

Insulated Panels
UK & Ireland

Protected by



Kingspan Day-Lite Trapezoidal Rooflight (KS1000 DLTR 1.0) Product Data Sheet



Product Data

Applications

Kingspan Day-Lite Trapezoidal Rooflight (KS1000 DLTR 1.0) is designed to be integrated with the QuadCore® KS1000RW Roof Panel. The product is a co-extruded, multi-wall polycarbonate rooflight offering a U-value of 1.0 W/m²K. Kingspan Day-Lite Trapezoidal Rooflight (KS1000 DLTR 1.0) is suitable for most building applications with a roof pitch of 4° or above after deflection.

Note: Not suitable for application where the occupants or processes add significant quantities of water to the air, or where there are internal environments with low temperatures.

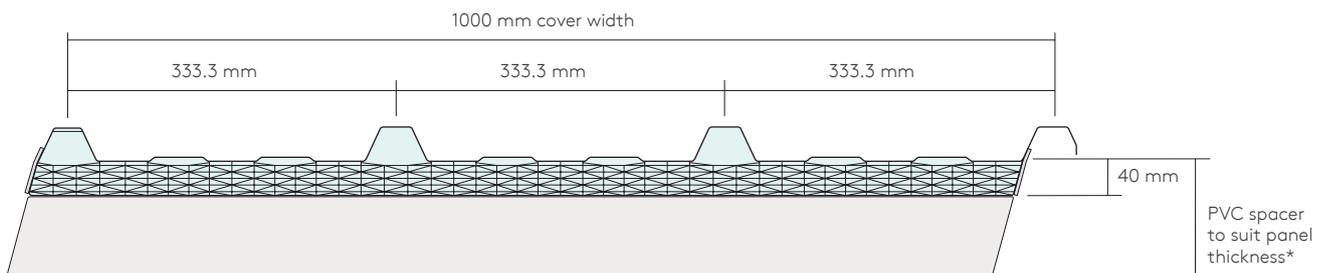


Available Lengths

Standard Lengths (m)	1.1 - 5.5
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Note: Additional costs and transport restrictions may apply for non-standard lengths. All lengths may change for export (outside of the UK and Ireland).

Additional lengths up to 7.5 m are available upon request.



* No spacers required when fitting with 40 mm QuadCore® KS1000RW Roof Panel.

Dimensions, Weight & Thermal Performance

Product Reference	Thickness (mm)	Weight (kg/m ²)	U-value (W/m ² K)	Light Transmission (%)	Solar Heat Gain Coefficient
Day-Lite Trapezoidal Rooflight 1.0 Opal*	40	4.80	1.0	38**	0.43

Notes: The U-value has been calculated using the method required by the appropriate National Building Regulations. Light transmission, calculated values using measurements to BS EN 410.

* 99% diffusion. ** Light transmission, according to BS EN 410, is as measured on 600 mm x 600 mm samples.

Solar Heat Gain Coefficient (SHGC), according to BS EN 410, is the total solar energy that enters the interior of a building. Please contact the Kingspan Tech-eXchange for more information.

Reaction to Fire

Kingspan Day-Lite Trapezoidal Rooflight (KS1000 DLTR 1.0) is classified B-s1,d0, when tested on the internal face of the product, according to the European Reaction to Fire classification system (Euroclasses) BS EN 13501-1: 2018 under the name ThermoRoof.

For further guidance on the fire performance of our polycarbonate rooflight systems please contact the Kingspan Tech-eXchange team.

Properties

Sound reduction:

- Kingspan Day-Lite Trapezoidal Rooflight (KS1000 DLTR 1.0) weighted sound reduction: 24 dB. R_w (C, Ctr) = 24 (-1, -4) dB.

H&S classification when installed as per Kingspan details:

- Non-Fragility to ACR[M]001: 2014 Class B (500 joules test)
- Non-Fragility to BS EN 14963: 2006 Class SB1200 (1200 joules test).

Air Leakage:

- An air leakage rate of 3m³/m²/hr at 50Pa or less can be achieved.

Product Data

Materials

External Weather Face

Multi-wall polycarbonate sheet 1,000 mm wide with an external trapezoidal profile. The external face has a co-extruded UV protection.

Tapes / Sealants

Factory-applied breather tape is applied to either end of the polycarbonate boxes to reduce the risk of condensation and prevent ingress of moisture and insects during transportation and delivery, keeping rooflights clean and optimising performance.

Kingspan Day-Lite Trapezoidal Rooflight (KS1000 DLTR 1.0) has two runs of PE foam tape, one at each side.

Spacers

Factory or site applied PVC spacers need to be positioned at purlin locations.

Note: No spacers required when fitting with 40 mm QuadCore® KS1000RW Roof Panel.

Side Laps

Kingspan Day-Lite Trapezoidal Rooflight (KS1000 DLTR 1.0) should side lap on both sides with the QuadCore® KS1000RW Roof Panel, and not another rooflight product.

All external side laps are weather sealed along the full length with unbroken runs of 6 mm x 5 mm butyl rubber sealant applied to the weather side of the stitching screw.

Rooflights are supplied with a continuous stitching plate to the side lap crown to facilitate side lap stitching.

End Laps

- All external end laps are 75 mm.
- Single run of 50 mm x 8 mm Kingspan Class A end-lap seal fitted with co-laminate / 'U Side' facing up.
- Rooflights supplied with end lap stitching plates, located in each minor valley to facilitate end lap stitching.
- Rooflight end laps using a ledger plate positioned at the rooflight end lap (1,100 mm long with 120 mm bearing face), so that all main fasteners are fixed through the ledger plate.
- Kingspan Day-Lite Trapezoidal Rooflight (KS1000 DLTR 1.0) should always end lap top and bottom with a QuadCore® KS1000RW Roof Panel, and not another rooflight product.
- We recommend that both top and bottom end laps for the rooflight are offset from the panel to panel end laps in adjacent panel runs.

