



em.dome™

TECHNICAL DATA SHEET | 12.10.21 | V 3.0

em.dome modular rooflights are primarily designed for introducing daylight into schools, hospitals, offices and other buildings. They are available as square, rectangular or circular.

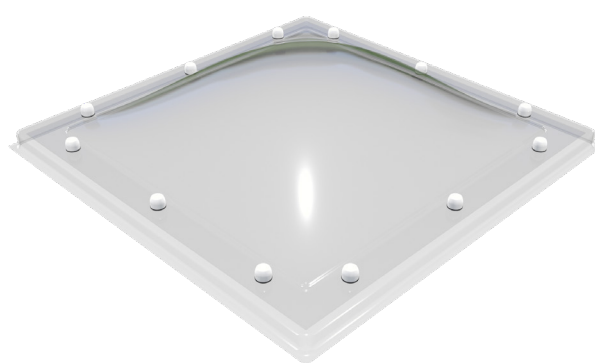
em.dome modular rooflights may be glazed in single, double, triple, quad, ECO10 and ECO16 polycarbonate. Glazing types include diffused, clear or heat reflect as the most common types.

A domed profile is available for all the manufactured sizes and a large proportion of these are also available as pyramidal rooflights.

Ventilation can be achieved either via fixed vents installed in the upstand or opening manually or electrically.

A wide range of upstands are available to accommodate roof insulation or an adaptor may be installed to builder's upstands.

A large range of accessories are also available including, operating rods, control panels, rain sensors, thermostats and remote control.



Features & Benefits

- CE marked according to EN1877:2005
- Fully certified to EN1873:1200 Joules and ACR (M) 001:2005 Class B
- Can incorporate ventilation in the curb and also be opening
- Polycarbonate em.domes are certified non-fragile
- Available as square, rectangular or circular
- May be clear or diffused as standard with heat reflect options available
- May be domed or trapezoidal
- Available with PVC upstand or direct

Technical Data

Thermal transmission:

Values below are calculated U-Values unless denoted otherwise. Complete unit U-Values are available on request.

Typical Values	U-Value (W/m²K)
Single glazed	5.36
Double glazed	2.68
Triple glazed	1.78
Quad glazed	1.24
ECO10	1.23
ECO16	0.85

Performance of glazing materials:

Typical Values	
Fire Ratings:	
To BS 476: Part 3	AA
To BS 476: Part 3	Class 1
To 1991 Building Regulations	Tp(a)
Service temperature	-5°C to +120°C

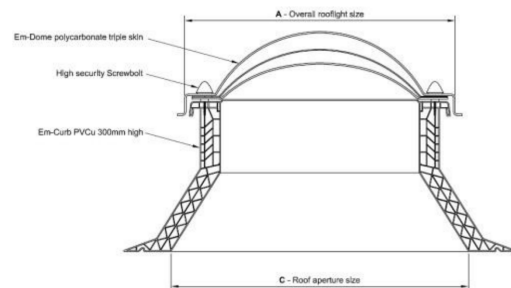
Certification

Air permeability to EN1873	A4
Watertightness to EN1873	Pass
Impact test to EN1873	1200/J
Impact test to ACR (M) 001:2005	Class B

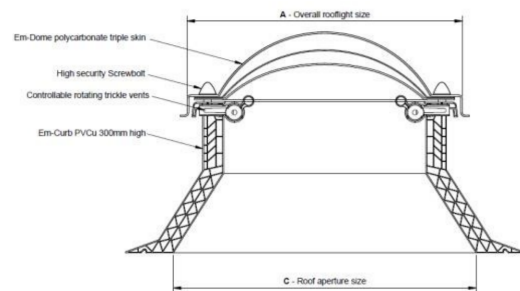


Common Permutations

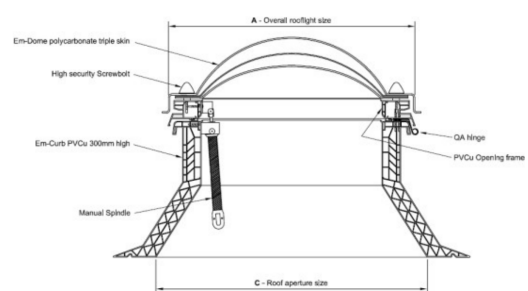
Triple Skin Fixed em.dome, comes with PVC 300mm Splayed em.curb:



