Roof Lantern Roof Lantern Pyramid

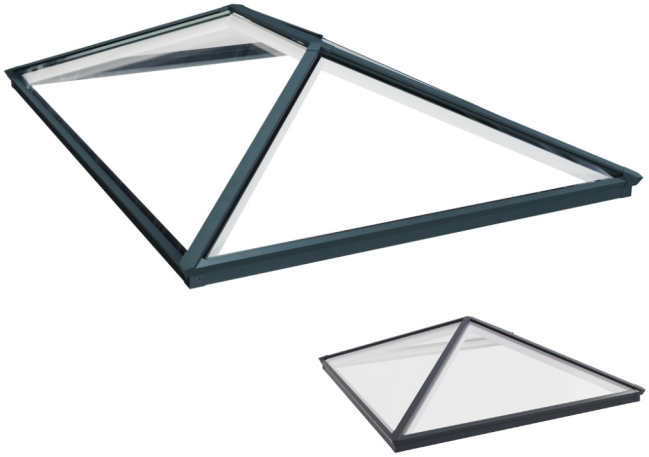
TB432

Brett Martin Roof Lantern Datasheet

Product Description
Brett Martin Roof Lantern is an elegant double-glazed glass rooflight, with a laminated inner glass pane as standard for the safety of those below, and fully thermally broken and powder coated aluminium frame. It is intended for quick and easy installation on flat roofs of all modern building types to provide natural light, and is manufactured to ISO 9001 industry standards.

LAMINATED INNER PANE
ENDORSED BY THE ROOFLIGHT ASSOCIATION

Design Features



- Stylish glass rooflight with slender aluminium frame offering clean sight lines and neat junctions
- Designed for rapid installation with no silicone sealant other than to seal between roof and rooflight
- Uniquely offering safety as standard thanks to a laminated inner glass pane protecting those below from falling glass in the event of accidental breakage
- Highly thermally efficient with thermally broken frame and Low-E double glazing
- 10 year warranty available
- Choice of clear self-clean or blue solar-control self clean glass as standard
- Special glass options also available
- 4 panes of glass as standard for a contemporary look, with the option of 6 panes for a more traditional aesthetic or where site access is limited
- Aluminium frame powder coated internally and externally in combinations of RAL 7016 grey, RAL 9010 white and RAL 9005 black
- Designed for simple mounting direct to a weathered builder's upstand

Composition
The double glazed glass panel is made up of: 4mm toughened outer, a 90% argon filled cavity, with a 6.8mm laminated inner (including PVB interlayer). All double glazed units include a soft coat Low E coating.

The frame incorporates aluminium extrusions and castings, un-plasticised rigid PVC extrusions, ABS and rubber mouldings, and stainless steel fasteners.

All aluminium is powder coated internally and externally in combinations of RAL 7016 grey, RAL 9010 white and RAL 9005 black to provide a premium appearance and highly appealing finish.

The Glass, Aluminium, PVC, ABS, EPDM rubber and stainless steel which comprise the product can be recycled at the end of useful product life.

Durability
Brett Martin Roof Lantern units are expected to remain fit for purpose in normal conditions for a period of 20 years (with a warranty available providing a 10 year guarantee) i.e. they will not become perforated, lose significant structural integrity, or distort to the extent of losing weather-tightness. The available warranty also guarantees insulated glass used in the construction of the rooflight for 5 years.

Safety Requirements and CDM
The inner panes of Brett Martin Roof Lantern rooflights are laminated for the safety of those below in accordance with The Rooflight Association (formerly NARM) recommendations, however the rooflight should be regarded as FRAGILE. It is the customer's responsibility to ensure a risk assessment has been carried out to define the measures required to prevent significant risk of falling through the rooflight, in compliance with the CDM regulations. For further information please see RA (formerly NARM) NTD14. All glass panels are BS EN12150, BS 14449 and BS 1279 compliant.

