



# Light



BRINGING NATURAL LIGHT INTO YOUR LIFE





# Architecture

**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.

## CREATE WITH NATURAL LIGHT

Use the translucency or transparency of the panels in design to transform buildings in to areas of light and colour, resulting in stunning effects during the day and through the night. Use the Danpalon system for roofing, facades, cladding or partitions, both internally and externally.

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

The Danpalon daylighting system is manufactured from the highest quality polycarbonate. The product's performance is certified by rigorous testing from worldwide institutions. It offers a new concept in architectural glazing providing outstanding performance and flexibility in design. The system consists of a main panel with snap-on connecting profiles made of aluminium or polycarbonate. The use of stainless steel fasteners allow for thermal expansion and eliminates the need for penetrations through the sheet, hence the structure is 100% watertight.

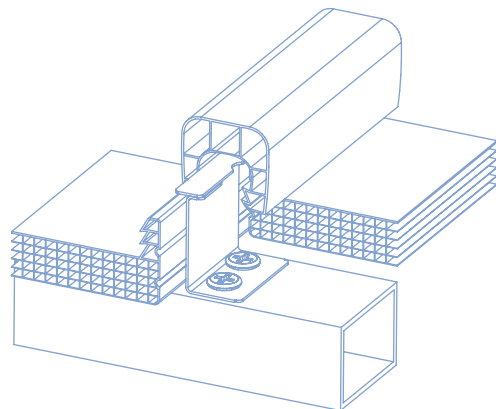
## THE STANDING SEAM CONNECTION

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.

# Danpalon Projects







## EVERYWHERE IN THE WORLD CREATIVITY FROM DAY TO NIGHT

During the day, the light hugs the building like a second skin and Danpalon provides an optimal quality and comfortable lighting. By night, the internal activity of the building can reveal itself, transforming the building in to a lantern of colour. Danpalon is light architecture – 24 hours a day.

“ THE TRANSLUCENCY OF THE BUILDING GENERATES A VERY PLEASANT LIGHT OF DAY; IT IS ALSO A PERFECTLY ADAPTED LIGHTING FOR TELEVISION BROADCASTING. ”

Paul Andreu, Architect



Projects



# Danpalon

## Colour





## DANPALON, SHADES OF LIGHT

Danpalon is available as standard in nine colours from clear, ice and opal, orange to blue, green and bronze colours as well as grey and silver.



Danpalon can be produced in any colour to echo the environment and incorporate the building in to its surroundings.

“ THE GREEN DANPALON REMINDS ME IN A WAY OF THE OXIDISED COPPER ON A NEARBY BUILDING. ”

Nathalie Larradet, Architect



Colour



# Danpalon

## Graphics



### 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.







THE EFFECT IS REALIZED BY A DEPTH, A TRANSLUCENCY, A VIBRATION OF THE PRINTED MATERIAL.



