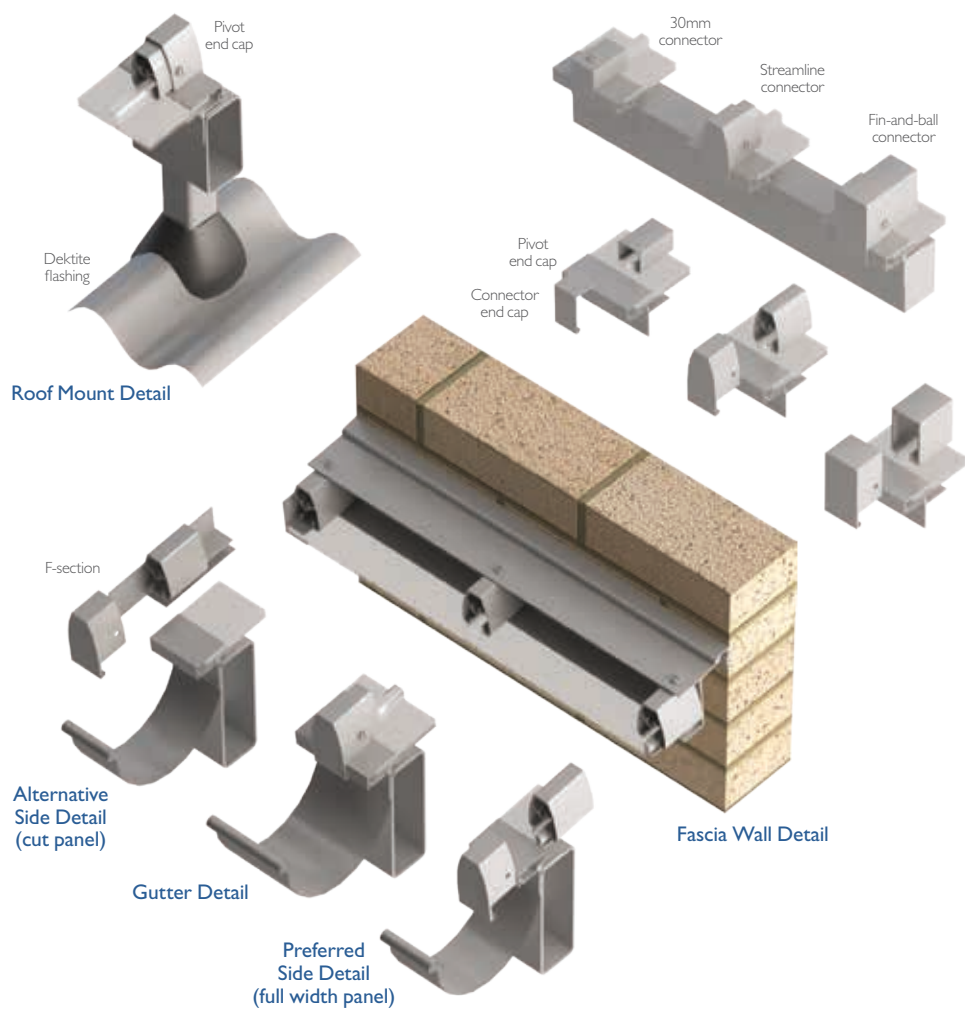
FORMAT AND SPANS

Freespan™ Bar	DPAB50	DPAB60	DPAB70	DPAB80	DPAB80	DPAB100	DPAB150
SPACING	1042	602	602	602	902	1042	1042
SPAN	4200	5500	6000	6500	6000	6800	8800

These spans are based on a design wind speed of 33 m/s. Deflection criteria is span / 75.



