



Pilkington Planar™ System Information

Pilkington Planar™ Triple

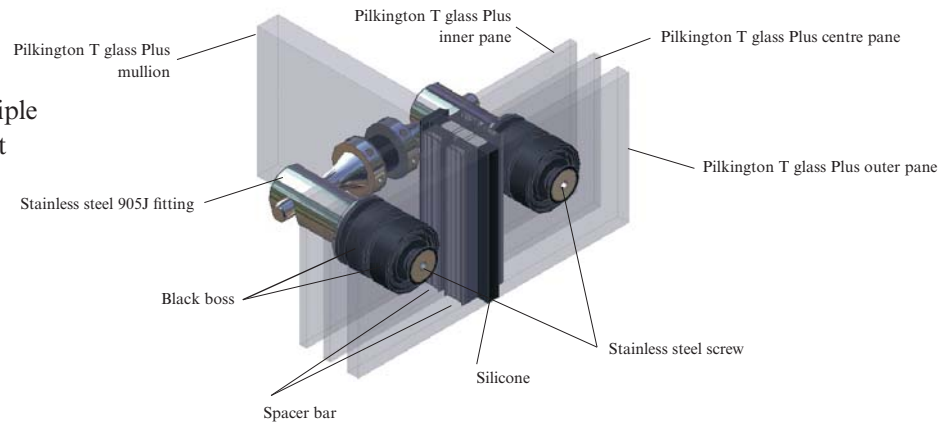
Glass Type			Light Transmittance LT	Light Reflectance LR	Total Solar Radiant Heat Transmittance	Total Shading Coefficient	U Value (W/m ² K)
Outer Pane 10mm	Centre Pane 6mm	Inner Pane 6mm					
Pilkington Optifloat™ Clear	Pilkington Optifloat™ Clear	Pilkington Optifloat™ Clear	0.69	0.19	0.59	0.68	1.8
Pilkington Optifloat™ Green	Pilkington Optifloat™ Clear	Pilkington Optifloat™ Clear	0.53	0.13	0.34	0.39	1.8
Pilkington Optiwhite™	Pilkington Optiwhite™	Pilkington Optiwhite™	0.76	0.21	0.74	0.85	1.8
Pilkington Arctic Blue™	Pilkington Optifloat™ Clear	Pilkington Optifloat™ Clear	0.31	0.07	0.25	0.29	1.8
Pilkington Optifloat™ Clear	Pilkington Optifloat™ Clear	Pilkington K Glass™ (5)	0.64	0.21	0.55	0.63	1.3
Pilkington Optifloat™ Green	Pilkington Optifloat™ Clear	Pilkington K Glass™ (5)	0.49	0.14	0.31	0.36	1.3
Pilkington Optiwhite™	Pilkington Optiwhite™	Pilkington K Glass™ (5)	0.68	0.23	0.70	0.80	1.3
Pilkington Arctic Blue™	Pilkington Optifloat™ Clear	Pilkington K Glass™ (5)	0.28	0.08	0.22	0.25	1.3
*Pilkington Activ™ Clear (<i>l</i>)	Pilkington Optifloat™ Clear	Pilkington K Glass™ (5)	0.60	0.25	0.53	0.61	1.3
*Pilkington Activ™ Blue (<i>l</i>)	Pilkington Optifloat™ Clear	Pilkington K Glass™ (5)	0.26	0.09	0.20	0.23	1.3
*Planar Sun 66/33 (2)	Pilkington Optifloat™ Clear	Pilkington Optifloat™ Clear	0.57	0.18	0.32	0.37	1.0
*Planar Sun 73/39 (2)	Pilkington Optifloat™ Clear	Pilkington Optifloat™ Clear	0.62	0.14	0.37	0.43	1.1
*Planar Sun 68/34 (2)	Pilkington Optifloat™ Clear	Pilkington Optifloat™ Clear	0.58	0.13	0.33	0.38	1.0
*Planar Sun 70/36 (2)	Pilkington Optifloat™ Clear	Pilkington Optifloat™ Clear	0.60	0.15	0.34	0.39	1.0
*Planar Sun 52/29 (2)	Pilkington Optifloat™ Clear	Pilkington Optifloat™ Clear	0.45	0.11	0.27	0.31	1.1
*Planar Sun 50/25 (2)	Pilkington Optifloat™ Clear	Pilkington Optifloat™ Clear	0.42	0.11	0.24	0.28	1.0
*Planar Sun 66/33 (2)	Pilkington Optifloat™ Clear	Pilkington K Glass™ (5)	0.52	0.20	0.30	0.34	0.8
*Planar Sun 73/39 (2)	Pilkington Optifloat™ Clear	Pilkington K Glass™ (5)	0.57	0.16	0.35	0.40	0.9
*Planar Sun 68/34 (2)	Pilkington Optifloat™ Clear	Pilkington K Glass™ (5)	0.53	0.14	0.31	0.36	0.8
*Planar Sun 70/36 (2)	Pilkington Optifloat™ Clear	Pilkington K Glass™ (5)	0.55	0.17	0.33	0.38	0.8
*Planar Sun 52/29 (2)	Pilkington Optifloat™ Clear	Pilkington K Glass™ (5)	0.41	0.12	0.26	0.30	0.9
*Planar Sun 50/25 (2)	Pilkington Optifloat™ Clear	Pilkington K Glass™ (5)	0.39	0.12	0.22	0.25	0.8

