Structurally Bonded High Performance Rooflights
OUR ROOFLIGHTS

Our latest product range of glass rooflights feature the innovative use of structural silicone bonding techniques which require the minimal amount of framework to support the glass and make for a true contemporary feel within any room. Lantern and pyramid rooflights have no internal framework to support the glass along the rooflights hips or ridge. The advantage of less framework within a rooflight are clear:

- A proportionally larger area of glass and therefore more daylight can pass through the rooflight than framed rooflight products.
- The thermal performance of the double glazed glass units are not compromised by supporting framework and hence a frameless rooflight has a reduced risk of condensation by comparison to framed products.
- External rooflight surfaces are flush and therefore there is nowhere for dirt to accumulate on the rooflight product.

Duplus Architectural Systems are the only rooflight manufacturer in the UK who have attained the Dow Corning structural silicone “Quality Bond” accreditation. Fully factory assembled rooflight products manufactured in a dry clean controlled environment guarantee the integrity of the structural bond. Every rooflights structural silicone is thoroughly tested to ensure its structural integrity prior to leaving our factory in Leicester.

As a UK manufacturer of flat glass rooflights since 1957 our latest range of products benefits from our wealth of experience and expertise in this field.
FIXED ROOFLIGHT

Our fixed rooflight is structurally bonded to give exceptional strength, rigidity and seamless appearance which results in a complete product delivered to site that is very easy to install.

All rooflights are double glazed in toughened safety glass and are available in clear, blue, bronze or grey tint, high performance solar control to minimise solar gain but maximise light transmittance and obscure for privacy. Prices below are based on clear low ‘E’ glass achieving a 1.1 U-value.

Outstanding thermal performance. True U-value and Ud-value available upon request.

The extruded aluminium perimeter frame is powder coated dark grey (RAL 7015 Matt).

Prices (All prices exclude delivery and VAT)

To suit external kerb dimension:

<table>
<thead>
<tr>
<th>Size</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>1000mm x 1000mm</td>
<td>£612</td>
</tr>
<tr>
<td>1000mm x 1500mm</td>
<td>£799</td>
</tr>
<tr>
<td>1000mm x 2000mm</td>
<td>£915</td>
</tr>
<tr>
<td>1000mm x 2500mm</td>
<td>£1048</td>
</tr>
<tr>
<td>1200mm x 1500mm</td>
<td>£803</td>
</tr>
<tr>
<td>1200mm x 2000mm</td>
<td>£983</td>
</tr>
<tr>
<td>1200mm x 2500mm</td>
<td>£1149</td>
</tr>
<tr>
<td>1500mm x 1500mm</td>
<td>£956</td>
</tr>
<tr>
<td>1500mm x 2000mm</td>
<td>£1106</td>
</tr>
<tr>
<td>1500mm x 2500mm</td>
<td>£1290</td>
</tr>
</tbody>
</table>

Bespoke sizes available upon request. Please call 0116 2610710

Features

- **High Performance**
  Structurally bonded
- **Seamless Slimline**
  Powder coated aluminium frame
- **Exceptional Strength & Rigidity**
  Toughened Low ‘E’ safety glass
- **Outstanding Thermal Performance**
  RAL 7015 Dark Grey colour as standard
- **Bespoke Sizes Available**
  Max. size 1800mm x 3000mm
LANTERN ROOFLIGHT

Our frameless contemporary lantern rooflight is structurally bonded to give exceptional strength, rigidity and seamless appearance which results in a complete product delivered to site that is very easy to install.

All rooflights are double glazed in toughened safety glass and are available in clear, blue, bronze or grey tint, high performance solar control to minimise solar gain but maximise light transmittance and obscure for privacy. Prices below are based on clear low ‘E’ glass achieving a 1.1 U-value.

Outstanding thermal performance. True U-value and Ud-value available upon request.