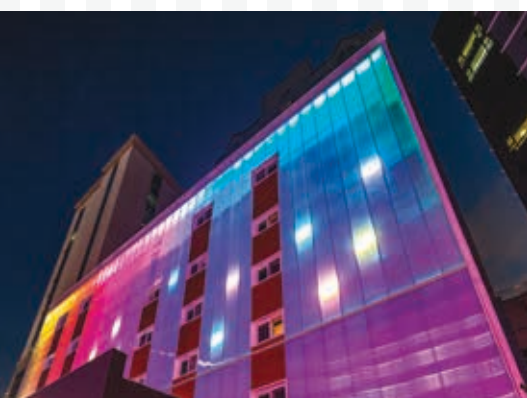
SOLARSPACE CONSTRUCTION AND CONNECTION DETAILS



FORMAT AND SPANS

	DPAC30	DPACSL	DPAC60	DPAC80	DPAC100
	30mm connector	Streamline connector	60mm connector	80mm connector	100mm connector
Span at 600mm spacing	2000	2500	4000	5200	6100
Span at 900mm spacing	1800	2300	3500	4500	5300
Span at 1040mm spacing	1600	2200	3300	4300	5100

These spans are based on a design wind speed of 33 m/s. Deflection criteria is span / 75.



SEAMLESS™ ACCESSORIES



Connector
40mm x 40mm



Connector
50mm x 40mm



Connector
60mm x 40mm



Connector
70mm x 40mm



Connector
80mm x 40mm



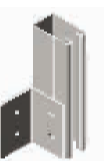
Connector
100mm x 40mm



Connector
54mm x 32mm



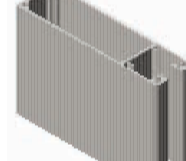
Connector H
70mm x 32mm



Angle Bracket
50mm x 50mm x 65mm



Angle Bracket
50mm x 50mm x 65mm



Connector
150mm x 40mm



Girt Bracket
54mm x 32mm



Girt Bracket
60/70mm x 40mm



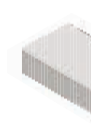
Girt Bracket
80/100mm x 40mm



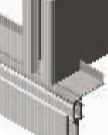
Connector End Cap
40mm to 150mm



F Section
8mm to 30mm



End Cap
8mm to 30mm



Sill
Assembly



Facade
Assembly

FORMAT AND SPANS

Connector	DPAC40			DPAC50			DPAC60			DPAC70			DPAC80			DPAC100			DPAC150		
SPACING	600	900	1040	600	900	1040	600	900	1040	600	900	1040	600	900	1040	600	900	1040	600	900	1040
SPAN	2700	2450	2400	3850	3650	3500	4500	4400	4200	5500	4900	4600	5500	5300	5100	6900	6400	6000	7800	6800	6600

These spans are based on a 1 kPa ultimate wind pressure. Deflection criteria is span /75.