*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. Please check current availability of Planar Sun product range at www.pilkington.com/planarcoatedupdate at the time of specification. Cavity for outer and centre pane = 16mm. 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. Please note: figures in brackets and italics indicate coated surfaces.

Pilkington Planar™ Triple Units – 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	✓	✓						
Pilkington Optitherm™ SN	Clear			✓					<i>Subject to minimum quantity. Max. size 2400 x 4800mm</i>
Planar Sun			✓		✓				<i>Subject to minimum quantity. Max. size 2400 x 4800mm</i>
Pilkington Decorative Glass Screen Printed		✓	✓	✓	✓	✓	✓	✓	<i>Maximum screened area 2400 x 4500mm (See enclosed data sheet for further details)</i>
Pilkington Activ™ Clear and Pilkington Activ™ Blue	Clear Blue		✓		✓				

View of Pilkington **Planar**™ Triple unit with glass mullion support



Specification – Pilkington **Planar**™ Triple Units

Composition

Pilkington **Planar**™ Triple Units are manufactured from three panes of fully toughened and heat soaked glass (Pilkington T glass Plus) and reference should be made to the Single Pilkington **Planar**™ specifications for technical data which is not contained herein.

Outer Pane

Outer pane to conform to single Pilkington **Planar**™ specifications.

Centre/Inner Panes

Thickness:	4, 6mm	±0.2mm
	8, 10, 12mm	±0.3mm

Pilkington **Planar**™ Triple Units

Airspaces:	16mm	±1mm
Depth of silicone seal:	Minimum 4mm	
Aluminium spacer depth:	7mm	
Sightline of unit edge seal:	12mm min. 20mm max.	
Spacer colour:	Black or Natural	

Glass size – rectangles

Maximum:	2400 x 4800mm	0 + 4.5mm
Minimum:	300 x 500mm	0 + 4.5mm
Aspect ratio:	14:1 Maximum	
Diagonal tolerances:	Up to 4m:	3mm Maximum difference
	Over 4m:	4mm Maximum difference
Overall thickness	80mm Maximum	
Maximum weight	600kg	

Shape capability

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

Roller wave – all glasses in same direction

Standard mean roller wave depth:	0.02mm
Planar Sun and Pilkington Optitherm ™ SN mean roller wave depth:	0.05mm
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 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 lime silicate safety glass to BSEN 12150-1. Classified as 1 (C) 1 to BSEN 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 or in excess of international specifications eg EN 14179-1.

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**™ Triple Units are manufactured from three panes of toughened glass which has 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. On occasion such effects can be increased by the specification of a coated glass. 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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