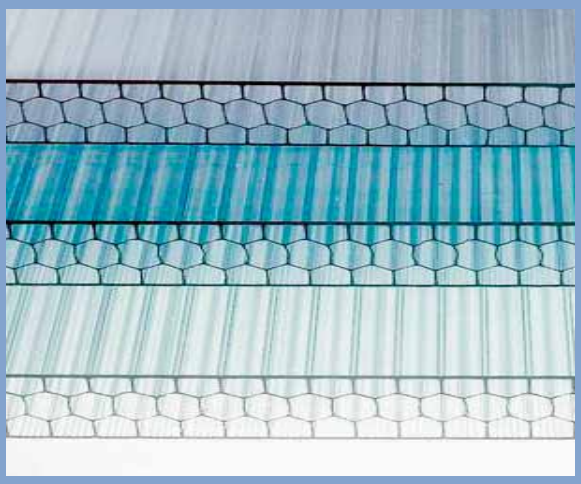
Danpalon
Light Architecture



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.

HOBART AIRPORT
Hassell Architects. Photography, Brett Boardman

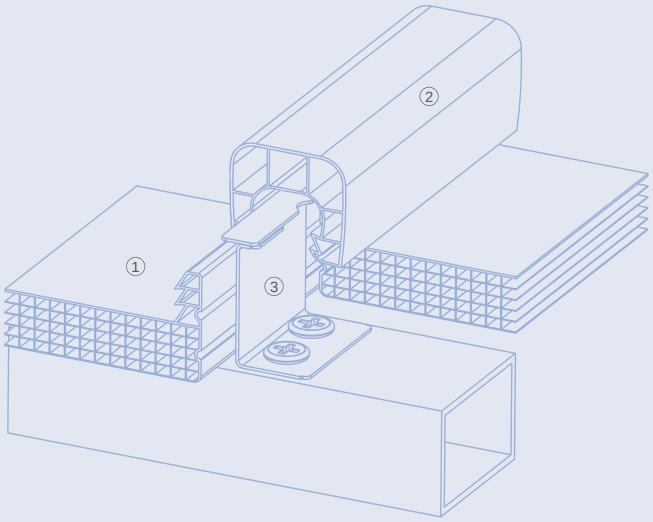
Danpalon
Multicell

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



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. 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.

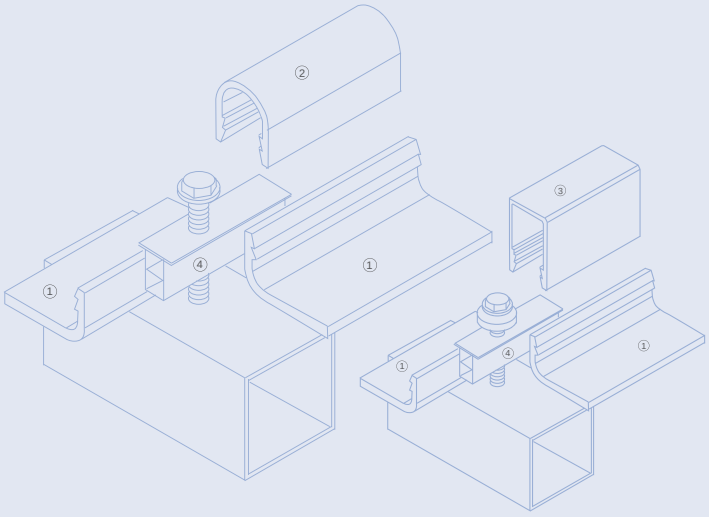
HIGH IMPACT AND WEATHER RESISTANCE

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.

Danpalon
Compact

The Compact system consists of:

① Transparent 4mm Compact panel, 592mm wide
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.

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.

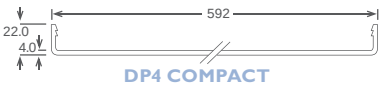
The system's installed module width is 600mm. The system is free floating. Every component is free to thermally expand or contract at its own rate, eliminating 'waves' or deflections and maintaining the structural properties for the life of the material. For high wind areas a special support plate should be used. Consult your distributor for further details.