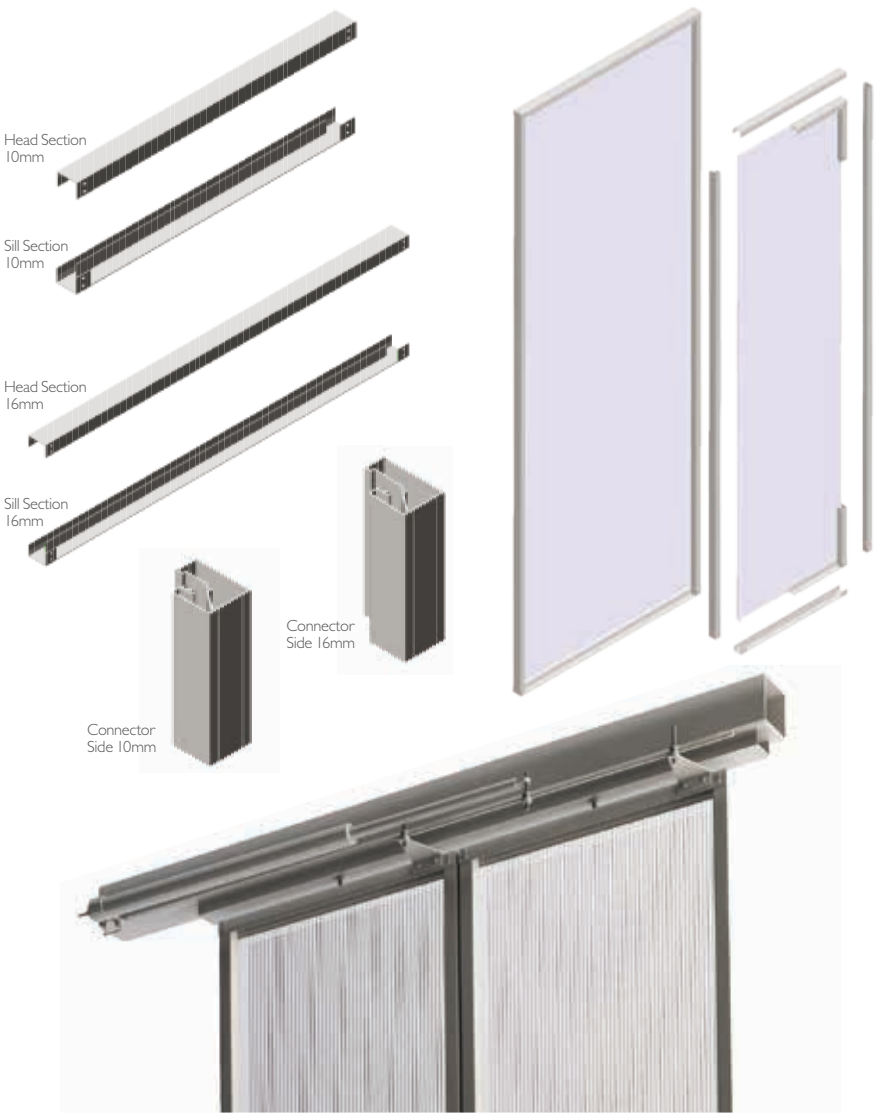


Piscine La Chapelle | France



Carrington Aged Care Facility | Camden | Jackson Teece Architects

LOUVRE ACCESSORIES

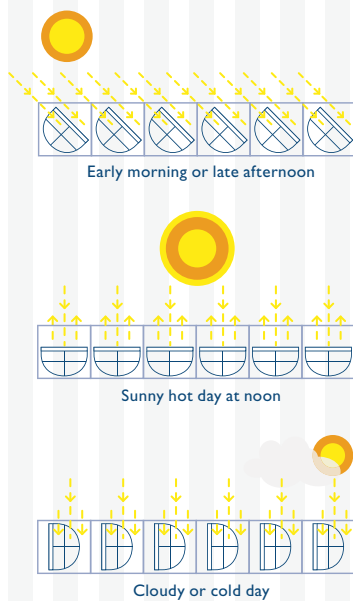


FORMAT AND SPANS

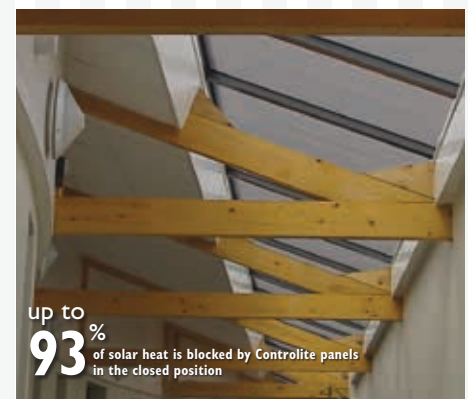
Sheet	Width	Overall Width	Maximum Height
DANPALON 10mm	600mm	632mm	2400mm
DANPALON 16mm	600mm	632mm	2800mm
DANPALON 16mm	1040mm	1072mm	2400mm

These spans are based on a 1 kPa ultimate wind pressure. Deflection criteria is span /75.

