



SUNBOX

Insulated skylight system



Overview

Palram continues to innovate with the introduction of a new insulating polycarbonate TRANSPARENT panel system.

SUNBOX is designed to provide natural light to industrial and commercial facilities as an integral rooflight system that will match almost every insulated metal panels.

SUNBOX provides both high insulation levels as well as diffused natural lighting for a dual conservation of energy.

The product is constructed from both profiled and multi-wall polycarbonate s

Main Benefits

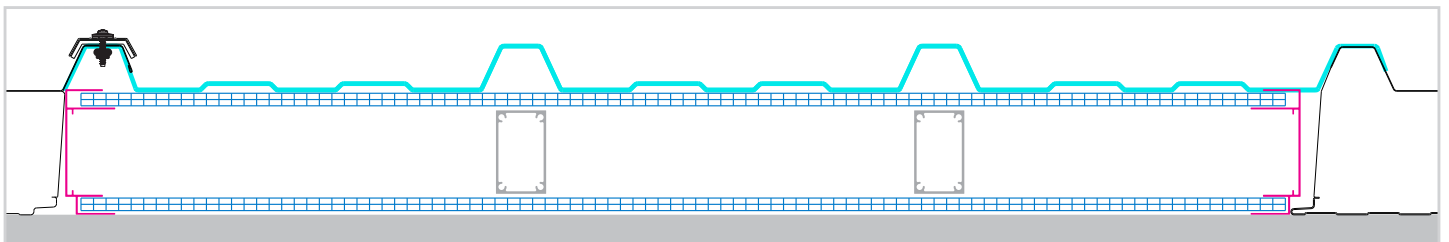
- Made to match most any insulated panel roofs
- Factory assembled Drop-In system for easy, quick installation
- Weather and UV Resistant - UV Protected, does not yellow
- Good Light Transmission - 37%
- Impact resistant - Virtually unbreakable
- Improved insulation U-value
- High load resistance
- Integrated Aluminum support system to eliminate the need of Safety mesh

Typical Applications

- Industrial buildings
- Commercial buildings
- Architectural projects
- Public buildings
- Shopping centers
- Supermarkets



Structure



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General Dimensions

Property	Value	Comments
Thickness	100 mm	Hight at valley
Length	3600 mm	
Width	1000 mm	
Crest Depth	According to metal panel size	

* Other lengths are available upon request

** SUNBOX overlap to meet any length requirement

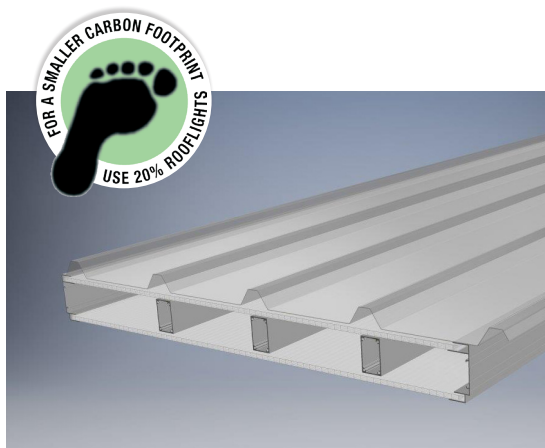
High Impact & Loading Resistance

SUNBOX is constructed with high quality polycarbonate panels, which is inserted into a aluminium frame with built in aluminium supports, which is the source for its high impact and loading resistance.

Complaint to Australian Standards:
AS/NZS 4398:2015 Roof Safety Mesh
AS 4040.4- 2006 Impact tes

Resistance to Weather and UV Radiation

SUNBOX rooflight transmits radiation selectively. It completely shields against harmful ultraviolet rays and withstands the detrimental effects of UV radiation. The changes in optical properties of SUNBOX are minor and are not perceptible to the naked eye. SUNBOX is also impervious to any temperature encountered in the environment and is designed to withstand harsh Australian weather conditions.



Typical Physical Properties - SUNTUF

Property	Method*	Conditions	Units	Value
Density	(D-1505)		g/cm ³	1.2
Heat Deflection Temperature (HDT)	(D-648)	Load: 1.82 MP	°C	130
Service Temperature		10 mm/min	°C	-50 to +120
Coefficient of Linear Thermal Expansion	(D-696)	1 mm/min	cm/ cm°C	6.5 x 10 ⁻⁵
Thermal Conductivity	(C-177)	10 mm/min	W/m K	0.21
Tensile Strength at Yield	(D-638)	10 mm/min	MPa	62
Tensile Strength at Break	(D-638)	1 mm/min	MPa	65
Elongation at Yield	(D-638)	1.3 mm/min	%	7
Elongation at Break	(D-638)	1.3 mm/min	%	>80
Tensile Modulus of Elasticity	(D-638)	0.8 mm sheet	MPa	2,300
Flexural Strength	(D-790)	clear sheet	MPa	93
Flexural Modulus	(D-790)	clear sheet	MPa	1,900
Impact Falling Weight	(ISO 6603/1 E50)	clear sheet	J	50
Rockwell Hardness	(D-785)		R Scale	118
Light transmission	(D-1003)		%	90%
Haze	(D-1003)		%	<0.5
Yellowness Index	(D-1003)		WI	<1

* ASTM method except where noted otherwise

Typical Physical Properties - SUNLITE

Property	Method*	Conditions	Units	Value
Density	(D-1505)		g/cm ³	1.2
Heat Deflection Temperature (HDT)	(D-648)	Load: 1.82 MP	°C	130
Service Temperature - Short Term			°C	-50 to +120
Service Temperature - Long Term				-50 to +100
Coefficient of Linear Thermal Expansion	(D-696)	1 mm/min	cm/ cm°C	0.065
Tensile Strength at Yield	(D-638)	10 mm/min	MPa	62
Elongation at Break	(D-638)	1.3 mm/min	%	>80
Impact Falling Weight	(ISO 6603/1 E50)	clear sheet	J	40 - 400
Thermal Expansion / Contracion Range			mm/m	3

* ASTM method except where noted otherwise

Thermal performance

SUNBOX system is an insulated system provides high R values, depending on the configuration of the Polycarbonate panel used:

The following combinations for 100mm thick SUNBOX

Combination	U-Value(W/m ² K)	R-Value(m ² K/W)
2 X 10mm SUNLITE 7W + Suntuf Panel	1.03	0.97
2 X 10mm SUNLITE 3W + Suntuf Panel	1.19	0.84
2 X 10mm SUNLITE 2W + Suntuf Panel	1.27	0.79
1 X 10mm SUNLITE 7W + Suntuf Panel	1.62	0.62



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