PULTENEY GRAMMAR
Tridente Architects. Photography, Peter Fisher

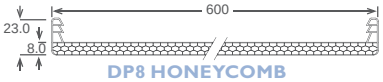
LEGEND

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.

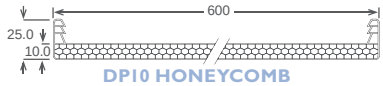
SHEET SIZES



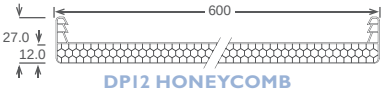
DP4 COMPACT



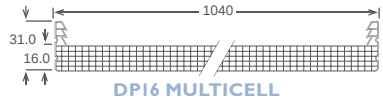
DP8 HONEYCOMB



DP10 HONEYCOMB



DP12 HONEYCOMB



DP16 MULTICELL

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
AS 1170.2-1989 SAA Loading Code Part 2 -Wind Loads
AS 1530.3 Early Fire Hazard Test

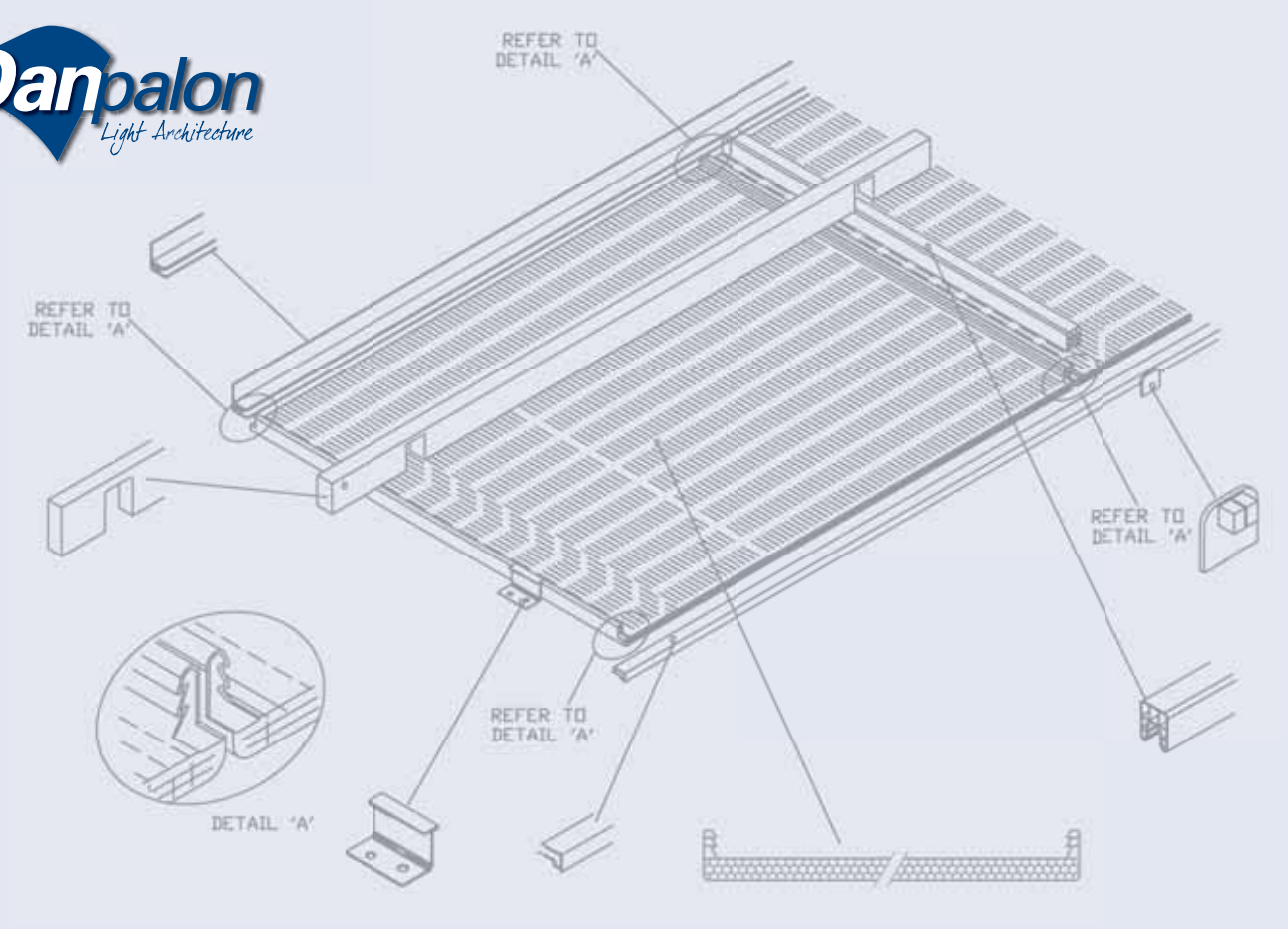
Profiles and colours stocked in Australia:
4mm Compact – Clear, Grey & Reflective Grey
8mm Honeycomb – Clear, Grey, Opal & Reflective Grey
10mm Honeycomb – Blue, Bronze, Clear, Green, Grey, Ice, Opal, Red & Reflective Grey
16mm Multicell – Ice & Reflective Grey