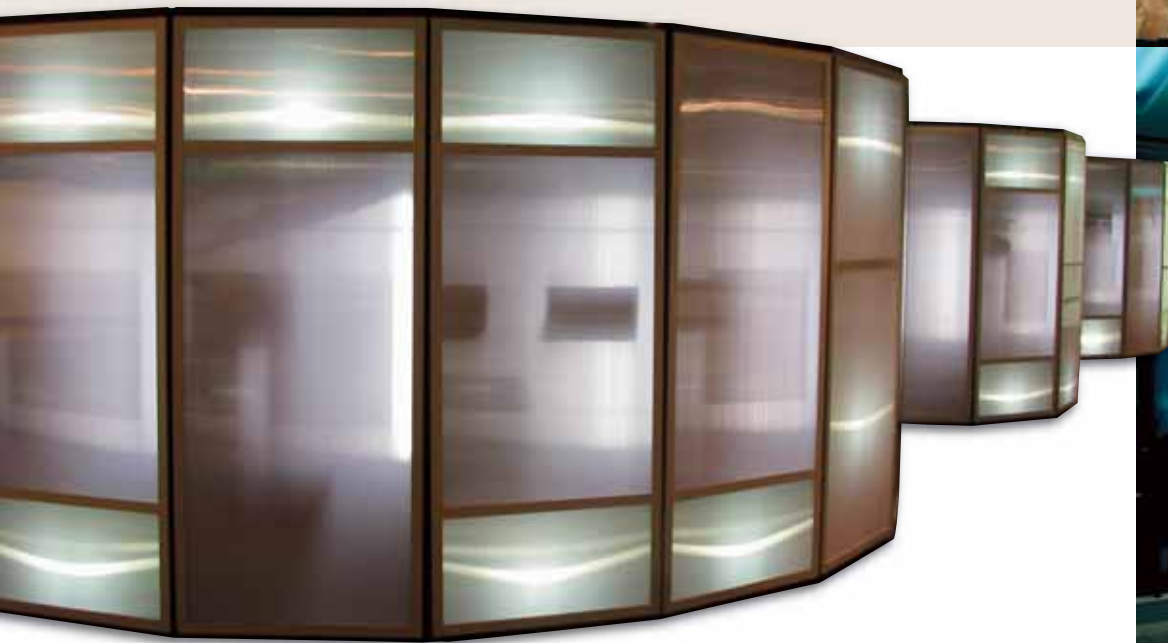
Graphics

# Danpalon

## Interiors

### DANPALON CREATES THE SCENE

Internal spaces can be brought to life with Danpalon and light effects, creating an appealing environment. The clean lines of the 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.







