



Standard Products



Decorative



Privacy



Thermal Insulation



Solar Control



Sound Control



Easy Clean



Fire Protection



Security Safety

WINDOW

DISTRIBUTION LIMITED

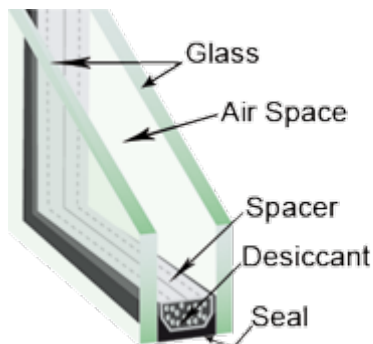
Glazing Solutions



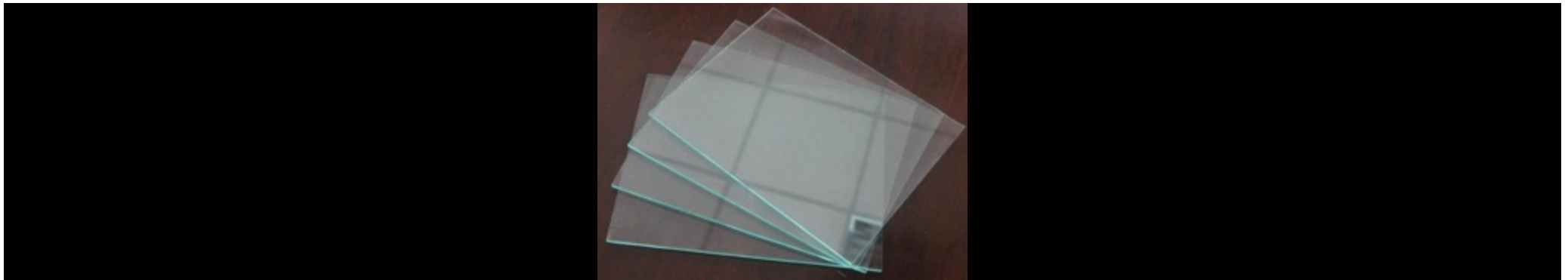
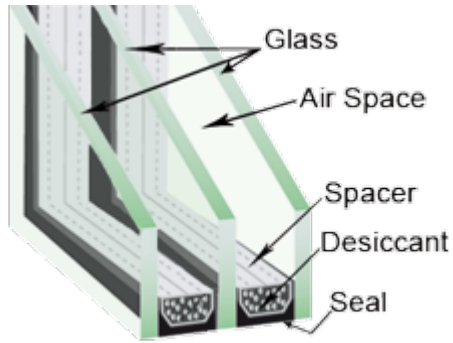
(i)- An Introduction to Insulated Glass Units

An Insulating glass unit is the most effective way to reduce air-to-air thermal transfer through the glazing. When used in conjunction with low emissivity and/or reflective glass coatings, IGU's become effective means to conserve energy and comply with UK Building Regulations such as (Document "L").

A Double Glazed Unit (DGU / Insulating Glass Unit) refers to two pieces of glass sealed around the edges with a perimeter spacer bar (creating a cavity between) to form a single unit.



A Triple Glazed Unit (Insulating Glass Unit) refers to three pieces of glass sealed around the edges with two spacer bars (creating two cavities between) to form a single unit.



(i)- Glass Types

Homeowners, Architects & Builders have more and more glass types to choose from than ever before. Making the right choice of glass can make a tremendous difference to the Comfort and Efficiency of the finished job. Glass types are available to achieve Thermal Insulation, Solar Control, Self Clean, Privacy, Safety, Security, Sound Control and many more.

In order to choose the right glass, the Homeowner / Architect needs to be aware of what glass types are readily available and what performance can be expected of them. In order to achieve this we have compiled performance tables so customers can make educated and informed decisions.