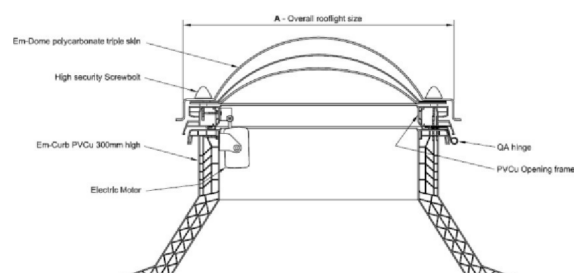
Triple Skin Fixed em.dome, comes with PVC 300mm Splayed em.curb and Rotary Trickle Vents:



Triple Skin Fixed em.dome, comes with PVC 300mm Splayed em.curb, Manually Opening:



Triple Skin Fixed em.dome, comes with PVC 300mm Splayed em.curb, Electrically Opening:



Security Options: em.dome plus

A fully enclosed, tamper-proof frame for a totally secure fixing, em.dome plus is simple to install and provides a neat, unobtrusive appearance, with no visible fixings.

The design of the frame allows for a completely weatherproof, self-draining construction, incorporating standard em.domes in single, double or triple skin construction.

The em.dome plus frame is made from aluminium extrusions to BS 1474, Quality 6063/T6, and is supplied in mill finish. Polyester powder coated frames are also available.



em.dome in opal diffused with 300mm ECO PVC upstand and 'em.dome plus' security frame

Performance:

em.dome plus security rooflights will not rust or be affected by atmospheric pollution. Once installed, they are maintenance free.

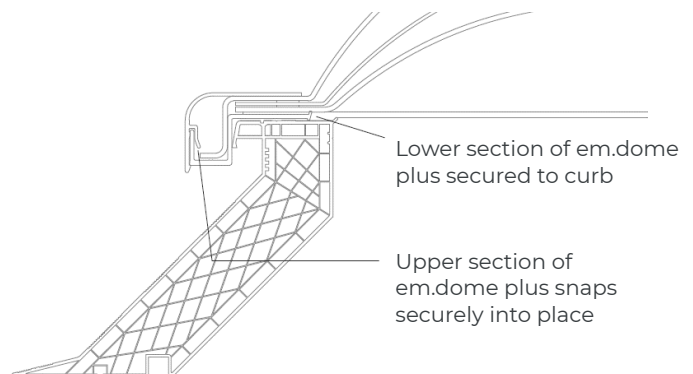
Sitework:

The frame is supplied factory fitted to an em.curb or em.collar. For mounting to a builder's upstand the frame will need to be supplied with an adaptor frame.

Features & Benefits

- Fully enclosed tamper-proof frame
- High security fixing detail
- Simple to install
- Unobtrusive appearance with no visible fixings
- Completely weatherproof
- Self-draining

Fixing em.dome plus to em.curb:



Standard Size Chart – Vertical Upstand

Other sizes available on request.

	Size Ref	Daylight Size		Roof Opening Size	
		Length (mm)	Width (mm)	Length (mm)	Width (mm)
Square	S1	400	400	400	400
	S2	500	500	500	500
	S3	550	550	550	550
	S4	600	600	600	600
	S5	700	700	700	700
	S6	750	750	750	750
	S7	800	800	800	800
	S8	900	900	900	900
	S9	1000	1000	1000	1000
	S10	1050	1050	1050	1050
	S10A	1100	1100	1100	1100
	S11	1200	1200	1200	1200
	S12	1300	1300	1300	1300
	S13	1400	1400	1400	1400
	S15A	1700	1700	1700	1700
Rectangular	R3	400	700	400	700
	R3A	400	1000	400	1000
	R4	500	800	500	800
	R4A	500	1100	500	1100
	R4B	500	1700	500	1700
	R5	600	900	600	900
	R6	600	1200	600	1200
	R7	700	1000	700	1000
	R7A	700	1300	700	1300
	R7B	700	1600	700	1600
	R10A	800	1100	800	1100
	R11	800	1300	800	1300
	R11A	800	1700	800	1700
	R16	900	1200	900	1200
	R16A	900	1500	900	1500
	R17	1000	1300	1000	1300
	R17A	1000	1500	1000	1500
	R18	1000	1600	1000	1600
R20	1000	2200	1000	2200	
R22B	1100	1700	1100	1700	
R22C	1100	2300	1100	2300	

Standard Size Chart – Splayed Upstand

Other sizes available on request.