CREATE NEW ATMOSPHERE



LIVE IN LIGHT WITH DANPALON

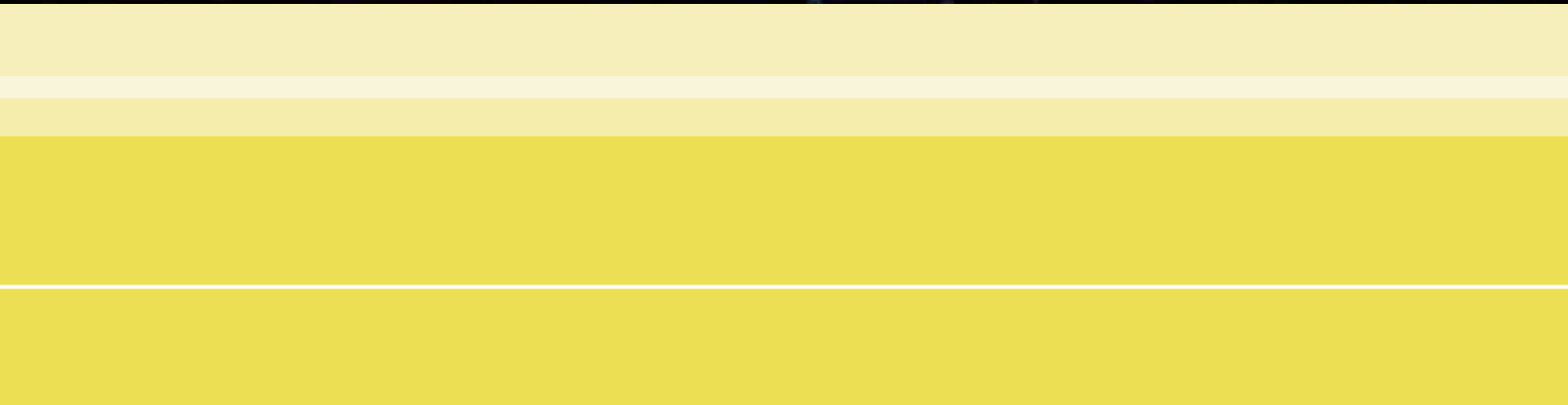
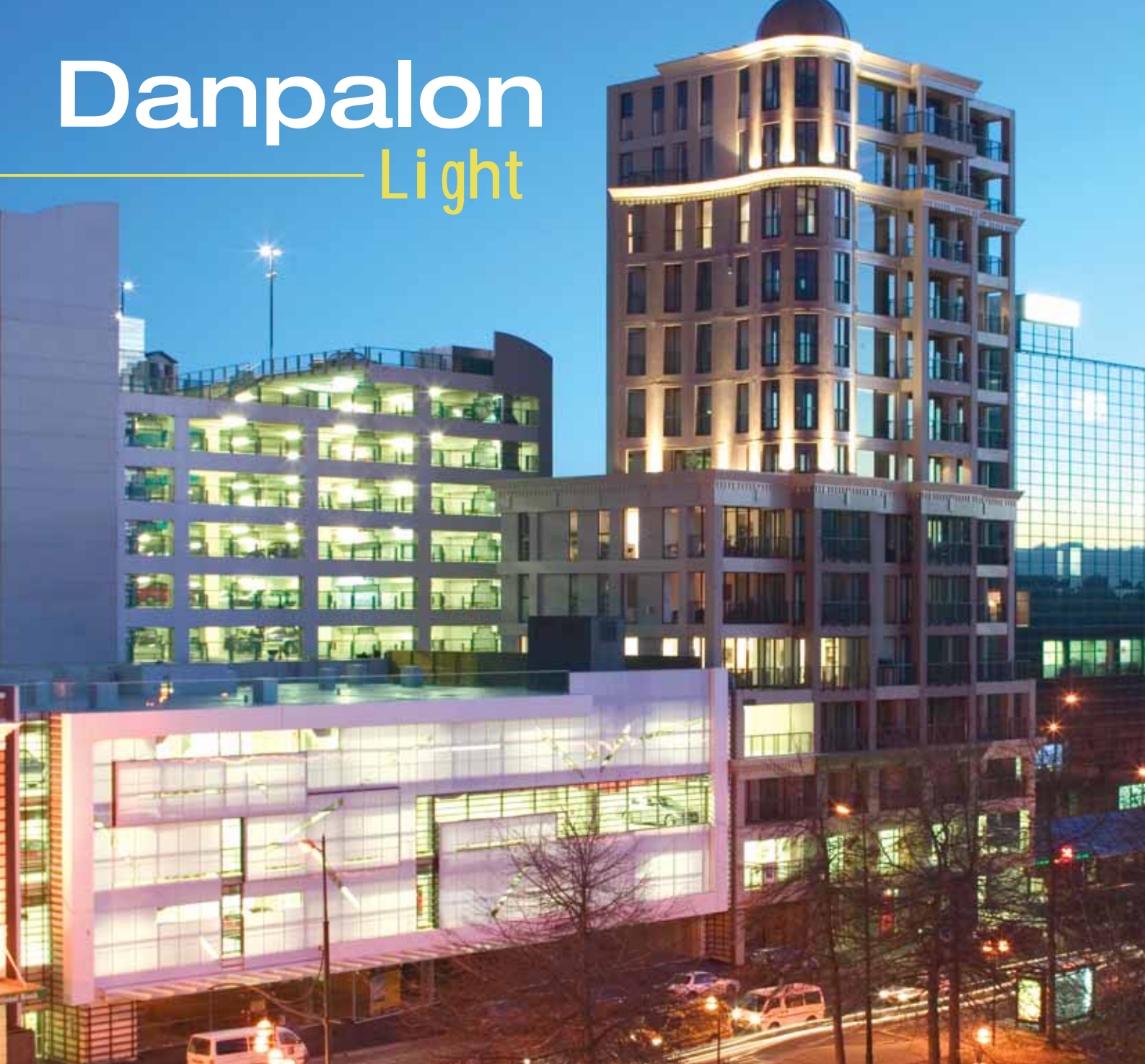


Interiors



# Danpalon

Light

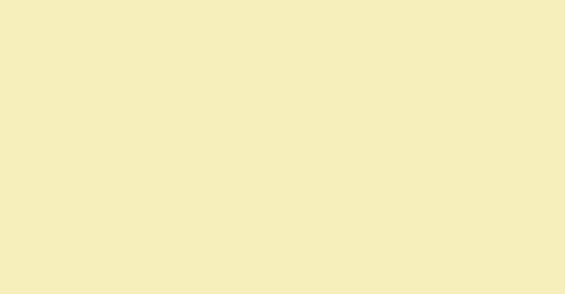






“ THE IMMATERIALITY OF LIGHT AND THERMAL PERFORMANCE OF THE DANPALON ARE VERY APPEALING. ”