Privacy

Patterned & Privacy Glass

Patterned Glass can be used where privacy is required, 5 Levels of Privacy are available (1=Least obscure, 5=Most Obscure)

Sandblasted and Satin Glass can also be used for privacy or decorative applications

Tinted Glass can also be used for privacy or decorative applications



**Thermal
Insulation**

Thermal Insulation Glass

Generally called Low "E" glass (Low Emissivity). Relatively neutral in appearance, low-e coatings such as Planitherm Total + or Pilkington K reduce heat loss by reflecting long-wave infrared energy (heat) and, therefore decrease the "U" value and improve energy efficiency.

A lower U-value indicated better insulating properties. The unit of measure is W/m² K.



**Solar
Control**

Solar Control Glass

Usually used in more Commercial buildings but Solar Control Glass is becoming more popular in Conservatories and South facing elevations where rooms can get too hot in the summer. (See section on Solar Control).



**Sound
Control**

Sound Control Glass

Sound Control glass is available in different thicknesses with different performance figures. It is used to reduce the noise levels from Vehicles, Road works & Pedestrians. (See section on Sound Control).



Easy
Clean

Easy Clean Glass

Easy clean glass is ideal for hard to reach areas such as conservatory roofs and high level windows and it is being used more and more (See section on Easy Clean).



Fire
Protection

Fire Protection Glass



Security
Safety

Safety and Security Glass

WINDOW

DISTRIBUTION
LIMITED



(iii)- Spacer Bar Types,
Colours & Widths

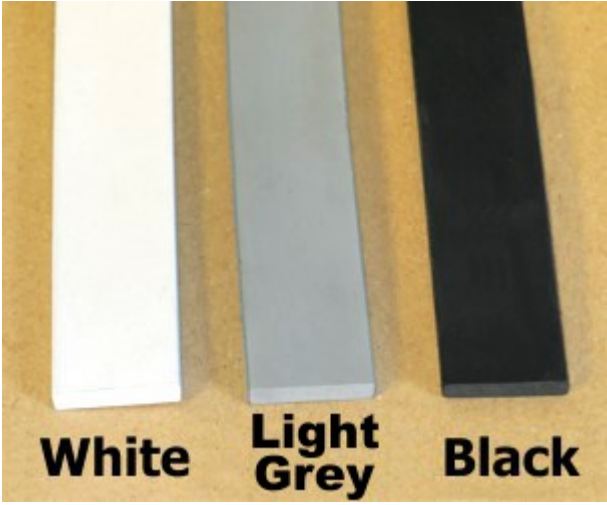
Spacer bars are available in two main types. Aluminium (conventional) spacer bar and Warm Edge technology spacer bar (such as Edgetech Super Spacer).

Conventional Spacer Bar	6mm	8mm	10mm	12mm	14mm	16mm	18mm	20mm
 Silver	✓	✓	✓	✓	✓	✓	✓	✓
 White	✓	✓	✓	✓	✓	✓	✓	✓
 Gold	✓	*	*	✓	*	✓	*	✓
 Bronze	✓	✓	✓	✓	✓	✓	✓	✓
 Black	*	✓	*	✓	*	✓	*	✓

✓	Width available from stock.
*	Width available to order. (Requires longer lead time)



(iv)- Super Spacer
(Warm Edge Technology)

Warm-edge Super Spacer		Colour	6mm	8mm	10mm	12mm	14mm	16mm	18mm	20mm
	Black	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Light Grey	*	*	*	✓	✓	✓	*	✓	
	White	*	*	*	*	*	✓	*	✓	

To see more information about Warm-edge Super Spacer please go to page

✓	Width available from stock.
*	Width available to order. (Requires longer lead time)



(v)- Argon Filled Units

A few facts about Argon filled units.

