

# Roof Lantern Datasheet

## TB432

### Product Description

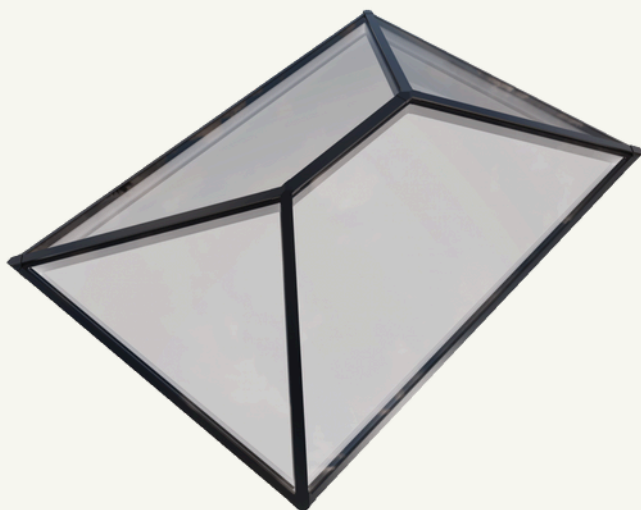
The Roof Lantern is an elegant double-glazed glass rooflight, with a laminated inner glass pane as standard for the safety of those below, and fully thermally broken and powder coated aluminium frame. It is intended for quick and easy installation on flat roofs of all modern building types to provide 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 or where site access is limited
- Aluminium frame powder coated to RAL 7016 externally and RAL 9010 internally or RAL 7016 externally and 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 coated to either RAL 7016 externally and RAL 9010 internally or RAL 7016 externally and 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

The 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 the 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.

# Roof Lantern Datasheet

## TB432

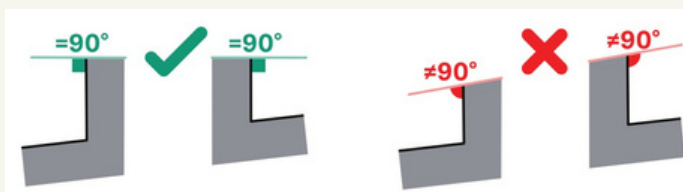
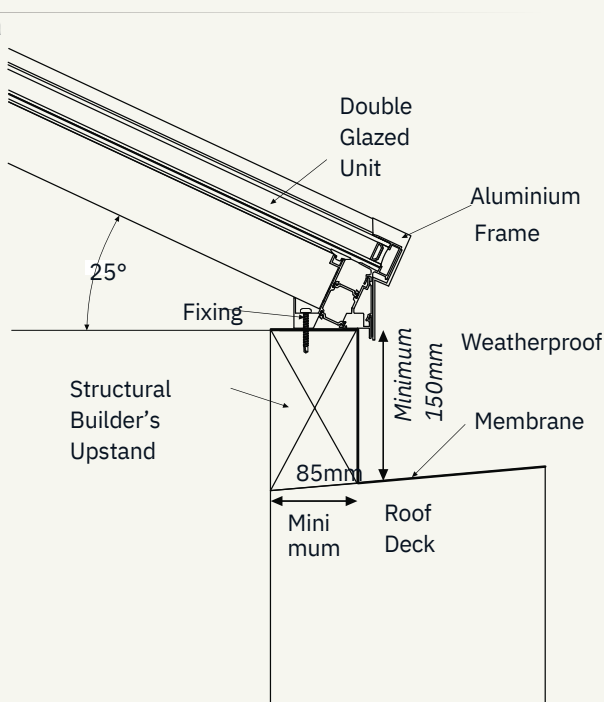
### Fire Performance

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 BROOF(t4) classification as per building regulations.

### Roof Applications

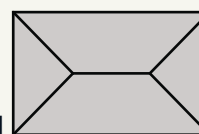
Roof Lantern rooflights are intended for installation onto a fully weathered and insulated builders upstand on flat and low pitch roofs. The surface of flat roofs normally require some degree of pitch to ensure adequate water runoff. For aesthetic reasons we recommend that the upstand is built with 0° 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.



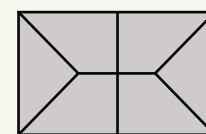
### Sizes and Configurations

- 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. Bespoke sizes also available



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 nonstandard 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 (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 value (W/m <sup>2</sup> 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

\*The overall thermal performance of rooflights is still referred to as a U<sub>d</sub>-value in the building regulations, rather than U<sub>r</sub>/U<sub>rc</sub> value as per the calculation method. Values stated are therefore equivalent to a U<sub>d</sub>-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<sub>d</sub> value as declared in the table shown. (The glazing used in Roof Lantern Glass achieves a centre pane U value of 1.2W/m<sup>2</sup>K).

Thermal Performance (Republic of Ireland, Northern Ireland)		
Width (mm)	Length (mm)	U <sub>d</sub> value (W/m <sup>2</sup> K)
1000	1500	1.71
1000	2000	1.66
1000	2500	1.62
1000	3000	1.60
1500	2000	1.58
1500	2500	1.55
1500	3000	1.52
2000	2500	1.51
2000	3000	1.48

## Acoustic Performance

Roof Lantern units achieve a direct airborne sound insulation value of 35db (R<sub>w</sub>).

### Wind and Snow Loads

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

Snow Load (N/m <sup>2</sup> )	1200
Wind Load (N/m <sup>2</sup> )	2400

### Thermal Fractures

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	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

Bespoke sizes available on request.

### Installation, Handling, Maintenance & Storage

Full installation details, maintenance and product care details are available on request.