Christophe Gaudié, Architect & associates



Light

# Danpalon

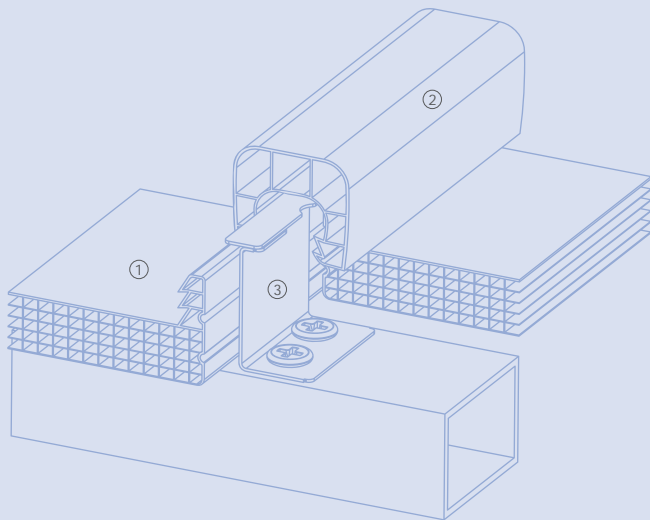
## Multicell

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 extrusion technology are available in a range of thicknesses and widths.



### The Standing Seam Connection Method 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



Danpalon's unique Multicell extrusion technology provides ten times more cells than traditional structures used in most polycarbonate sheets on the market. The smaller spans between the rib supports give you the best combination of translucency and strength.

### SUPERIOR LIGHT AND VISUAL APPEARANCE

The Multicell structure transmits an even diffusion of natural light, producing a rich look similar to glass. Specifically designed for architectural daylight applications, the tight spacing between the ribs produces a superior quality of light and aesthetically appealing look, offering a refined alternative to the 'green-house look' associated with traditional twin-wall polycarbonate sheets.

### EXTENDED UV PROTECTION

Danpalon Multicell 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.

THE UNIQUE QUALITIES OF THE DANPALON SYSTEM ALLOW ARCHITECTS TO INCLUDE IT AS PART OF THE BUILDING ENVELOPE.

Multicell



# Danpalon

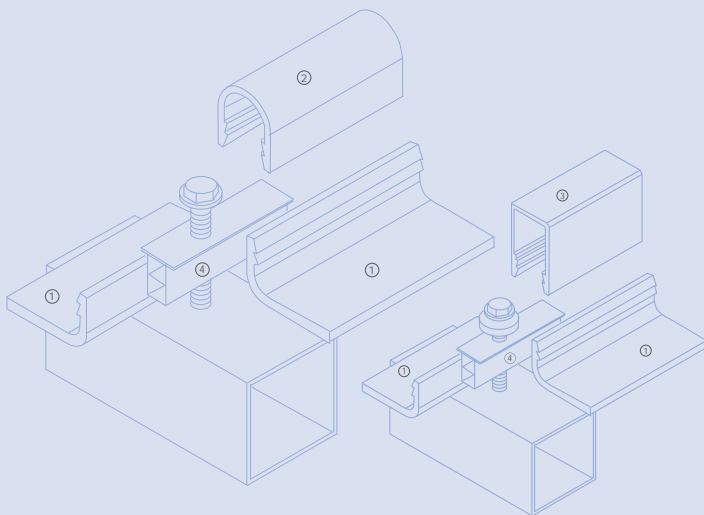
## Compact

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 Compact system consists of:

- ① Transparent 4mm Compact panel, 592mm wide.
- ② Transparent Polycarbonate Connector
- ③ Aluminium Connector
- ④ Transparent Polycarbonate Spacer



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.

### WHAT MAKES DANPALON UNIQUE IS THE HEART OF THE SYSTEM

The standing seam connecting method.

The Danpalon system consists of:

- Main transparent 4mm compact panels, 592mm wide, 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.

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. For high wind areas a special support plate should be used. Consult your distributor for further details.