- Argon is Clear, Colourless and Odourless. Even side by side you cannot see the difference between a unit filled with Argon or Air.
- Argon does not conduct Heat/Cold as readily as air. Therefore it reduces heat loss and minimises condensation in your home. It lowers the U-value which is the measurement of heat loss.
- Argon is not dangerous. It is already in the air you breathe. It is non-toxic, sunlight stable, colourless, odourless and Inert. Nor does it block any sunlight entering your home.
- Argon gas filled IGU's help save you money on your fuel bills and reduces condensation.
- Argon helps IGU's to perform better by reducing the U-value. See Examples below

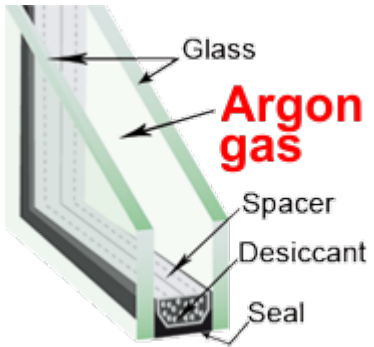
Double Glazed Units

Insulated Glass Unit construction	With Air	With Argon
4 / 16 / 4 Clear & Clear Glass	2.7 U-value	2.5 U-value
4 / 16 / 4 Clear Glass with Pilkington 'K' (Hard coat Low-E).	1.7 U-value	1.5 U-value
4 / 16 / 4 Clear Glass with Planitherm Total + (Soft coat Low-E).	1.4 U-value	1.2 U-value
4 / 16 / 4 Clear Glass with Planitherm 4S (Low E & Solar Control).	1.2 U-value	1.0 U-value

Reducing the U-value can help you to reduce your fuel bills.

WINDOW

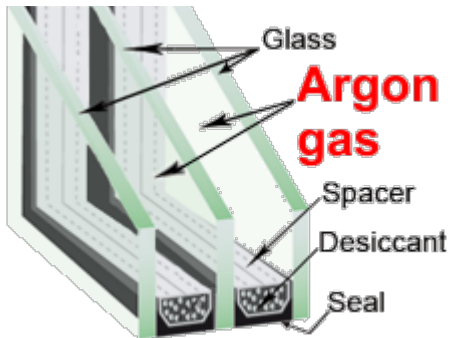
DISTRIBUTION
LIMITED



Triple Glazed Units

Insulated Glass Unit construction	With Air	With Argon
4 / 16 / 4 / 16 / 4 Clear, Clear, Planitherm Total+ Glass	1.1 U-value	0.9 U-value
4 / 16 / 4 / 16 / 4 Clear, Planitherm Total+, Planitherm Total+	0.8 U-value	0.6 U-value

Reducing the U-value can help you to reduce your fuel bills.

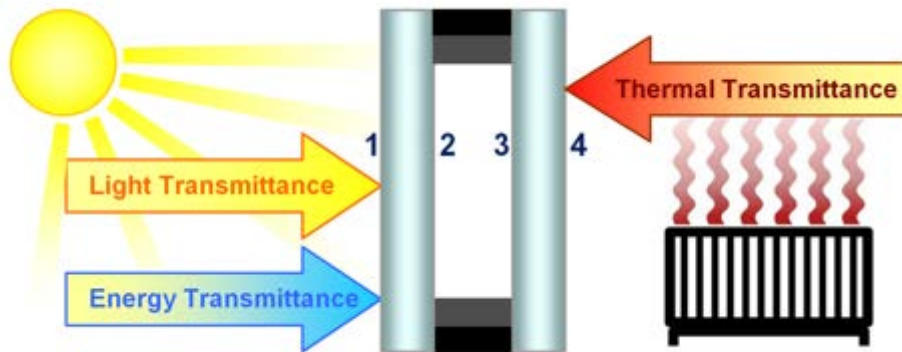




(vi)-U-Value Tables

Getting the best U-value means picking the best glass combination, spacer type and cavity fill (argon). The table below will help you to see the differences

Double Glazed Units



Thermal Transmittance values represent the amount of heat lost through glazing. A lower U Value (W/m^2K) is a better option for energy efficient glazing.

