



# Pilkington Planar™ System Information

## Pilkington Planar™ Insulating Glass Units (IGUs)

### Pilkington Planar™ IGUs with 6mm Pilkington Optifloat™ Clear inner pane and 16mm airspace

Outer Pane Glass Type	Colour	Thickness (mm)	Light Transmittance LT	Light Reflectance LR	Total Solar Radiant Heat Transmittance	Total Shading Coefficient	U Value (W/m²K)	R <sub>w</sub> Value (dB)
Pilkington Optifloat™	Clear	10	0.78	0.14	0.67	0.77	2.7	38
		12	0.77	0.14	0.65	0.75	2.7	38
		15	0.76	0.14	0.62	0.71	2.7	40
Pilkington Optifloat™	Bronze	10	0.28	0.06	0.34	0.39	2.7	38
		10	0.23	0.05	0.33	0.38	2.7	38
		10	0.59	0.10	0.38	0.44	2.7	38
Pilkington Optiwhite™	Green	10	0.81	0.15	0.78	0.90	2.7	38
		12	0.81	0.15	0.78	0.90	2.7	38
		15	0.81	0.15	0.77	0.89	2.7	40
Pilkington Arctic Blue™	Blue	10	0.33	0.06	0.28	0.32	2.7	38
Pilkington Suncool™ HP	Neutral 70/40	10	0.68	0.10	0.40	0.46	1.4	38
		10	0.52	0.08	0.39	0.45	1.5	38
		10	0.50	0.15	0.37	0.43	1.6	38
		10	0.64	0.21	0.42	0.48	1.4	38
		10	0.50	0.35	0.31	0.36	1.4	38
		10	0.65	0.15	0.35	0.40	1.3	38
		10	0.49	0.17	0.27	0.31	1.3	38
		10	0.29	0.24	0.19	0.22	1.3	38
		10	0.49	0.19	0.32	0.37	1.3	38

### Pilkington Planar™ IGUs with 6mm Pilkington K Glass™ inner pane and 16mm airspace

Outer Pane Glass Type	Colour	Thickness (mm)	Light Transmittance LT	Light Reflectance LR	Total Solar Radiant Heat Transmittance	Total Shading Coefficient	U Value (W/m²K)	R <sub>w</sub> Value (dB)
Pilkington Optifloat™	Clear	10	0.72	0.16	0.63	0.72	1.7	38
		12	0.72	0.16	0.61	0.70	1.7	38
		15	0.71	0.16	0.58	0.67	1.7	40
Pilkington Optifloat™	Bronze	10	0.26	0.06	0.29	0.33	1.7	38
		10	0.22	0.05	0.29	0.33	1.7	38
		10	0.55	0.11	0.34	0.39	1.7	38
Pilkington Optiwhite™	Green	10	0.75	0.17	0.75	0.86	1.7	38
		12	0.75	0.17	0.75	0.86	1.7	38
		15	0.75	0.17	0.74	0.85	1.7	40
Pilkington Arctic Blue™	Blue	10	0.30	0.07	0.24	0.28	1.7	38

### Pilkington Planar™ IGUs with 6mm Pilkington Optitherm™ SN, inner pane and 16mm airspace

Outer Pane Glass Type	Colour	Thickness (mm)	Light Transmittance LT	Light Reflectance LR	Total Solar Radiant Heat Transmittance	Total Shading Coefficient	U Value (W/m²K)	R <sub>w</sub> Value (dB)
Pilkington Optifloat™	Clear	10	0.76	0.11	0.57	0.66	1.4	38
		12	0.76	0.11	0.55	0.63	1.4	38
		15	0.74	0.11	0.53	0.61	1.4	40
Pilkington Optifloat™	Bronze	10	0.28	0.05	0.25	0.29	1.4	38
		10	0.23	0.05	0.25	0.29	1.4	38
		10	0.57	0.08	0.33	0.38	1.4	38
Pilkington Optiwhite™	Green	10	0.79	0.12	0.66	0.76	1.4	38
		12	0.79	0.12	0.65	0.75	1.4	38
		15	0.79	0.12	0.65	0.75	1.4	40
Pilkington Arctic Blue™	Blue	10	0.32	0.06	0.23	0.26	1.4	38