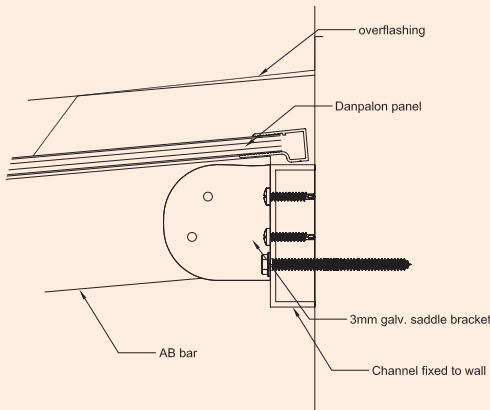
# Compact

# Danpalon

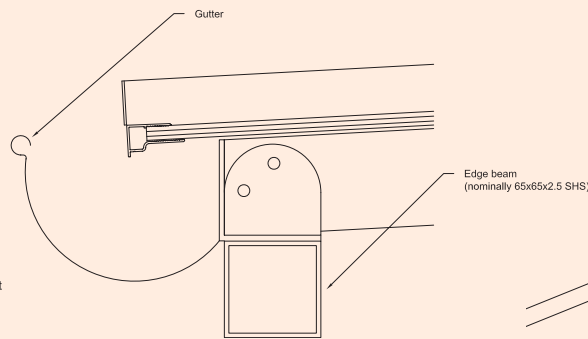
## Rafter Systems

### THE REVOLUTION IN GLAZED ROOFING BEGINS HERE

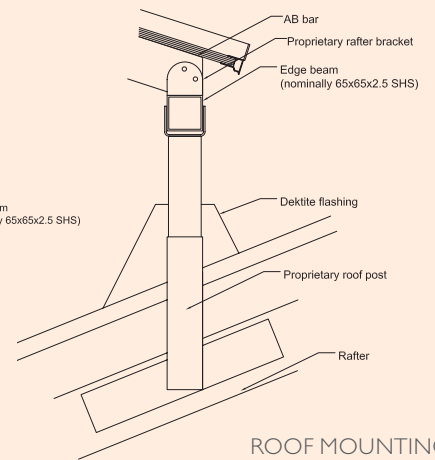
With our patented Light & Space AB Roof System, it is easy to add style onto any commercial or domestic roof structure. The ability to span up to 10 metres\* without intermediate framework allows larger pergolas, canopies and atriums that maintain a smooth, clean appearance. The Light & Space AB Roof System utilises the unique snap-lock connection of Danpalon polycarbonate panels, providing unsurpassed impact strength and high wind resistance.



WALL MOUNTING

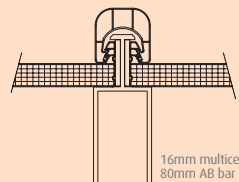
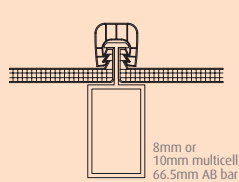
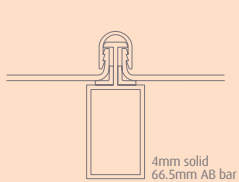


GUTTER MOUNTING



ROOF MOUNTING

### A RANGE OF STRUCTURAL RAFTERS FOR A RANGE OF DANPALON SHEETS



\*Subject to local restrictions. Contact your local Danpalon distributor for further advice on design specifications. \*Innovation Patent No. 2005100256 Other patent applications pending. Danpalon polycarbonate available 1m to 12m (longer on request).