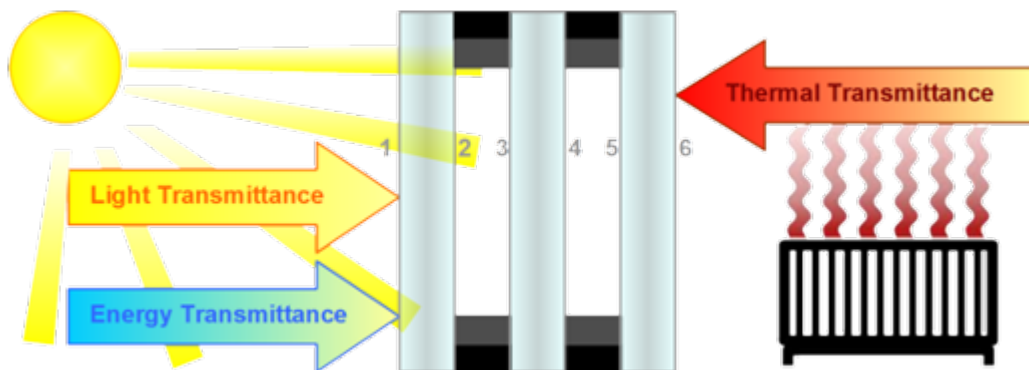
Light Transmittance values represent the amount of light or glare which gets through glazing. A lower percentage is a better option for roof glazing.

Energy Transmittance values represent the amount of solar heat which gets through glazing. A higher g factor is a better option for achieving Window Energy

Triple Glazed Units

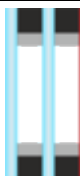

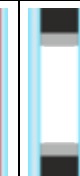
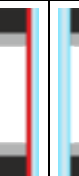


WINDOW

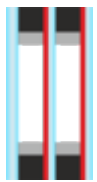
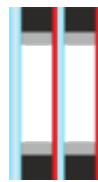
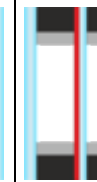
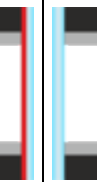
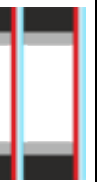

DISTRIBUTION LIMITED



Thermal Transmittance values represent the amount of heat lost through glazing. A lower U Value (W/m^2K) is a better option for energy efficient glazing.
Light Transmittance values represent the amount of light or glare which gets through glazing. A lower percentage is a better option for roof glazing.
Energy Transmittance values represent the amount of solar heat which gets through glazing. A higher g factor is a better option for achieving Window Energy

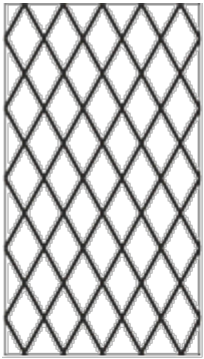
Ratings.

		Triple Glazed Units			Cavity Size(mm) (For full Summary of unit configuration click on value below)						
		Outer Glass	Centre Glass	Inner Glass	Cavity	Transmittance					
							8 - 8	10-10	12 - 12	16 - 16	20 - 20
 SAINT-GOBAIN All calcs taken from Saint-Gobain Calumen 1/3/2012	Clear	Clear	Planitherm Total+ (Low E coating to Side 5)	Air	Thermal ($W/m^2 K$)	<u>1.6</u>	<u>1.4</u>	<u>1.3</u>	<u>1.1</u>	<u>1.1</u>	
					Light (%)	<u>73</u>	<u>73</u>	<u>73</u>	<u>73</u>	<u>73</u>	
					Energy (g factor)	<u>0.63</u>	<u>0.63</u>	<u>0.63</u>	<u>0.63</u>	<u>0.63</u>	
	Clear	Clear	Planitherm Total+ (Low E coating to Side 5)	Argon (90%)	Thermal ($W/m^2 K$)	<u>1.3</u>	<u>1.2</u>	<u>1.1</u>	<u>0.9</u>	<u>0.9</u>	
					Light (%)	<u>73</u>	<u>73</u>	<u>73</u>	<u>73</u>	<u>73</u>	
					Energy (g factor)	<u>0.63</u>	<u>0.63</u>	<u>0.63</u>	<u>0.63</u>	<u>0.63</u>	

