

# Summary of U Value Calculation

Undertaken by Slide and Fold, of WeatherShield Ltd

Reference Number: Tilt and Turn- Option 2 Glass

Uvalue override reference:

Liniar Window: T & T

Calculation Date: 12/06/2011

Calculated following the principles of EN ISO 10077-1:2006



## Basic Dimensions

Width of Opening: 1230 mm

Height of Opening: 1480 mm

## Window Glazing Profile

Number of Spaces: 1 (Double Glazing)

Gas Temperature: 283.15 K (10°C)

Normal Emissivity of Internal Glass Surface: 0.89

Space	Width	Gas Type
1	20 mm	10% Air : 90% Argon

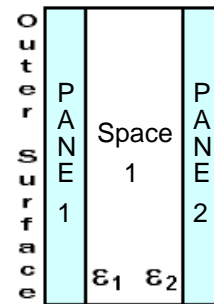
Space	e1	e2
1	0.05 (0.06 corr)	0.89 (0.84 corr)

Pane	Thickness
1	4 mm
2	4 mm

Total Thickness of Glazing: 28 mm

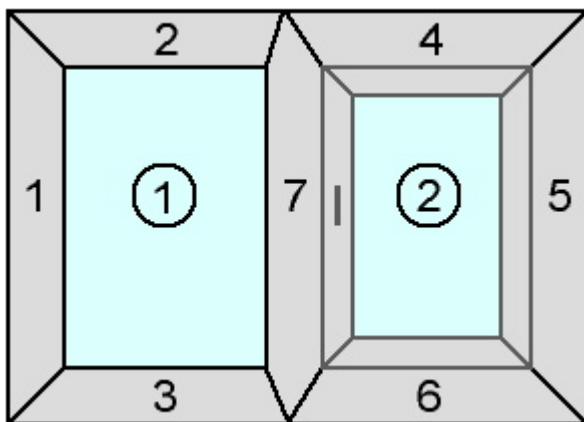
External Heat Transfer Coefficient: 23 W/m<sup>2</sup>.K

Internal Heat Transfer Coefficient: 8.0 W/m<sup>2</sup>.K



## Configuration of Unit: Frame & Pane Areas

Numbers on each frame edge correspond to the Frame Side in the frame table on the next page, and Circled Numbers refer to the Pane in the panes table.



## Summary of U Value Calculation (ctd)



Liniar Window: T & T

Calculation Date: 12/06/2011

### Window Frame

Side	A f,i	A f,e	A frame	Int. Frame W	Ext. Frame W
1	0.108 m <sup>2</sup>	0.108 m <sup>2</sup>	0.108 m <sup>2</sup>	77 mm	77 mm
2	0.043 m <sup>2</sup>	0.043 m <sup>2</sup>	0.043 m <sup>2</sup>	77 mm	77 mm
3	0.043 m <sup>2</sup>	0.043 m <sup>2</sup>	0.043 m <sup>2</sup>	77 mm	77 mm
4	0.066 m <sup>2</sup>	0.066 m <sup>2</sup>	0.066 m <sup>2</sup>	131 mm	131 mm
5	0.177 m <sup>2</sup>	0.177 m <sup>2</sup>	0.177 m <sup>2</sup>	131 mm	131 mm
6	0.066 m <sup>2</sup>	0.066 m <sup>2</sup>	0.066 m <sup>2</sup>	131 mm	131 mm
7	0.193 m <sup>2</sup>	0.193 m <sup>2</sup>	0.193 m <sup>2</sup>	141 mm	141 mm

U frame
1.33
1.33
1.33
1.40
1.54
1.40
1.64

$$\Sigma A_{\text{frame}} : 0.694 \text{ m}^2$$

$$\Sigma A_{\text{frame}} \cdot U_{\text{frame}} : 1.030 \text{ W/K}$$

### Window Panes

Pane	Type	A panel	U panel	Perimeter	Spacer
1	Glass	0.651 m <sup>2</sup>	1.221 W/m <sup>2</sup> .K	3.634 m	Aluminium Generic
2	Glass	0.475 m <sup>2</sup>	1.221 W/m <sup>2</sup> .K	3.216 m	Aluminium Generic

PSI
0.080
0.080

$$\Sigma A_{\text{panel}} : 1.126 \text{ m}^2$$

$$\Sigma A_{\text{panel}} \cdot U_{\text{panel}} : 1.376 \text{ W/K}$$

$$\Sigma l_{\text{panel}} \cdot \psi_{\text{panel}} : 0.548 \text{ W/K}$$

Total Thermal Conductance of Glazing: 1.54W/m<sup>2</sup>.K

Final U Value for Unit: 1.6 W/m<sup>2</sup>.K