Please contact Kingspan Tech-eXchange for further information.

Installation Details

Please refer to standard Kingspan installation details for more information.

Note: For all fixing details and fastener specifications please contact Kingspan Tech-eXchange.



Product Tolerances

Cut to Length	± 5 mm
Cover Width	± 2 mm
Thickness	± 2 mm

Handing

Kingspan Day-Lite Trapezoidal Rooflight (KS1000 DLTR 1.0) can be manufactured both left to right handed (LH) and right to left handed (RH).

Quality & Durability

Kingspan Day-Lite Trapezoidal Rooflight (KS1000 DLTR 1.0) is manufactured from the highest quality materials, using state of the art production equipment to rigorous quality control standards, complying with ISO 9001 standard, ensuring long term reliability and service life.

Kingspan Day-Lite Trapezoidal Rooflight (KS1000 DLTR 1.0) is fully compliant with Environmental Management System Certification ISO 14001, Occupational Health and Safety Certification ISO 18001 and Compliance management systems ISO 37301.

Kingspan Day-Lite Trapezoidal Rooflight (KS1000 DLTR 1.0) is also manufactured under Environmental Management System Certification BS EN ISO 14001, Energy Management System Certification BS EN ISO 50001 and Occupational Health and Safety Certification BS EN ISO 45001.

Warranty

The Kingspan Warranty covers the structural and thermal performance for a period of up to 25 years, reducing after the 12th year following installation by 7.15% per year for each subsequent year, or part of, thereafter.

Product Data

Packing

Kingspan Day-Lite Trapezoidal Rooflight (KS1000 DLTR 1.0) is stacked weather sheet to weather sheet (to minimise pack height). The top, bottom, sides and ends are protected by foam and timber packing and spiral wrap stretch polyfilm.

	No. in Pack
Day-Lite Trapezoidal Rooflight 1.0 (KS1000 DLTR) (AVE)	12

Safe Storage

To ensure that Kingspan Day-Lite Trapezoidal Rooflight (KS1000 DLTR 1.0) remains in prime condition while stored on site, the following precautions should be taken.

At ground level:

- Allocate a safe, trade-free area.
- Prevent personnel from walking over packs.
- All packs must be kept in packaging and covered with a non-transparent waterproof sheet, to protect from direct sunlight and water ingress, at all times prior to installation (at both ground and roof level).
- Store Kingspan Day-Lite Trapezoidal Rooflight (KS1000 DLTR 1.0) on a slight slope, ensuring any penetrating rainwater drains off.

At roof level:

- Prior to and during installation, securely tie Kingspan Day-Lite Trapezoidal Rooflight 1.0 (KS1000 DLTR) packs to the roof structure to prevent movement.
- Keep Kingspan Day-Lite Trapezoidal Rooflight (KS1000 DLTR 1.0) covered to prevent penetration from rainwater.

Sea Freight

Fully timber crated packs are available on projects requiring delivery by sea freight shipping, at additional costs. Alternatively, steel containers can be used. Special loading charges apply.

Delivery

All deliveries (unless indicated otherwise) are by road transport to project site. Off-loading is the responsibility of the client.

Cleaning

Periodic cleaning, using the correct procedure, is recommended to prolong service life.

For small surfaces, gently wash sheet with a solution of mild soap and lukewarm water using a soft, grit-free cloth or sponge to loosen any dirt or grime. Do not use any corrosive materials or chemicals.

Please contact Kingspan Tech-eXchange for further information.

Product Data

Load / Span Tables

Structural Tables

Load / span tables - to be compared against calculated characteristic (i.e. unfactored) wind load values.

Single Span

Load Type	Span (m)														
	Uniformly Distributed Loads (kN/m ²)														
	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2	2.1	2.2	2.3	2.4	2.5
Pressure	4.37	4.37	4.37	4.37	4.37	4.37	4.22	3.72	3.31	2.96	2.66	2.40	2.18	1.99	1.82
Suction	3.02	2.92	2.82	2.72	2.62	2.46	2.18	1.95	1.75	1.58	1.43	1.30	1.19	1.09	1.01

Double Span

Load Type	Span (m)														
	Uniformly Distributed Loads (kN/m ²)														
	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2	2.1	2.2	2.3	2.4	2.5
Pressure	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38
Suction	2.11	2.04	1.98	1.89	1.79	1.69	1.60	1.50	1.50	1.50	1.50	1.41	1.32	1.24	1.17

- Values have been calculated in accordance with EAD 220089-00-0401, BS EN 16153:2013 and BS 5427: 2016.
- Downwards pressure maximum deflection 1/30th of span, but not more than 50 mm.
- Suction uplift maximum deflection 1/30th of span, but not more than 50 mm.
- The actual wind suction load resisted by the rooflight is dependent on the number of fasteners used and the support thickness, as well as the fastener material.
- The fastener calculation should be carried out in accordance with the appropriate standards. For further advice please contact the Kingspan Technical Department.
- The allowable steelwork tolerance between bearing planes of adjacent supports is ± 5mm.
- For intermediate values, linear interpolation may be used.
- All spans have been calculated with a minimum support width of 50 mm. Larger support widths are possible.
- The above load spans are based on Kingspan Day-Lite Trapezoidal Rooflight (KS1000 DLTR 1.0) side-lapped with QuadCore® KS1000 RW Roof Panels. For load spans where Kingspan Day-Lite Trapezoidal Rooflight (KS1000 DLTR 1.0) is side lapped with Kingspan Day-Lite Trapezoidal Rooflight (KS1000 DLTR 1.0), please contact Kingspan Technical Department.

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