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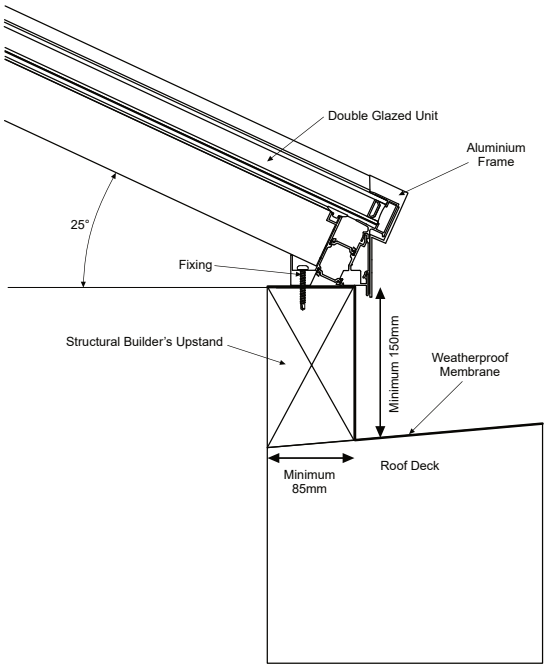
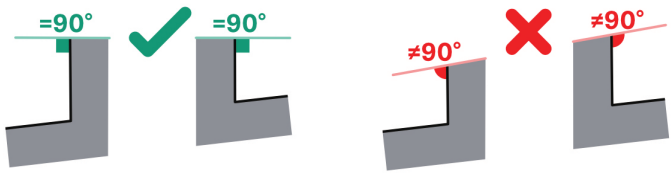
Fire Performance
Glass is designated Class A to EN13501 part 1, as it is included in the list of CWFT (classified without further test) materials published in the Official Journal of the EU (see European Commission Decision 96/603/EC).

These rooflights are glazed with a 4mm toughened outer pane and can therefore be regarded as having a $B_{ROOF}(t4)$ classification as per English building regulations.

Roof Applications
Brett Martin Roof Lantern rooflights are intended for installation onto a fully weathered and insulated builders upstand on flat and low pitch roofs. The surface of flat roofs normally require some degree of pitch to ensure adequate water runoff. For aesthetic reasons we recommend that the upstand is built with 0° pitch i.e. not parallel with the pitched roof surface. The rooflight can accommodate being installed on an upstand with a pitch of up to 5° but please note that this will likely result in a 'lopsided' appearance.





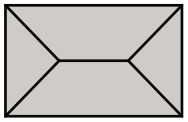
Sizes and Configurations

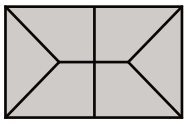
Roof Lantern	Roof Lantern Pyramid
1500 x 1000mm	1000 x 1000mm
2000 x 1000mm	1500 x 1500mm
2000 x 1500mm	2000 x 2500mm
2500 x 1000mm	2500 x 2500mm
2500 x 1500mm	
2500 x 2000mm	
3000 x 1000mm	
3000 x 1500mm	
3000 x 2000mm	

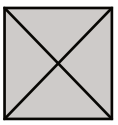
Standard stock units are supplied with 4 panes of glass as standard for a contemporary appearance.

An optional central rafter on the long side of the rooflight splits the larger glass pane in two, giving the rooflight a more traditional look. This option is also useful where site access is limited.

Bespoke sizes also available


4 pane option


6 pane option


4 pane pyramid

Glazing Options and Performance

Available with clear self-clean or blue solar-control self-clean glass as standard. Other glazing options are available on request. If non-standard glass is used, glazing performance may differ from the table shown.

Overall Glazing Performance				
Glazing	**Light**		**Solar Energy**	
Clear self-clean	**Transmission**	76%	**G-Value**	66%
	Reflectance in/out	17% / 17%	**Shading coefficient**	0.76
Blue solar-control self-clean	**Transmission**	52%	**G-Value**	46%
	Reflectance in/out	14% / 16%	**Shading coefficient**	0.53

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Thermal Performance (England, Scotland and Wales)

There is currently no method set out for assessing the thermal performance of lantern rooflights, so the method shown in Rooflight Association (formerly NARM) NTD2 has been adopted as the most appropriate. The thermal transmittance values (assessed horizontally) are shown in the table.

