



BS DECLARATION OF CONFORMITY

(System 3)

Issue No: SH-LR-001

Teamframes Ltd
26-36 Hawthorn Road
Eastbourne
East Sussex BN23 6QA

This document declares that the product:

Sheerline – Prestige Lantern Roof

**External pedestrian doorset for domestic and commercial buildings – non emergency exit use
Conforming to BS EN 14351-1:2006+A2:2016 Annex ZA & BS EN 1873**

Essential Characteristics	Performance	Test Standards	Test Source Data
Watertightness ²	PASS	CWCT Sections 9 & Technical Note 41 for building envelopes for Watertightness.	¹ Report: S1 Lantern thermal Report ² Report: CW21276-CWCT ³ Report: 2020_2071_ Rev A: Garnalex Roof Lantern
Dangerous substances	None	BS EN 14351-1: 2006+A2:2016	
Resistance to wind load	NPD	BS EN 12211	
Impact resistance	NPD	BS EN 13049	
Load-bearing capacity ³	NPD	BS EN	
Height & Width (mm)	NPD	BS EN 14351-1 2006+A2:2016	
Ability to release	Not applicable	BS EN 179 & BS EN 1125	
Acoustic performance	NPD	BS EN ISO 140-3	
Thermal transmittance ¹	1.7 W/m ² .k	EN ISO 10077-1 EN ISO 10077-2 EN ISO 12567-1 prEN 12567-2	
Radiation properties	NPD	EN 410	
Air permeability	NPD	BS EN 1026	

This declaration of performance is issued under the sole responsibility of Whiteline Manufacturing Ltd.

Signed on behalf of Whiteline Manufacturing Ltd:

Signature:

Name and Position: Joel Ufton – Managing Director

Date of Issue: 09 May 2023

S1 Rooflight Thermal Calculation

Glass Options

6.8lam

No

Product

DGU 0.01 low-e / Argon

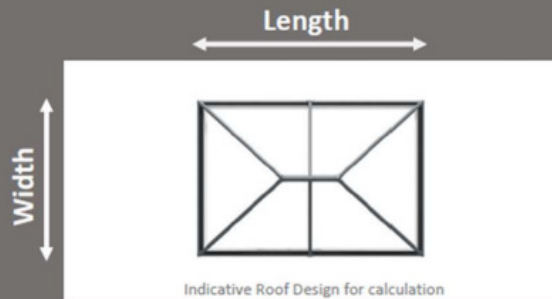
1.0 centre pane

U_d-value

1.59

W/m²·K

U-value for developed area of the lantern roof



Calculation Values

Kerb Ψ

0.35 W/m · K

surface:area ratio

U-value

1.81 W/m² · K

1.14

U_d-value result stated describes the the U-value against the external developed area of the product as specified in Approved Document L1 2021. DoP is based on a 2180mm x 2500mm product (reference glazed product sizes for U-value calculation BS EN 14351-1:2018).

U_f results for all sections are included in this complete roof thermal calculation (Ridge, Hips, Rafters, Jack Rafters, Eaves Beam).

"Kerb Ψ " is the specified backstop for the Kerb to the Roof in BR443:2019 - for reference only; not included in any calculations.

All glazing results are calculated to BS EN 673 - centre pane U-value of glazing units in the vertical plane.

Thermal models to BS EN 10077-1:2017 / BS EN 10077-2:2017 in vertical plane; to guidance of BR443 an adjustment of +0.4 W/m²·K should be applied to allow for installation with 25deg pitch.

ver 0.4

Calculation:

S1 Roof Lantern

25/03/2022

Panel Value:

Panel thickness, $d_p = d_g =$

0.028 m

$\lambda_p = 0.035$ W/(m·K)
 $R_{se} = 0.04$ m²·K / W
 $R_{tot} = 0.9700$ m²·K / W

$R_p = 0.8000$ m²·K / W
 $R_{si} = 0.13$ m²·K / W
 $U_p = 1.0309$ W/(m²·K)

Simulation values

Centre Pane U Value

1.070

Actual dimensions

Frame Length

Panel Length

Simulation with Panel

	UFD	U _p	bf	bp	U _f
Ridge	0.578	1.031	0.098	0.380	1.90457
Hip	0.559	1.031	0.060	0.380	2.79412
Upstand (Eaves)	0.423	1.031	0.069	0.190	3.28875
Rafter	0.511	1.031	0.050	0.380	2.38895
Jack Rafter	0.511	1.031	0.050	0.380	2.38295

Linear thermal transmittance calc

Work out as above

Centre Pane U Value

	UFD ² D	U _f	U _g	bf	bg	PSI
Ridge	0.638	1.905	1.070	0.098	0.380	0.04425
Hip	0.632	2.794	1.070	0.060	0.380	0.05785
Upstand (Eaves)	0.459	3.289	1.070	0.069	0.190	0.02858
Rafter	0.585	2.389	1.070	0.050	0.380	0.05845
Jack Rafter	0.585	2.383	1.070	0.050	0.380	0.05905