	Size Ref	Daylight Size		Roof Opening Size	
		Length (mm)	Width (mm)	Length (mm)	Width (mm)
Square	S1	400	400	600	600
	S2	500	500	700	700
	S3	550	550	750	750
	S4	600	600	800	800
	S5	700	700	900	900
	S6	750	750	950	950
	S7	800	800	1000	1000
	S8	900	900	1100	1100
	S9	1000	1000	1200	1200
	S10	1050	1050	1250	1250
	S10A	1100	1100	1300	1300
	S11	1200	1200	1400	1400
	S12	1300	1300	1500	1500
	S13	1400	1400	1600	1600
	S15A	1700	1700	1900	1900
Rectangular	R3	400	700	600	900
	R3A	400	1000	600	1200
	R4	500	800	700	1000
	R4A	500	1100	700	1300
	R4B	500	1700	700	1900
	R5	600	900	800	1100
	R6	600	1200	800	1400
	R7	700	1000	900	1200
	R7A	700	1300	900	1500
	R7B	700	1600	900	1800
	R10A	800	1100	1000	1300
	R11	800	1300	1000	1500
	R11A	800	1700	1000	1900
	R16	900	1200	1100	1400
	R16A	900	1500	1100	1700
	R17	1000	1300	1200	1500
	R17A	1000	1500	1200	1700
	R18	1000	1600	1200	1800
	R20	1000	2200	1200	2400
	R22B	1100	1700	1300	1900
R22C	1100	2300	1300	2500	

Standard Size Chart – Splayed Upstand

Other sizes available on request.

	Size Ref	Daylight Size	Roof Opening Size
		Diameter (mm)	Diameter (mm)
Circular	C1	400	650
	C2	500	750
	C3	600	850
	C4	700	950
	C5	800	1050
	C6	900	1150
	C7	1000	1250
	C8	1100	1350

Standard Size Chart – Dome Only (to suit Builder's Upstand)

Other sizes available on request.

	Size Ref	External Curb Size	
		Length (mm)	Width (mm)
Square	S1	500	500
	S2	600	600
	S3	650	650
	S4	700	700
	S5	800	800
	S6	850	850
	S7	900	900
	S8	1000	1000
	S9	1100	1100
	S10	1150	1150
	S10A	1200	1200
	S11	1300	1300
	S12	1400	1400
	S13	1500	1500
	S15A	1800	1800
Rectangular	R3	500	800
	R3A	500	1100
	R4	600	900
	R4A	600	1200
	R4B	600	1800
	R5	700	1000

Standard Size Chart – Dome Only (to suit Builder’s Upstand)

Other sizes available on request.

	Size Ref	External Curb Size	
		Length (mm)	Width (mm)
Rectangular	R6	700	1300
	R7	800	1100
	R7A	800	1400
	R7B	800	1700
	R10A	900	1200
	R11	900	1400
	R11A	900	1800
	R16	1000	1300
	R16A	1000	1600
	R17	1100	1400
	R17A	1100	1600
	R18	1100	1700
	R20	1100	2300
	R22B	1200	1800
	R22C	1200	2400
		Diameter (mm)	
Circular	C1	500	
	C2	600	
	C3	700	
	C4	800	
	C5	900	
	C6	1000	
	C7	1100	
	C8	1200	

Confirmation of Technical Performance

Type	Single-walled		Double-walled				Triple-walled				
	A	D	T	AA	AD	TA	TD	AAA	AAD	TAA	TAD
U-value	5.36	5.36	5.36	2.68	2.68	2.68	2.68	1.70	1.70	1.70	1.70
dB	12	12	12	20	20	20	20	22	22	22	22
LT	88%	58%	49%	77%	51%	43%	28%	68%	45%	38%	25%
g-value	0.83	0.60	0.51	0.69	0.50	0.49	0.35	0.57	0.47	0.41	0.29

Key

T = Heatstop translucent pearl polycarbonate

A = Clear polycarbonate

D = Opal polycarbonate

Technical Calculation

- The reflection of the visible light can be calculated as $100 - LT$ (%)
- The reflection of the total solar energy can be calculated as $100 - G$ (%)
- U-values for single and double walled skylights according to the calculation method EN ISO 6946 : 1997
- U-values for triple walled skylights according to the test method EN ISO 12567-2