Thermal Performance (England, Scotland and Wales)

Width (mm)	Length (mm)	Surface:area ratio	U_r value (W/m²K)
1000	1000	2.40	1.87
1000	1500	1.99	2.01
1000	2000	1.86	1.97
1000	2500	1.79	1.95
1000	3000	1.75	1.94
1500	1500	1.89	1.81
1500	2000	1.66	1.93
1500	2500	1.60	1.91
1500	3000	1.56	1.89
2000	2000	1.69	1.79
2000	2500	1.52	1.89
2000	3000	1.48	1.87
2500	2500	1.57	1.77

*The overall thermal performance of rooflights is still referred to as a U_d-value in the building regulations, rather than U_f/U_{fc} value as per the calculation method. Values stated are therefore equivalent to a U_d-value assessed horizontally.

Thermal Performance (Republic of Ireland and Northern Ireland)

The thermal performance of Roof Lantern is assessed in the vertical plane and depending on configuration achieves a U_d value as declared in the table shown. (The glazing used in Roof Lantern Glass achieves a centre pane U value of 1.2W/m²K).

Thermal Performance (Republic of Ireland, Northern Ireland)

Width (mm)	Length (mm)	U_d value (W/m²K)
1000	1000	1.63
1000	1500	1.71
1000	2000	1.66
1000	2500	1.62
1000	3000	1.60
1500	1500	1.50
1500	2000	1.58
1500	2500	1.55
1500	3000	1.52
2000	2000	1.43
2000	2500	1.51
2000	3000	1.48
2500	2500	1.38

Acoustic Performance

Brett Martin Roof Lantern units achieve a direct airborne sound insulation value of 35db (Rw).

Wind and Snow Loads

Brett Martin Roof Lantern has been tested to show that, when correctly fitted in accordance with our instructions, will resist wind loads calculated in accordance with BS EN 1991-1-4: 2005, and imposed loads in accordance with BS EN 1873: 2005.

All sizes of Brett Martin Roof Lanterns can resist a snow load of 1200N/m².

Resistance to Wind Loads (upwards) N/m²

Width \ Length	1000	1250	1500	1750	2000	2250	2500	2750	3000
1250	2400	2400	2400	2400	2400	2400	2400	2400	2400
1500	-	2400	2400	2400	2400	2400	2400	2400	2400
1750	-	-	2400	2400	2400	2400	2400	2400	2400
2000	-	-	-	2400	2400	2400	2400	2400	2400
2250	-	-	-	-	1200	1200	-	-	
2750	-	-	-	-	-	1200	-	-	

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Thermal Fractures

Brett Martin Roof Lantern rooflights are manufactured using double glazing which includes an inner pane of annealed, laminated safety glass, which is essential for ensuring the safety of those below the rooflight through the prevention falling glass from accidental breakage.

In some circumstances, annealed, laminated safety glass can be subject to thermal stress fracture in the event of uneven heat build-up directly under the glass. Installation of blinds, or any other alterations made to the lightwell below the rooflight, must be done so with consideration to the risk of thermal stress fracture. In the case of blinds, the risk of thermal stress fracture can never be fully removed, but it can be reduced by choosing light coloured blinds and positioning them as far away from the glass as possible.

More detailed guidance can be obtained upon request - please contact the technical department.

Product Height & Weight

Product Overall Height & Weight				
Width (mm)	**Length (mm)**	**Height (mm)**	**4 pane weight (kg)**	**6 pane weight (kg)**
1000	1000	355	56	-
1000	1500	347	71	75
1000	2000	347	89	94
1000	2500	347	108	112
1000	3000	347	126	130
1500	1500	471	99	-
1500	2000	463	123	128
1500	2500	463	148	154
1500	3000	463	174	179
2000	2000	588	158	-
2000	2500	580	189	195
2000	3000	580	222	228
2500	2500	685	237	-

Bespoke sizes available on request.

Installation, Handling, Maintenance & Storage
Full installation details, maintenance and product care details are available on request.