The extruded aluminium perimeter frame is powder coated dual colour as standard (RAL 7015 ‘dark grey’ Matt externally & RAL 9910 ‘white’ Matt internally). External hip and ridge flashings are fitted for aesthetics and are powder coated RAL 7015 ‘dark grey’ Matt to match the perimeter frame at the base of the lantern rooflight.

Prices (All prices exclude delivery and VAT)

To suit external kerb dimension:

<table>
<thead>
<tr>
<th>Size</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>1000mm x 1500mm</td>
<td>£1025</td>
</tr>
<tr>
<td>1000mm x 2000mm</td>
<td>£1162</td>
</tr>
<tr>
<td>1000mm x 2500mm</td>
<td>£1672</td>
</tr>
<tr>
<td>1000mm x 3000mm</td>
<td>£1900</td>
</tr>
<tr>
<td>1250mm x 1500mm</td>
<td>£1197</td>
</tr>
<tr>
<td>1250mm x 2000mm</td>
<td>£1690</td>
</tr>
<tr>
<td>1250mm x 2500mm</td>
<td>£1819</td>
</tr>
<tr>
<td>1250mm x 3000mm</td>
<td>£2180</td>
</tr>
<tr>
<td>1500mm x 2000mm</td>
<td>£1727</td>
</tr>
<tr>
<td>1500mm x 2500mm</td>
<td>£2284</td>
</tr>
<tr>
<td>1500mm x 3000mm</td>
<td>£2329</td>
</tr>
</tbody>
</table>

Bespoke sizes available upon request. Max. size 2000mm x 5800mm
PYRAMID ROOFLIGHT

Our frameless contemporary pyramid rooflight is structurally bonded to give exceptional strength, rigidity and seamless appearance which results in a complete product delivered to site that is very easy to install.

All rooflights are double glazed in toughened safety glass and are available in clear, blue, bronze or grey tint, high performance solar control to minimise solar gain but maximise light transmittance and obscure for privacy. Prices below are based on clear low ‘E’ glass achieving a 1.1 U-value.

Outstanding thermal performance. True U-value and Ud-value available upon request.

The extruded aluminium perimeter frame is powder coated dual colour as standard (RAL 7015 ‘dark grey’ Matt externally & RAL 9910 ‘white’ Matt internally). External hip flashings are fitted for aesthetics and are powder coated RAL 7015 ‘dark grey’ Matt to match the perimeter frame at the base of the pyramid rooflight.

Prices (All prices exclude delivery and VAT)

To suit external kerb dimension:

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>700mm x 700mm</td>
<td>£685</td>
</tr>
<tr>
<td>1000mm x 1000mm</td>
<td>£886</td>
</tr>
<tr>
<td>1250mm x 1250mm</td>
<td>£1225</td>
</tr>
<tr>
<td>1500mm x 1500mm</td>
<td>£1425</td>
</tr>
<tr>
<td>1750mm x 1750mm</td>
<td>£1954</td>
</tr>
<tr>
<td>2000mm x 2000mm</td>
<td>£2451</td>
</tr>
</tbody>
</table>

Bespoke sizes available upon request. Max. size 2000mm x 2000mm
OPENING ROOFLIGHT

Our opening rooflights are structurally bonded to give exceptional strength, rigidity and seam-
less appearance which results in a complete product delivered to site that is very easy to install.
Our opening rooflights are electrically operated via a 24v electric actuator and touch sensitive
switch with in-built transformer (see image opposite) or manually with a screwjack and winding
pole.

All rooflights are double glazed in toughened safety glass and are available in clear, blue,
bronze or grey tint, high performance solar control to minimise solar gain but maximise light
transmittance and obscure for privacy. Prices below are based on clear low ‘E’ glass achieving
a 1.1 U-value.

Outstanding thermal performance. True U-value and Ud-value available upon request.

The extruded aluminium perimeter frame is powder coated dual colour as standard ( RAL 7015
‘dark grey’ Matt externally & RAL 9910 ‘white’ Matt internally).

