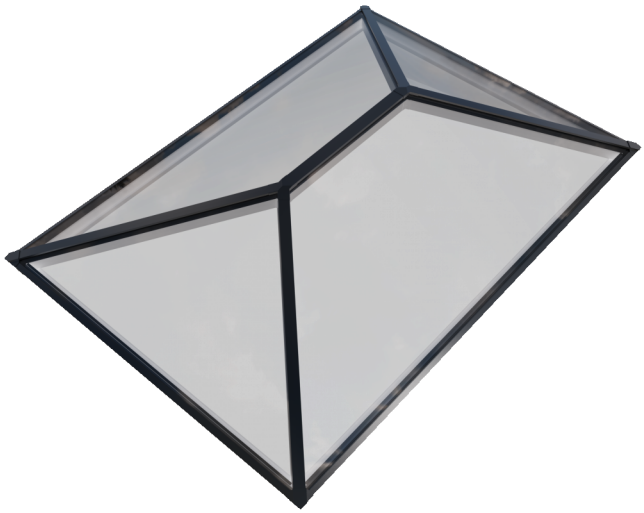
Roof Lantern

TB432
Brett Martin Roof Lantern
Datasheet

Product Description
Brett Martin Roof Lantern is an elegant double-glazed glass rooflight, with 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 narm

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 offering an overall U value as low as 1.7W/m^{2}K
- 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 to RAL 7016 externally and RAL 9010 internally
- 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 coating to RAL 7016 externally and RAL 9010 internally 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 National Association of Rooflight Manufacturers (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 NARM NTD14. All glass panels are BS EN12150, BS 14449 and BS 1279 compliant.

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Fire Ratings
Building Regulations Approved Document B: Fire Safety (volume 1 for dwellings and volume 2 for buildings other than dwellings) sets out the fire safety rules for buildings, which can be met by achieving specific European Class reaction to fire ratings to the relevant standard EN 13501-1.

Section B2 (volumes 1 and 2) concerns internal fire spread and defines the classification of linings dependent on building type and size:

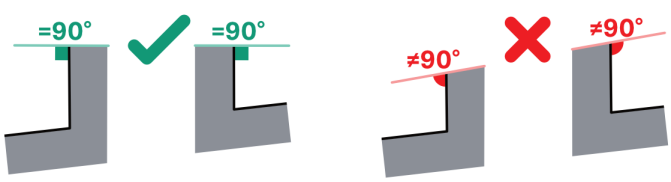
	Volume 1 - dwellings (see paragraph 4.1 & table 4.1)	**Volume 2 - non dwellings** (see paragraph 6.1 & table 6.1)
Classification	**Location**	**Location**
D-s3,d2	Small rooms max floor area 4m² Garages (as part of dwelling) max floor area 40m²	Small room in non-residential accomodation max 30m²
C-s3,d2	Other rooms (including garages) Circulation spaces within a dwelling	Other rooms (including garages)
B-s3,d2	Other circulation spaces (including the common areas of blocks of flats)	Other circulation spaces

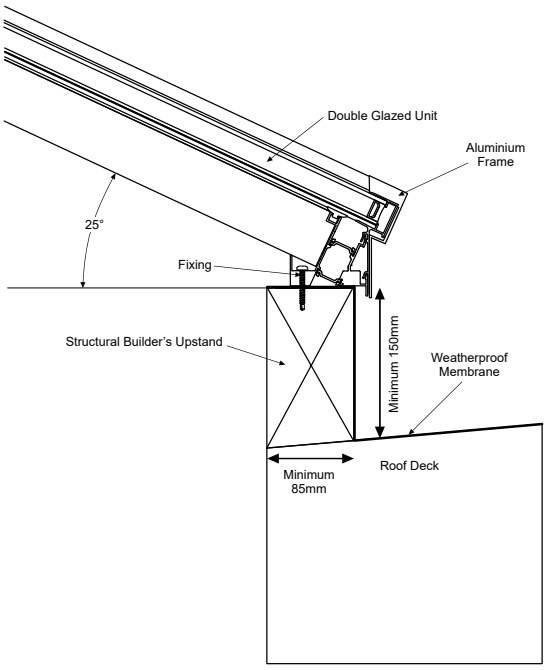
Section B4 (volumes 1 and 2) concerns external fire spread and defines limitations on the roof coverings. Coverings with a designation of $B_{ROOF}(t4)$ can be used at any distance from a relevant boundary. It also states that when used in rooflights, unwired glass a minimum of 4mm thick can be regarded as having a $B_{ROOF}(t4)$ classification (see: volume 1 – paragraph 12.8; volume 2 – paragraph 14.8)

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).

Brett Martin Roof Lantern rooflights can therefore be regarded as Class A (CWFT) to EN13501-1. All Brett Martin Roof Lantern rooflights are glazed with a 4mm toughened outer pane and therefore can also be regarded as having the $B_{ROOF}(t4)$ classification defined in section B4.

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.





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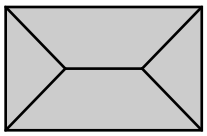
Standard Sizes and Configurations

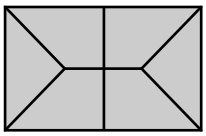
1500 x 1000mm
2000 x 1000mm
2000 x 1500mm
2500 x 1000mm
2500 x 1500mm
2500 x 2000mm
3000 x 1000mm
3000 x 1500mm
3000 x 2000mm

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.



4 pane option



6 pane option

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

Thermal Performance

Thermal transmittance of rooflights is assessed in the horizontal plane for compliance with Part L of building regulations.

There is currently no method set out for assessing the thermal performance of lantern rooflights, so the method shown in NARM NTD2 has been adopted as the most appropriate. All variants of Brett Martin Roof Lantern have a better thermal transmittance than the limiting value in Part L of 2.2 W/m^{2}K. The thermal transmittance values (assessed horizontally) are shown below. For U_d values calculated in the vertical plane please contact Brett Martin Daylight Systems.

Width (mm)	Length (mm)	Surface:area ratio	U_r value (W/m^{2}K)
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	2000	1.66	1.93
1500	2500	1.60	1.91
1500	3000	1.56	1.89
2000	2500	1.52	1.89
2000	3000	1.48	1.87

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.

Resistance to Snow and Wind Loads (Figures in excess of)	
Snow Load (N.m^{-2})	1200
Wind Load (N.m^{-2})	2400

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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 Dimensions

Product Overall Height & Weight				
Width (mm)	**Length (mm)**	**Height (mm)**	**4 pane weight (kg)**	**6 pane weight (kg)**
1000	1500	347	70	72
1000	2000	347	89	91
1000	2500	347	108	110
1000	3000	347	126	129
1500	2000	463	123	127
1500	2500	463	150	153
1500	3000	463	176	179
2000	2500	580	192	196
2000	3000	580	226	230

Installation, Handling, Maintenance & Storage
Full installation details, maintenance and product care details, can be found in the relevant Technical Bulletins.

Technical Bulletins	
Code	**Description**
TB209	Datasheet Glass Product Care
TB431	Installation Brett Martin Roof Lantern

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