



Pilkington **Planar**[™] System Information

Pilkington **Planar**[™] Laminated Insulating Glass Units (IGUs)

Pilkington **Planar**[™] Laminated IGUs

Performance of typical combinations with clear interlayer

Pilkington T glass Plus Outer Leaf	Heat Strengthened Glasses forming Laminated Inner Leaf	Light Transmittance LT	Light Reflectance LR	Total Solar Radiant Heat Transmittance	Total Shading Coefficient	U Value (W/m ² K)	R _w Value (dB)
Pilkington Optifloat [™] Clear 10mm	Pilkington Optifloat [™] Clear 6mm + 6mm	0.73	0.14	0.64	0.74	2.6	41
	6mm + 6mm	0.72	0.13	0.61	0.70	2.6	42
	6mm + 6mm	0.70	0.13	0.57	0.66	2.6	43
Pilkington Optifloat [™] Clear 10mm	Pilkington K Glass [™] & Pilkington Optifloat [™] Clear 6mm + 6mm	0.68	0.16	0.62	0.71	1.7	41
	6mm + 6mm	0.67	0.16	0.59	0.68	1.7	42
	6mm + 6mm	0.65	0.15	0.55	0.63	1.7	43
Pilkington Optiwhite [™] 10mm	Pilkington Optiwhite [™] 6mm + 6mm	0.81	0.15	0.78	0.90	2.6	41
	6mm + 6mm	0.80	0.15	0.78	0.90	2.6	42
	6mm + 6mm	0.80	0.15	0.77	0.89	2.6	43
Pilkington Optiwhite [™] 10mm	Pilkington K Glass [™] & Pilkington Optiwhite [™] 6mm + 6mm	0.75	0.17	0.75	0.86	1.7	41
	6mm + 6mm	0.74	0.17	0.75	0.86	1.7	42
	6mm + 6mm	0.74	0.17	0.74	0.85	1.7	43
Pilkington Activ [™] Clear 10mm	Pilkington K Glass [™] & Pilkington Optifloat [™] Clear 6mm + 6mm	0.64	0.21	0.60	0.69	1.7	41
Pilkington Activ [™] Blue 10mm	Pilkington K Glass [™] & Pilkington Optifloat [™] Clear 6mm + 6mm	0.27	0.15	0.23	0.26	1.7	41
*Planar Sun 10mm 73/39	Pilkington Optifloat [™] Clear 6mm + 6mm	0.66	0.10	0.40	0.46	1.3	41
*Planar Sun 10mm 68/34	6mm + 6mm	0.61	0.09	0.35	0.40	1.3	41
*Planar Sun 10mm 66/33	6mm + 6mm	0.60	0.15	0.35	0.40	1.3	41
*Planar Sun 10mm 52/29	6mm + 6mm	0.47	0.09	0.30	0.34	1.3	41
*Planar Sun 10mm 50/25	6mm + 6mm	0.45	0.09	0.26	0.30	1.3	41
*Planar Sun 10mm 70/36	6mm + 6mm	0.64	0.11	0.37	0.43	1.3	41

*Please note that these are a selection of Solar Control glasses within the range and the performance data supplied is indicative only and can vary subject to the substrate used. Technical data has been calculated according to EN 410 and EN 673. The above table has been updated to take into account the declared values of radiation and thermal properties required for CE Marking. R_w Value is indicative for PVB interlayer product only and will be subject to minor variations dependent upon the size of the glass panels and the number of fittings required.

Pilkington **Planar**[™] Laminated IGUs – Glass Types

Glass Type	Colour	4mm	6mm	8mm	10mm	12mm	15mm	19mm	Notes
Pilkington Optifloat [™]	Clear	✓	✓	✓	✓	✓	✓	✓	
Pilkington Optifloat [™]	Grey	✓	✓		✓				
	Bronze	✓	✓		✓				
	Green	✓	✓		✓				
Pilkington Optiwhite [™]	Clear	✓	✓		✓	✓	✓	✓	
Pilkington Arctic Blue [™]	Blue	✓	✓		✓				
Pilkington K Glass [™]	Clear	✓	✓						
Planar Sun			✓		✓				<i>Subject to minimum quantity. Max. size 2000 x 3600mm</i>
Pilkington Decorative Glass Screen printed		✓	✓	✓	✓	✓	✓	✓	<i>Maximum screened area 2000 x 3600mm (See enclosed data sheet for further details)</i>
Pilkington Activ [™] Clear and Pilkington Activ [™] Blue	Clear Blue		✓		✓				