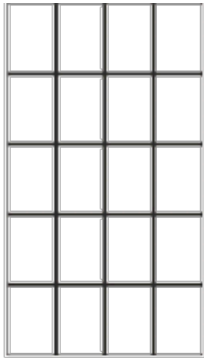
	Outer Glass	Centre Glass	Inner Glass	Cavity	Transmittance					
						8 - 8	10 - 10	12 - 12	16 - 16	20 - 20
 SAINT-GOBAIN All calcs taken from Saint-Gobain Calumen 1/3/2012	Clear	Planitherm Total+ (Low E coating to Side 3)	Planitherm Total+ (Low E coating to Side 5)	Air	Thermal (W/m ² K)	<u>1.3</u>	<u>1.1</u>	<u>1.0</u>	<u>0.8</u>	<u>0.7</u>
					Light (%)	<u>71</u>	<u>71</u>	<u>71</u>	<u>71</u>	<u>71</u>
					Energy (g factor)	<u>0.6</u>	<u>0.6</u>	<u>0.61</u>	<u>0.61</u>	<u>0.61</u>
	Clear	Planitherm Total+ (Low E coating to Side 3)	Planitherm Total+ (Low E coating to Side 5)	Argon (90%)	Thermal (W/m ² K)	<u>1.0</u>	<u>0.9</u>	<u>0.8</u>	<u>0.6</u>	<u>0.6</u>
					Light (%)	<u>71</u>	<u>71</u>	<u>71</u>	<u>71</u>	<u>71</u>
					Energy (g factor)	<u>0.61</u>	<u>0.61</u>	<u>0.61</u>	<u>0.61</u>	<u>0.61</u>



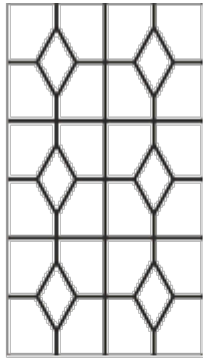
(vii)- Decorative Units



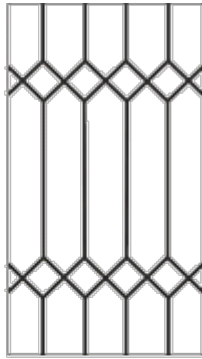
Diamonds



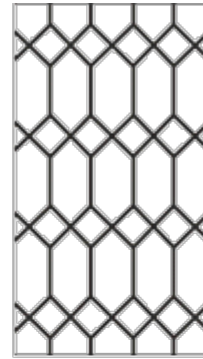
Squares



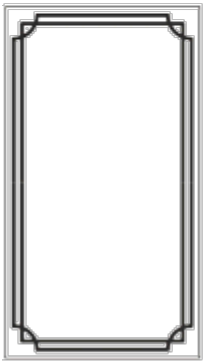
Queen Anne



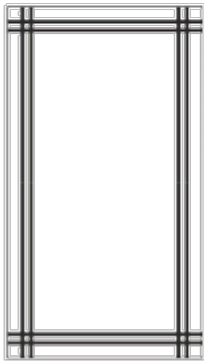
Stuart



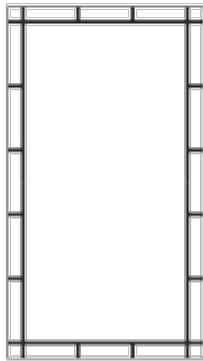
Windsor



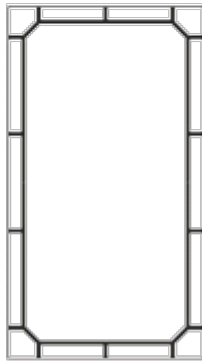
Cleveland
Border



Oxford
Border



Westmorland
Border



Cumberland
Border



(viii)- Shaped & Stepped Units