Prices (All prices exclude delivery and VAT)

To suit external kerb dimension:

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>1000mm x 1000mm</td>
<td>£1394</td>
</tr>
<tr>
<td>1000mm x 1500mm</td>
<td>£1598</td>
</tr>
<tr>
<td>1000mm x 1000mm</td>
<td>£1126</td>
</tr>
<tr>
<td>1000mm x 1500mm</td>
<td>£1344</td>
</tr>
</tbody>
</table>

Bespoke sizes available upon request.
**WALK-ON ROOFLIGHT**

The Duplus walk on flat glass rooflight is designed to be flush with surrounding flooring, typically on roof terraces with decking. As with all Duplus rooflights an upstand is required for this product, the rooflight should be fitted first with the decking completed around the rooflight in order to achieve a flush finish. With a walk on product it is essential that the correct loading standards are considered and imperative that products are fully backed up with structural calculations to prove that they are safe to use. With this in mind and following extensive structural glass calculations we utilise a minimum walk on glass thickness of 25.5mm toughened laminated glass for our smaller rooflights and 31.5mm – 33.5mm for our larger rooflights.

In order to calculate the thickness of the glass for our range of walk on rooflights, we have considered the requirements of the Building Regulations which in respect to the amount of load the glass is required to withstand, require compliance with the imposed loads set out in Eurocodes BS EN 1991. For new projects started after 1st October 2013, walk on rooflights stating only compliance to the lower loads defined by BS6399 (1.5KN per square metre and 1.4KN concentrated load) should be avoided. Please refer to our website technical section for details www.duplus.co.uk/technical/walk-on-rooflight

Outstanding thermal performance.

The extruded aluminium perimeter frame is powder coated RAL 7015 ‘dark grey’ Matt.

**Prices** *(All prices exclude delivery and VAT)*

To suit external kerb dimension:

- 1000mm x 1000mm  £1215
- 1000mm x 1500mm  £1550
- 1000mm x 2000mm  £1982

Bespoke sizes available upon request.
CIRCULAR ROOFLIGHT

Our fixed circular rooflight is structurally bonded to give exceptional strength, rigidity and seamless appearance which results in a complete product delivered to site that is very easy to install.

All rooflights are double glazed in toughened safety glass and are available in clear, blue, bronze or grey tint, high performance solar control to minimise solar gain but maximise light transmittance and obscure for privacy. Prices below are based on clear low ‘E’ glass achieving a 1.1 U-value.

Outstanding thermal performance. True U-value and Ud-value available upon request.

The extruded aluminium perimeter frame is powder coated black (RAL 9005 Matt).

Prices (All prices exclude delivery and VAT)

To suit external kerb dimension:
1000mm Diameter  £1099
1500mm Diameter  £1599
1800mm Diameter  £1899
2000mm Diameter  £2099
2300mm Diameter  £2399

Bespoke sizes available upon request.
GLASS

Duplus rooflight double glazed units - a net contributor of energy in buildings

The Duplus rooflight product range incorporates double glazed safety glass units that are manufactured to BS EN 1279 – Insulating glass units and BS EN12150 – Thermally toughened soda lime silicate safety glass. The double glazed units in every rooflight we produce have a centre pane U value of 1.1W/m2K. Our structurally bonded rooflight products incorporate double glazed units that feature three thermal components namely a low E coating, an argon gas cavity and a perimeter manufactured with a warm edge spacer bar.

Duplus roof light’s incorporate toughened glass which is manufactured to BS EN12150 – Thermally toughened soda lime silicate safety glass.

Optional Extras: Body tinted glazing. As standard our Rooflight products are manufactured using clear double glazed units. However, we are able to offer a wide range of glass solutions to suit our client’s requirements.

Different body tint colours offer different levels of Light Transmittance (LT). The LT Values given below are for guidance/comparison only, they are approximate and subject to the glass thickness. (6mm glass thickness – 4mm glass thickness)

- Clear Glass 79-80%
- Green body tinted 64%-70%
- Blue body tinted 47% (only available in 6mm)
- Bronze body tint 43%-54%
- Grey body tint 38%-49%

Duplus Roof light products featuring body tinted glass also incorporate argon gas cavities, warm edge spacer bars and both the internal and external panes of the double glazed unit are toughened glass.