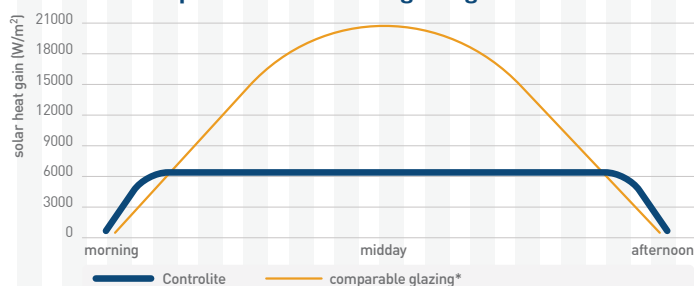
CONTROLITE OPERABLE SYSTEM



Controlite's new composite translucent roofing and cladding system offers increased comfort through optimised natural lighting. Rotating blades adapt to changing conditions for effective control of glare, light, shading and solar heat gain. Controlite significantly lower energy consumption by reducing the need for air-conditioning, heating and artificial lighting.

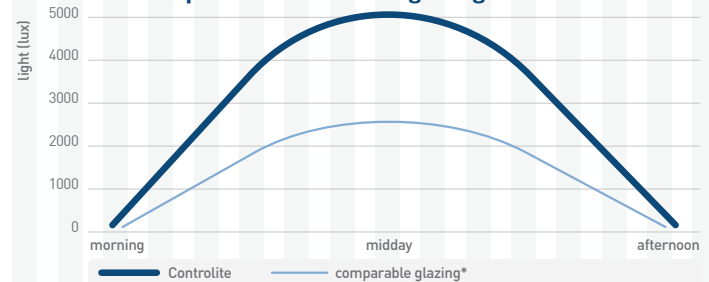


Controlite compared to traditional glazing — summer



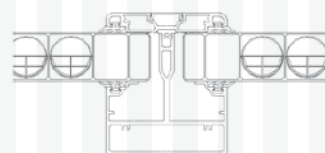
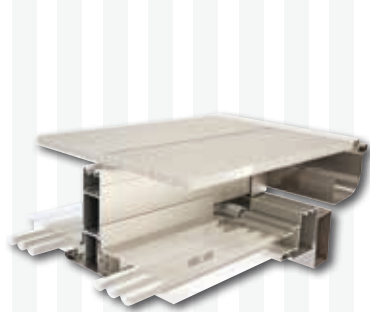
Controlite blocks 80% of solar heat gain (W/m²).