Glazing area calc

Area / m2

U values

AU

Ag	4.25	1.070	4.547329356
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Frame Area Calc

	Area / m2	U values	AU	Total measured area	Total calculated area
Ridge	0.03	1.9046	0.059727175		
Hip	0.34	2.7941	0.947206485		
Upstand (Eaves)	0.61	3.2887	1.99692866		
Rafter	0.19	2.3889	0.46393379		
Jack Rafter	0.00	2.3829	0		
Af	1.17				

Perimeter calc

lg

PSI

	lg	PSI	
Ridge	0.32	0.0443	0.014160825
Hip	5.77	0.0579	0.33380887
Upstand (Eaves)	8.80	0.0286	0.25147134
Rafter	1.94	0.0585	0.113514905
Jack Rafter	0.00	0.0591	0
	16.83		

U-value

1.81

U-value to be converted to U_d-value by developed area ratio calculation

S1 Rooflight Thermal Calculator

Glass Options

6.8lam

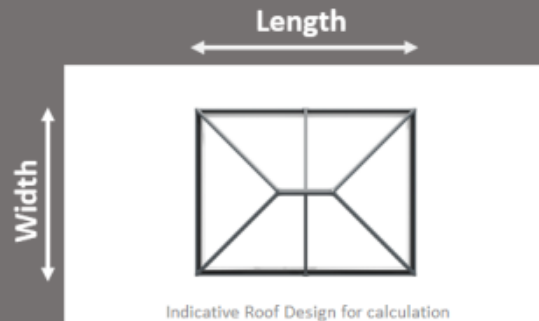
No

Product

DGU 0.05 low-e / Argon 1.2 centre pane

U_d-value **1.73** W/m²·K

U-value for developed area of the lantern roof



Calculation Values

Kerb Ψ 0.35 W/m · K surface:area ratio
 U-value 1.98 W/m² · K 1.14

U_d-value result stated describes the the U-value against the external developed area of the product as specified in Approved Document L1 2021. DoP is based on a 2180mm x 2500mm product (reference glazed product sizes for U-value calculation BS EN 14351-1:2018).

U_f results for all sections are included in this complete roof thermal calculation (Ridge, Hips, Rafters, Jack Rafters, Eaves Beam).

"Kerb Ψ " is the specified backstop for the Kerb to the Roof in BR443:2019 - for reference only; not included in any calculations.

All glazing results are calculated to BS EN 673 - centre pane U-value of glazing units in the vertical plane.

Thermal models to BS EN 10077-1:2017 / BS EN 10077-2:2017 in vertical plane; to guidance of BR443 an adjustment of +0.4 W/m²·K should be applied to allow for installation with 25deg pitch.

ver 0.4

Calculation:	S1 Roof Lantern	28.04/2022
Panel Value:	Panel thickness, d _p = d _u =	0.028 m
λ_p =	0.035 W/(m·K)	R_p = 0.8000 m ² K/W
R_{in} =	0.04 m ² K/W	R_{in} = 0.13 m ² K/W
R_{ex} =	0.9700 m ² K/W	U_p = 1.0309 W/(m ² ·K)

Simulation values

Centre Pane U Value	Actual dimensions				
	UFD	U _p	Frame Length bf	Panel Length bp	U _f
Simulation with Panel					
Ridge	0.578	1.031	0.098	0.380	1.90457
Hip	0.559	1.031	0.080	0.380	2.79412
Upstand (Eaves)	0.423	1.031	0.069	0.190	3.28875
Rafter	0.511	1.031	0.050	0.380	2.38895
Jack Rafter	0.511	1.031	0.050	0.380	2.38295

Linear thermal transmittance calc	Work out as above					Centre Pane U Value		
	UFD	U _f	U _g	bf	bg	PSI		
Ridge	0.703	1.905	1.219	0.098	0.380	0.05303		
Hip	0.694	2.794	1.219	0.080	0.380	0.06333		
Upstand (Eaves)	0.501	3.289	1.219	0.069	0.190	0.04207		
Rafter	0.639	2.389	1.219	0.050	0.380	0.05833		
Jack Rafter	0.639	2.383	1.219	0.050	0.380	0.05703		

Glazing area calc	Area / m2			U values		AU	
	Ag						
Frame Area Calc	4.25	1.219	5.18055594				
Ridge	0.03	1.9046	0.059727175	Total measured area			
Hip	0.34	2.7941	0.947206485	Total calculated area			
Upstand (Eaves)	0.61	3.2887	1.99692886				
Rafter	0.19	2.3889	0.46393379				
Jack Rafter	0.00	2.3829	0				
Σ	1.17						

Perimeter calc	lg		PSI	
Ridge	0.32	0.0530	0.016970425	
Hip	5.77	0.0633	0.365428422	
Upstand (Eaves)	8.80	0.0421	0.37018334	
Rafter	1.94	0.0583	0.109397885	
Jack Rafter	0.00	0.0570	0	
Σ	16.83			

U_w **1.98** U-value to be converted to U_d-value by developed area ratio calculation