# Rafter Systems

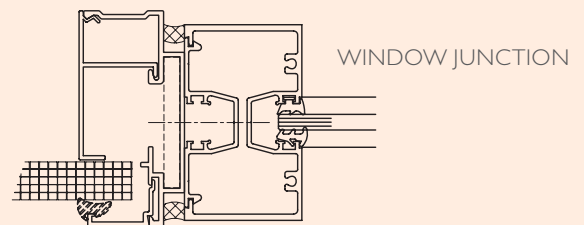
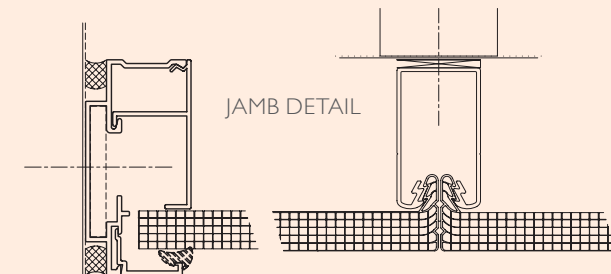
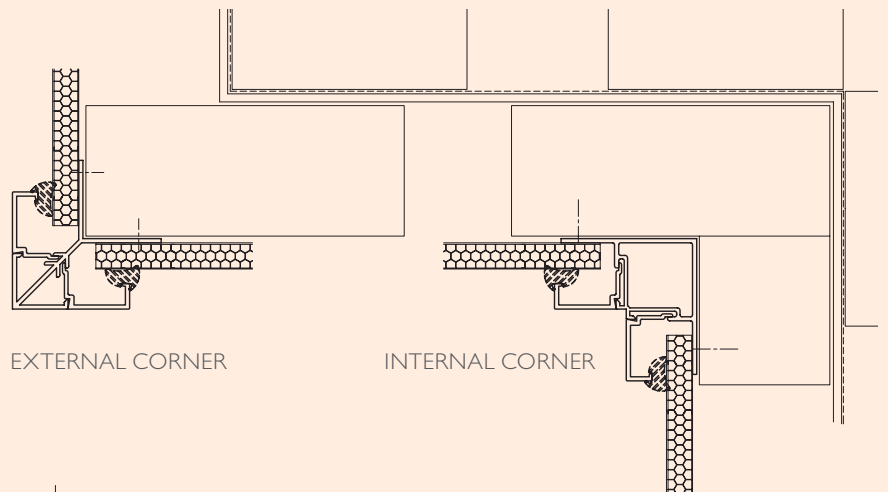
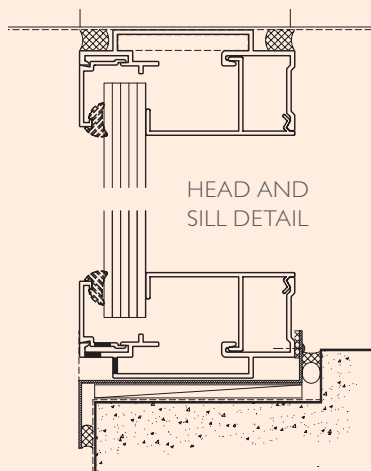


# Danpalon

## Facade Systems

### THE REVOLUTION IN FACADE GLAZING BEGINS HERE

The Everlight façade system provides a simple yet attractive aluminium framework for use with Danpalon in vertical cladding or glazing. Specially designed aluminium sections can be used to surround the ends of the Danpalon panels and to accommodate junctions with other materials. The Everlight system offers a convenient, watertight solution that is easy to install.



# Facade Systems

# Danpalon

## Technical Data



### OPTICAL AND THERMAL PROPERTIES

		Compact 4mm	Honeycomb 8mm	Honeycomb 10mm	Honeycomb 12mm	Multicell 16mm
<b>REFLECTIVE GREY</b>	LT %	20	20	20	20	20
	ST %	18	18	18	18	18
	SR %	33	33	33	33	33
	SHGC	0.28	0.28	0.28	0.28	0.28
<b>BRONZE</b>	LT %	38	25	25	25	35
	ST %	41	26	26	26	35
	SR %	12	18	18	18	30
	SHGC	0.50	0.37	0.37	0.37	0.42
<b>GREY</b>	LT %	41	30	30	30	31
	ST %	51	35	35	35	38
	SR %	12	22	22	22	30
	SHGC	0.58	0.44	0.44	0.44	0.44
<b>OPAL</b>	LT %	40	35	35	35	22
	ST %	44	38	38	38	28
	SR %	35	40	40	40	51
	SHGC	0.48	0.42	0.42	0.42	0.32
<b>GREEN</b>	LT %	75	60	60	60	44
	ST %	69	52	52	52	42
	SR %	17	32	32	32	33
	SHGC	0.72	0.55	0.55	0.55	0.47
<b>ICE</b>	LT %	55	60	60	60	51
	ST %	58	54	54	54	50
	SR %	26	32	32	32	38
	SHGC	0.61	0.57	0.57	0.57	0.52
<b>BLUE</b>	LT %	64	50	50	50	49
	ST %	73	57	57	57	51
	SR %	17	27	27	27	38
	SHGC	0.75	0.60	0.60	0.60	0.44
<b>CLEAR</b>	LT %	89	71	71	71	63
	ST %	80	60	60	60	57
	SR %	17	36	36	36	40
	SHGC	0.81	0.61	0.61	0.61	0.53