Controlite compared to traditional glazing — winter

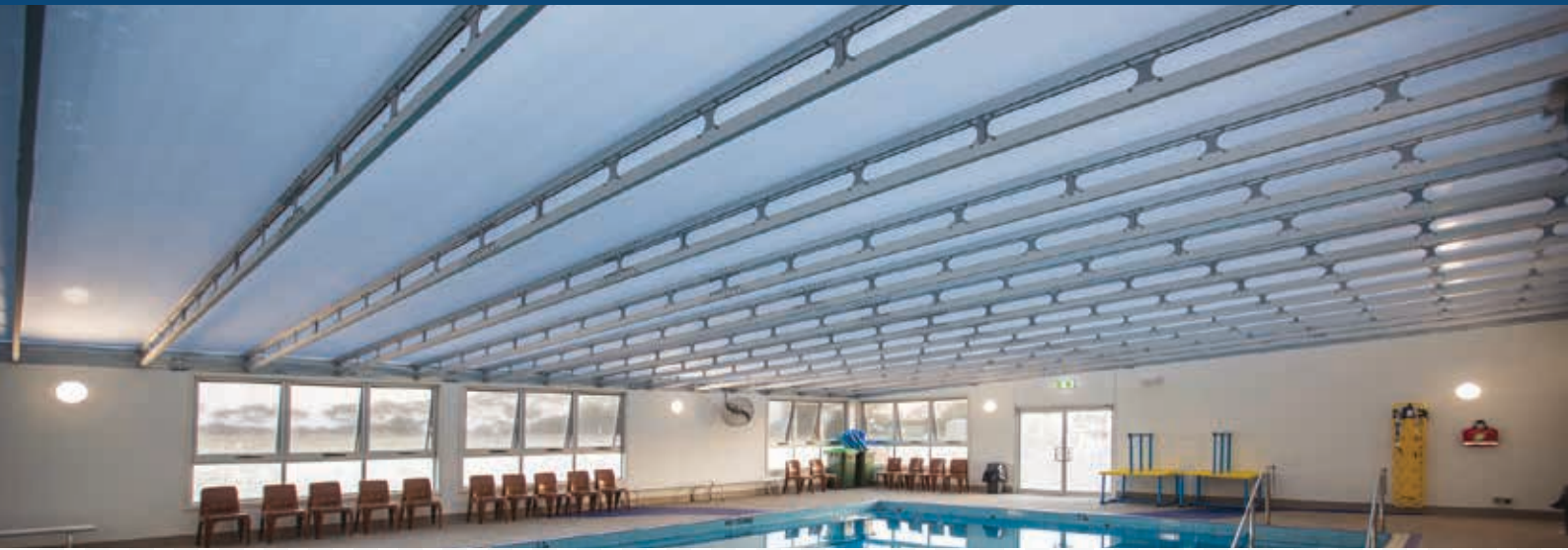


Controlite increases daylight transmittance by 100%.

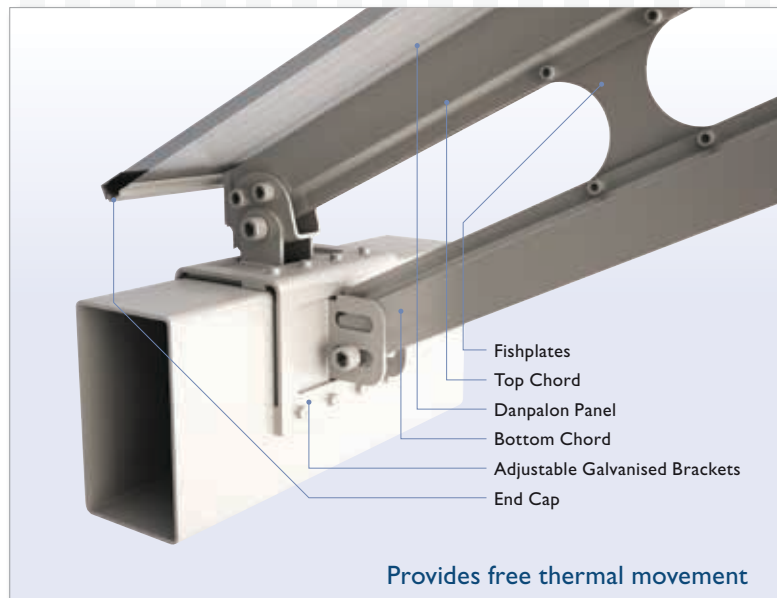
*Comparable glazing: 30% insulating, Low E-glass, or 25mm opal multiwall polycarbonate.



	Danpalon plus Controlite for roofing		Danpalon plus Controlite for vertical applications		Traditional Controlite (not stocked in Australia)	
	Open	Closed	Open	Closed	Open	Closed
Assembly thickness (mm)	116-250 (depending on span)		116-200 (depending on span)		88	
Assembly module (mm)	1042		1042		1000	
Maximum length (mm)	11980		11980		11980	
Weight including frame (kg/m ²)	14.5		14.5		9.5	
U value (W/m ² K)	1.0	0.9	1.0	0.9	1.8	1.7
Acoustic insulation	27 dBA		27 dBA		21 dBA	
Light transmission	37%	5%	37%	5%	60%	6%
Minimum pitch	5 degrees (ideally 9 degrees)		N/A		14 degrees (ideally 25 degrees)	



BEAM CONNECTION



FEATURES:

- Large Free Spans up to 45m
- Structural Efficiency
- Affordability
- Convenience
- Versatility

The Spacetruss™ system simplifies the design, procurement and construction of large free-spanning canopies up to 45 metres.