For more technical information please visit our website www.duplus.co.uk/technical
THERMAL PERFORMANCE

Rooflight Thermal Performance – it’s more than just the U value of the glass.

The measure of a Rooflight’s heat loss is usually expressed in terms of U-value, which is the rate of heat loss in Watts per square metre per degree Kelvin temperature difference between the inside and outside of the rooflight. This is expressed as W/m²K, with a lower value defining a better insulating product. It should be noted that one degree Kelvin is equivalent to one degree Celsius.

The heat loss calculation required to satisfy the Building Regulations is one which establishes the heat loss in W/m²K through the whole of a rooflight, that being the rooflights framework and its glass. It is simply not enough to state the centre pane U value of the glass unit as this does not represent the U value of the entire rooflight product.

Equally, thermal comparisons between competing rooflight products can only be made when U values for the whole rooflight are considered. A poorly designed triple glazed rooflight product may in fact perform worse than a well-designed double glazed product albeit the centre pane U value of the triple glazed glass unit may be better than that of the double glazed glass unit.

For more than a decade Duplus Architectural Systems have utilised two dimensional finite element mesh analysis software to optimise the thermal design of our entire product range. This experience has enabled us to produce a range of structurally bonded rooflights that incorporate high resistance to condensation with impressive overall U values.

The extensive thermal modelling of our product range has delivered a range of well insulated rooflight products that offer significantly better Ud values than required by the Building Regulations but also designs that comparatively, have a high resistance to condensation under normal conditions.

Our structural bonding techniques allow us to produce lantern and pyramid rooflights without the need of any internal aluminium support framework to the hips or ridges of our products. Not only does this give a more contemporary appearance, but silicone rubber structural bonding offers greatly improved thermal efficiency when compared to similar products which rely on hip and ridge internal aluminium framework. For more technical information please visit our website www.duplus.co.uk/technical
STRUCTURAL BONDING

Structural Bonding of frameless rooflights Duplus frameless glass roof lights are created by combining high performance double glazed glass units with world class structural bonding techniques – a solution which guarantees that the space beneath an installed Duplus rooflight is bathed in the maximum amount of natural light available.

Our contemporary product range could only be achieved by utilising state-of-the-art structural silicone bonding products, standards of best practice in quality control, quality assurance, and structural bonding product application by our team of specialist silicone fabricators.

Structurally bonding the glass into our rooflights is undertaken in strictly controlled, independently audited factory conditions. Structural joints are made in a clean, dry, dirt-free and frost-free environment which ensures the long term performance of the structural bond and in turn the integrity of our rooflight products.

The structural silicone is manufactured by one of the world leaders in silicones – Dow Corning. Duplus Architectural Systems are the only frameless glass rooflight manufacturer in the UK that is certified by Dow Corning to their highest “Quality Bond” standard. A full list of UK accredited members is available at www.dowcorning.com/applications/qualitybond/appicatorsearchresults.aspx?popup=true&c=GBR&a=

The structural silicone itself is Dow Corning’s 993 two part silicone rubber structural glazing sealant. This product meets the standard for structural glazing as developed by the EOTA working group and is CE marked as structural glazing sealant according to ETAG002, the European Technical Guidelines for structural glazing, it also meets the structural glazing sealant requirements according to EN13022.

All components used within our rooflight product range have been extensively tested by Dow Corning to ensure complete compatibility with the structural bond in order to guarantee the longevity of our rooflight products.

The importance of the structural bond should not be underestimated, in short, without it there can be no frameless rooflight and with a weak or inferior bond this could lead to complete rooflight failure. So that we have complete certainty over our product quality, every rooflight has its structural silicone tested during the three day silicone bonding period. We undertake a minimum of five tests utilizing four different test methods. Only when your rooflight has passed all of these tests will it be ready for delivery. The physical samples of these tests are kept on file for the duration of the rooflight framework guarantee period by Duplus.