### SPECIFICATION

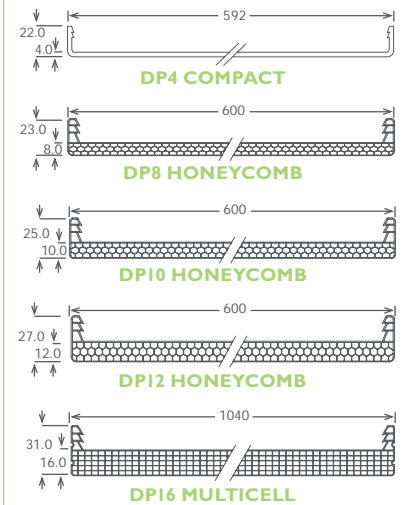
	Compact 4mm	Honeycomb 8mm	Honeycomb 10mm	Honeycomb 12mm	Multicell 16mm
<b>Width (mm)</b>	592	600	600	600	1040
<b>Rafter Spacing (mm)</b>	600	602	602	602	1042*
<b>Weight (g/m<sup>2</sup>)</b>	5000	1830	2410	2580	3250
<b>Min Cold Bending Radius (mm)</b>	2900	2200	2500	2600	2900
<b>U Value (w/m<sup>2</sup>C°)</b>	5.36	2.46	2.11	1.84	1.53

\*1050mm when using the wide connector and spacer

### 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



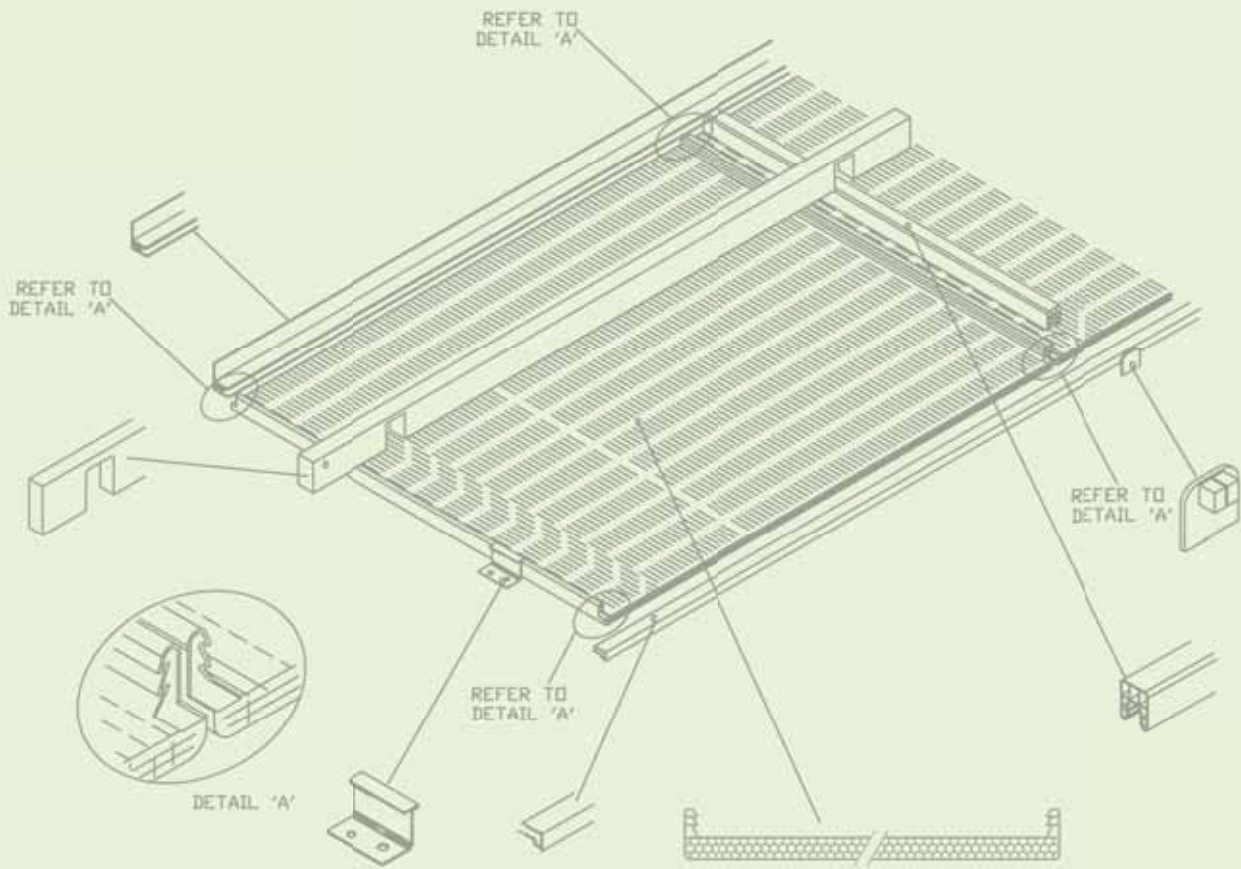
### TEST COMPLIANCES:

AS/NZS 1562.3-1996 Design and Installation  
 AS/NZS 4040.4-1996 Sandbag Impact Test  
 AS 4040.3- 1992 Resistance to wind pressures for cyclone regions  
 -Wind Loads  
 AS 1530.3 Early Fire Hazard Test

### Profiles and colours stocked in Australia:

4mm Compact – Clear, Grey & Reflective Grey  
 8mm Honeycomb – Clear, Grey, Opal & Reflective Grey  
 10mm Honeycomb – Blue, Bronze, Clear, Green, Grey, Ice, Opal, Red & Reflective Grey  
 16mm Multicell – Ice & Reflective Grey





### 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.

### THE DANPALON SUPPORT SPACING GUIDE (where there would be virtually no deflection)

		Compact 4mm	Honeycomb 8mm	Honeycomb 10mm	Multicell 16mm
<b>Polycarbonate Connector</b>	MID SPAN	900	900	1100	1300
	END SPAN	700	700	800	900
<b>Standard Aluminium Connector</b>	MID SPAN	1400	1400	1600	1600
	END SPAN	1000	1000	1200	1200
<b>Heavy Duty Aluminium Connector</b>	MID SPAN	N/A	1600	1800	1800
	END SPAN	N/A	1200	1400	1400

### DANPALON ACCESSORIES



Aluminium H Connector



Aluminium HD Connector



Aluminium Std Connector



Al End Cap Std & HD



Poly End Cap Std & 16mm



Polycarbonate Std Connector



Polycarbonate 16mm Spacer



Polycarbonate 16mm Wide Connector



Polycarbonate 4mm Spacer



Polycarbonate 4mm Connector



Knee Fastener Heavy Duty



Knee Fastener Trapezoid



End Cap 8, 10 & 16mm



'F' Section 8, 10 & 16mm

**SPECIAL NOTE:** Danpalon complies with AUSTRALIAN STANDARD 1562.3 – 1996, (without the need for screw fixing through the sheet), thus eliminating the new requirement for safety mesh under roofs over 3 metres above ground level. 10-year-old naturally aged Danpalon sheets have also been tested to this Standard.

**Manufacturer's Lifetime Warranty** Danpalon polycarbonate sheets carry a limited manufacturer's lifetime warranty, not to lose more than 8% of light transmission for the first 10 years and thereafter no more than 1% per year when measured in accordance with ASTM D – 1003-77. Danpalon polycarbonate sheets are warranted for \*up to 10 years from the purchase date, not to break or fail as a result of the impact of hail measuring up to 25mm in diameter. These warranties shall only apply if the sheets are installed, used and maintained in accordance with Danpalon recommendations and specifications. \*Full Warranty details available from your Danpalon Agent NOTE: Regulations differ from area to area, seek approval from your local council prior to building. Information in this brochure is subject to change without notice.