It features a combination of aluminium and steel components that are economical and attractive, maximising visual cleanliness while minimising material costs.

Typically the trusses are spaced 1.04 metres apart to suit the width of Danpalon light transmitting glazing.

This glazing can be above the trusses, below them or on both sides depending on visual preference and insulation requirement.

Alternatively any other roofing material can be installed by using special concealed brackets to attach purlins onto trusses up to 3.0m metres apart.

The trusses attach to the beams using special brackets that cater for free lateral thermal movement, resulting in a floating system with no stress on the materials.

The base support member is fixed to the beam while the brackets holding the trusses can slide left or right as necessary.

The sliding brackets allow for movement in the trusses as well as accommodating a wide range of different shaped structures.

By allowing the connection points to be adjustable, exact precision in locating the brackets and trusses during installation is not required.



TRUSS AND DANPALON DETAILS



Roofing on top



Roofing on top



Roofing under frame



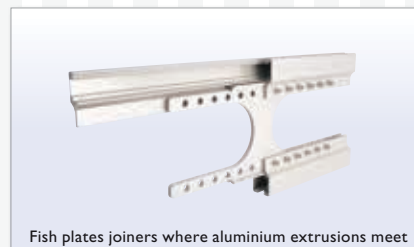
Double layered option

CHORD CONNECTION



Standard fish plates at 750mm centres

CHORD CONNECTION / JOIN



Fish plates joiners where aluminium extrusions meet

LONG SHEETS

AVOID UNNECESSARY OVERLAPS

Danpalon is available in sheet lengths up to 36m. This can eliminate labour intensive and costly construction details whilst at the same time offer clean, freeform glazing lines.



Marion Aquatic Centre | Adelaide | Peddle Thorpe Architects



Lake Ainsworth | Ballina, NSW | Allen Jack + Cottier



Tatchilla Lutheran College | Adelaide | Kilpatrick Architecture



LEGEND

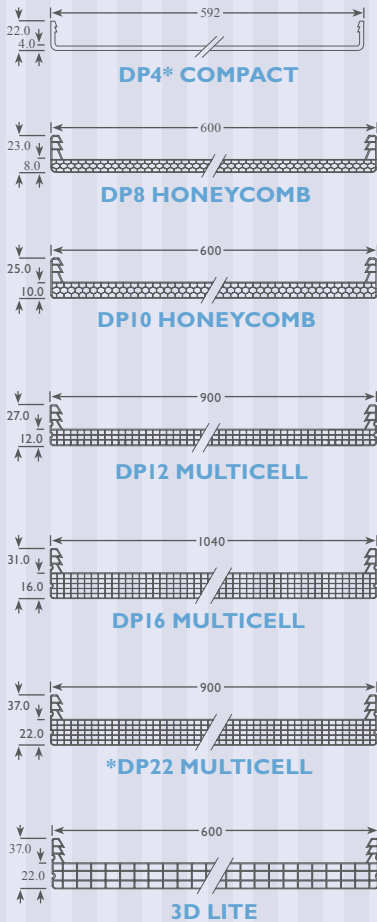
LT % of visible light transmission (400 - 700nm)

ST % of total solar radiation transmission (300 – 2800nm)

SR % of total solar reflection (300-2800nm)

SHGC Solar Heat Gain Coefficient.
Total Solar energy transmitted through the panel = %ST+0.2x(%st+%sr). Tests were performed in accordance with ASHRAE 74-1988 procedures. Figures are indicative and may change within manufacturers production tolerances.

SHEET SIZES



*can be produced to order. Not stocked in Australia.