All performance data determined in accordance with EN 410 and EN 673



PILKINGTON

## Pilkington **Planar**<sup>TM</sup> Units – Glass Types

Glass Type	Colour	6mm	10mm	12mm	15mm	19mm	Notes
Pilkington <b>Optifloat</b> <sup>TM</sup>	Clear	✓	✓	✓	✓	✓	
Pilkington <b>Optifloat</b> <sup>TM</sup>	Grey	✓	✓				
	Bronze	✓	✓				
	Green	✓	✓				
Pilkington <b>Optiwhite</b> <sup>TM</sup>		✓	✓	✓	✓		
Pilkington <b>Arctic Blue</b> <sup>TM</sup>	Blue	✓	✓				
Pilkington <b>K Glass</b> <sup>TM</sup>		✓					
Pilkington <b>Optitherm</b> <sup>TM</sup> SN		✓					<i>Subject to minimum quantity. Max. size 2400 x 4200mm</i>
Pilkington <b>Suncool</b> <sup>TM</sup> HP		✓	✓				<i>Subject to minimum quantity. Max. size 2400 x 4200mm</i>
Pilkington Decorative Glass Screen Printed		✓	✓	✓	✓	✓	<i>Maximum screened area 2400 x 4500mm (See enclosed data sheet for further details)</i>

## Specification – Pilkington **Planar**<sup>TM</sup> IGUs

### Composition

Pilkington **Planar**<sup>TM</sup> IGUs are manufactured from two Pilkington T glass Plus panes and reference should be made to the Single Pilkington **Planar**<sup>TM</sup> specification.

### Outer glass

Outer glass to conform to single Pilkington **Planar**<sup>TM</sup> specification.

### Inner glass

Thickness: 6mm ±0.2mm

Pilkington **Planar**<sup>TM</sup> Insulating Glass Units

Airspace: 16mm ±1mm

Depth of silicone seal: Minimum 5mm

Aluminium spacer depth: 7mm

Spacer colour: Black or natural

Overall thickness: ±2mm tolerance

### Glass size – rectangles

Maximum: 2400 x 4800mm 0 + 4.5mm

Minimum: 360 x 900mm 0 + 4.5mm

Aspect ratio: 10:1 Maximum

Diagonal tolerances:

Up to 4m: 3mm Maximum difference

Over 4m: 4mm Maximum difference

Overall thickness: 80mm Maximum

### Shape capability

Rectangles and simple shapes. All tolerances will vary depending on the complexity of shape.

### Roller wave – both glasses in same direction

Mean roller wave depth: 0.02mm

Maximum edge dip: 0.25mm

Roller wave is usually parallel to the short side and in coated glasses should be glazed horizontally where possible.

### Edge condition

Smooth ground edges giving a flat profile with small ground arris. Shells or chips at edges will be ground out prior to toughening and do not constitute reason for rejection. Corners may be dubbed. Some variation in edgework may be discernible on exposed edges where different machines and/or hand forming is a requirement for manufacture. Such variations shall be kept to a minimum.

Where the detail of a structure is such that the double glazing edge sealant is fully exposed, minor undulations in the edge seal may be discernible particularly near corners of the unit.

### Hole drilling – rectangles

Diameter: 34mm ±1mm

Diameter: 19mm ±1mm Countersunk

Position: Normally 60mm from glass edge at corners and sometimes along edge. Other configurations subject to confirmation.

Tolerance: ±2mm from one datum point.

Number: Up to 10

### Toughening stress

Thermally toughened soda glass silicate safety glass to EN 12150. Classified as 1 (C) 1 to EN 12600. Checked regularly during production by fracture count or the Differential Stress Refractometer (DSR) method.

### Heat Soak Testing

All toughened glass will be supplied heat soaked to international specifications eg prEN 14179-1, DIN 18516.

### Glass marking

Glass will be marked with the Pilkington toughening stamp and will show compliance with regulatory requirements. The mark will be on each glass pane. Multiple panes will not necessarily be marked in the same corner.

### Visual quality

#### Distortion

Pilkington **Planar**<sup>TM</sup> IGUs are manufactured from two Pilkington T glass Plus panes which have minimal effect on visual transmission through the glass but some distortion can be seen in reflection. The air in all sealed units expands and contracts in hot and cold weather causing the glass to bow out and in respectively and again reflections will reflect this movement. Site inspection should be from a distance of 3m and at right angles to the glass.

#### Installation

Whilst the Pilkington **Planar**<sup>TM</sup> system is completely weatherproof, the components are not designed to be left in contact with water for extended periods, and adequate ventilation or drainage should be provided to allow the system to dry out periodically. Weatherseals used around the periphery must be compatible with the Pilkington **Planar**<sup>TM</sup> system and approval from Pilkington should be sought prior to application.

This publication gives a general description of the product and materials. It is the responsibility of the users of this document to ensure that the proposed application of the product is appropriate and that such application complies with all relevant local and national legislation, standards, codes of practice and other requirements. To the extent allowed by law Pilkington United Kingdom Limited hereby disclaims all liability howsoever arising from any error in or omission from this publication and all consequences of relying on it.



**PILKINGTON**

**Pilkington Architectural**

Borough Road St Helens WA10 3WA

Tel: 01744 692000 Fax: 01744 451326

**Pilkington United Kingdom Limited**

www.pilkington.com