OPTICAL AND THERMAL PROPERTIES

		Compact 4mm	Honeycomb 8mm	Honeycomb 10mm	Honeycomb 12mm	Multicell 16mm
REFLECTIVE GREY	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
BRONZE	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
GREY	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
OPAL	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
GREEN	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
ICE	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
BLUE	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
CLEAR	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
Width (mm)	592	600	600	600	1040
Rafter Spacing (mm)	600	602	602	602	1042*
Weight (g/m²)	5000	1830	2410	2580	3250
Min Cold Bending Radius (mm)	2900	2200	2500	2600	2900
U Value (w/m²C°)	5.36	2.46	2.11	1.84	1.53



ROOF FALL

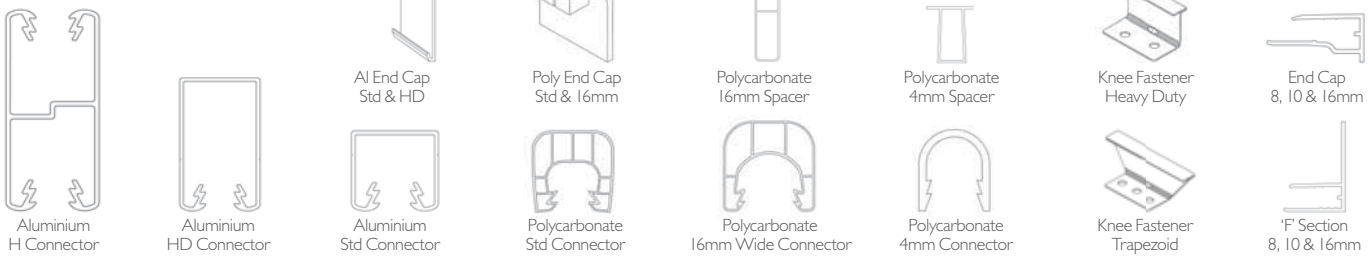
A minimum pitch of 5° is recommended (87mm/1000mm). Having sufficient fall allows natural weather action to assist in keeping the sheets clean.

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
Polycarbonate Connector	MID SPAN	900	900	1100	1300
	END SPAN	700	700	800	900
Standard Aluminium Connector	MID SPAN	1400	1400	1600	1600
	END SPAN	1000	1000	1200	1200
Heavy Duty Aluminium Connector	MID SPAN	N/A	1600	1800	1800
	END SPAN	N/A	1200	1400	1400

DANPALON ACCESSORIES



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 manufacturers 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-E-1175. 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.

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