TEST COMPLIANCES

AS1170.1 - 2002	Balustrade Loadings
AS1530.3 - 2009	Early Fire Hazard Test
AS1562.3 - 2006	Impact Test (includes 10 year old panels)
AS3837 - 1998	Heat and Smoke Release Rates (Fire Group 3)
AS4040.3 - 1992	Resistance to Wind (cyclonic)
AS4040.4 - 2006	Resistance to Impact
BCA2007 B1.2	Cyclonic Regions
BRANZ Appraisal 2006	Certificate 527
ROHS Compliant	Restriction of Hazardous Substance Lic 24727

OPTICAL AND SOLAR PROPERTIES

		DP8	DP10	DP12	DP16	*DP22
Reflective Colours						
	REFLECTIVE GREY	LT%	20	20	20	20
		ST%	18	18	18	18
		SR%	33	33	33	33
		SHGC	0.28	0.28	0.28	0.28
	REFLECTIVE ICE	LT%	24	24	24	20
		ST%	34	34	34	29
		SR%	48	48	48	20
		SHGC	0.38	0.38	0.38	0.39
Standard Colours						
	BLUE	LT%	50	50	50	49
		ST%	57	57	57	51
		SR%	27	27	27	38
		SHGC	0.60	0.60	0.60	0.53
	BRONZE	LT%	25	25	25	35
		ST%	26	26	26	35
		SR%	18	18	18	30
		SHGC	0.37	0.37	0.37	0.42
	CLEAR	LT%	71	71	71	63
		ST%	60	60	60	51
		SR%	36	36	36	40
		SHGC	0.61	0.61	0.61	0.53
	GREEN	LT%	60	60	60	44
		ST%	52	50	50	42
		SR%	32	32	32	33
		SHGC	0.55	0.55	0.55	0.47
	GREY	LT%	30	30	30	31
		ST%	35	35	35	38
		SR%	22	22	22	30
		SHGC	0.44	0.44	0.44	0.44
	ICE	LT%	60	60	60	51
		ST%	54	54	54	50
		SR%	32	32	32	38
		SHGC	0.57	0.57	0.57	0.52
	OPAL	LT%	35	35	35	22
		ST%	38	38	38	28
		SR%	40	40	40	51
		SHGC	0.42	0.42	0.42	0.32
Premium Colours						
	DARK OPAL	LT%	11	11	11	14
		ST%	18	18	18	22
		SR%	53	53	53	51
		SHGC	0.24	0.24	0.24	0.27
	GOLD	LT%	25	25	25	28
		ST%	23	23	23	27
		SR%	31	31	31	28
		SHGC	0.32	0.32	0.32	0.36
	ORANGE	LT%	40	40	40	36
		ST%	45	45	45	39
		SR%	15	15	15	24
		SHGC	0.53	0.53	0.53	0.46
	PURPLE	LT%	44	44	44	32
		ST%	55	55	55	43
		SR%	20	20	20	27
		SHGC	0.60	0.60	0.60	0.49
	RED	LT%	20	20	20	18
		ST%	45	45	45	39
		SR%	22	22	22	24
		SHGC	0.51	0.51	0.51	0.46
	YELLOW	LT%	58	58	58	50
		ST%	52	52	52	45
		SR%	26	26	26	26
		SHGC	0.56	0.56	0.56	0.50

SPECIFICATIONS

	COMPACT	HONEYCOMB		MULTICELL			
	4mm	8mm	10mm	12mm	16mm	22mm	3DLite
WIDTH (mm)	592	600	600	900	1040	900	600
RAFTER SPACING (mm)	600	602	602	902	1042	902	602
WEIGHT (g/m²)	5000	1830	2666	2796	3462	3796	
MIN COLD BENDING RADIUS (mm)	2900	2200	2500	2750	3000	3500	5000
U VALUE (w/m²C°)	5.36	2.46	2.11	1.84	1.53	1.50	1.75
R VALUE (w/m²C°)	0.19	0.41	0.47	0.54	0.65	0.67	0.57



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