Notes

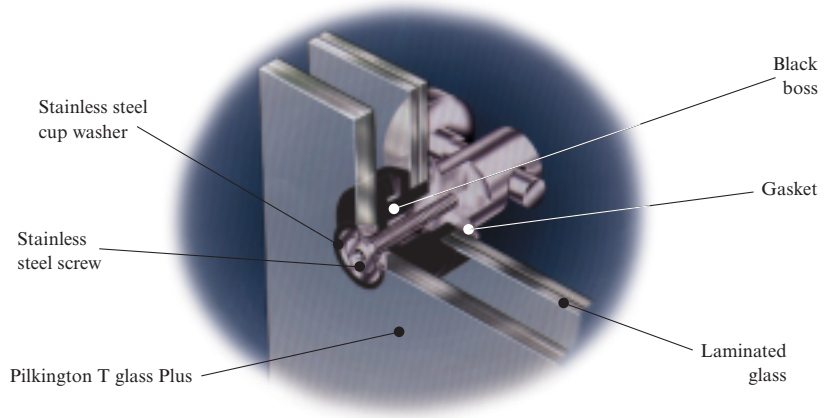
Pilkington **Planar**™ Laminated IGUs are available with a selection of interlayers including PVB and SentryGlas®.

Silicone perimeter seals must be compatible with Pilkington Laminated Safety Glass.

A wide range of glass combinations and a choice of clear, translucent and coloured interlayers are available with laminated glasses. Please refer to Pilkington Architectural for advice.

In line with regulations applicable in many European countries, Pilkington recommend the use of laminated glass in overhead or sloping overhead glazing.

905 Fitting to Double Glazed Pilkington **Planar**™ Laminated IGUs.



Specification – Pilkington **Planar**™ Laminated IGUs

Composition

Pilkington **Planar**™ Laminated IGUs are manufactured from an outer pane of Pilkington T glass Plus and one laminated inner glass comprising of 4mm, 6mm or 8mm glasses. The use of heat strengthened or toughened glass in the laminate is dependent on the exact interlayer specification.

Pilkington **Planar**™ Laminated IGUs

Air space:	16mm	±1mm
Depth of silicone seal:	Minimum 4mm	
Aluminium spacer depth:	7mm	
Sight line of unit edge seal:	12mm min.	20mm max.
Spacer colour:	Black or Natural	
Laminated interlayer:	1.52mm or 2.28mm	
There may be a step on each side up to 3mm		
Overall thickness:	±2mm tolerance	

Glass size – rectangles

Maximum (4mm):	2000 x 3000mm	0 + 4.5mm
Maximum (6-19mm):	2000 x 3600mm	0 + 4.5mm
	(Larger sizes upon request)	
Minimum:	300 x 500mm	0 + 4.5mm
Aspect ratio:	14:1 Maximum for larger sizes	
Larger glass sizes and weights greater than 350kg subject to enquiry.		

Shape capability

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

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.
Positional Tolerance:	±2mm from one datum point
Number of holes:	Up to 8

Interlayers available as standard

SentryGlas® or PVB.

Toughening Stress

10/12/15/19mm glass:	Pilkington T glass Plus (Toughened and Heat Soaked)
4/6/8mm glass:	Heat Strengthened or toughened as required by design

Bow

Maximum bow:	0.15% (Float glass)
	0.2% (Ceramic coated glass)

Roller wave

Mean roller wave depth:	0.05mm
Maximum edge dip:	0.25mm
Roller wave is usually parallel to the short side and in coated glass should be glazed horizontal where possible.	

Glass marking

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

Visual quality

Distortion

When laminating toughened or heat strengthened glasses together slight visible distortion in transmission due to the small lens effects will be noted with increase in viewing angle. The phenomenon is not normally a problem in roof glazing, but may be discernible in vertical glazing. 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. On occasion, such effects can be increased by the specification of a coated glass within the unit. Site inspection should be from a distance of 3m and at right angles to the glass.

Installation

Whilst the Pilkington **Planar**™ 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**™ 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. For more information about Pilkington **Planar**™, please visit www.pilkington.co.uk/planar



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