

Pilkington Planar™ System Information

Pilkington Planar™ Triple



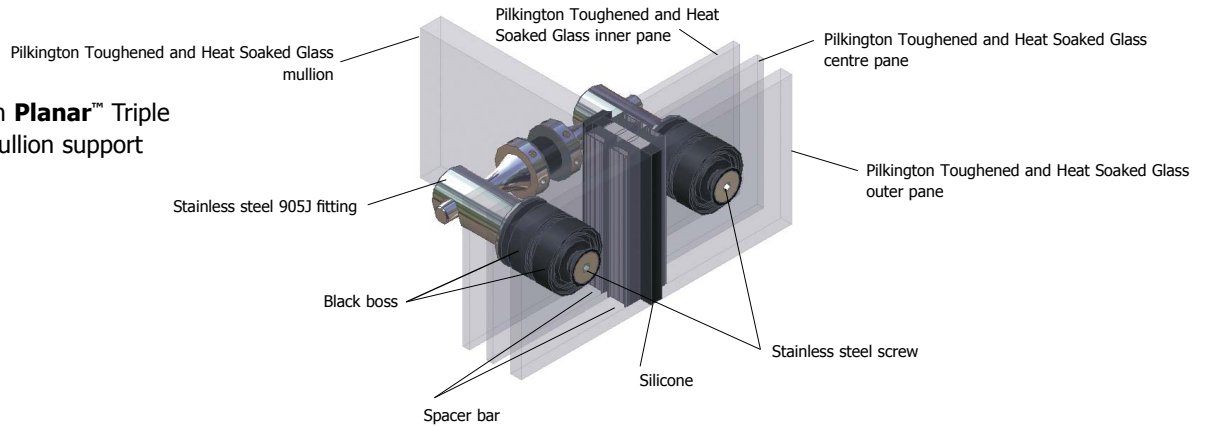
Pilkington Toughened and Heat Soaked Glass Outer Pane 10 mm	Pilkington Toughened and Heat Soaked Glass Centre Pane 6 mm	Pilkington Toughened and Heat Soaked Glass Inner Pane 6 mm	Light Transmittance LT	Light Reflectance LR	Total Solar Radiant Heat Transmittance	Total Shading Coefficient	U Value (W/m ² K)
Pilkington Optifloat™ Clear	Pilkington Optifloat™ Clear	Pilkington Optifloat™ Clear	0.69	0.19	0.59	0.68	1.8
Pilkington Planar™ Sun 73/42	Pilkington Optifloat™ Clear	Pilkington Optifloat™ Clear	0.62	0.14	0.36	0.41	1.1
Pilkington Planar™ Sun 70/39	Pilkington Optifloat™ Clear	Pilkington Optifloat™ Clear	0.60	0.15	0.34	0.39	1.0
Pilkington Planar™ Sun 69/37	Pilkington Optifloat™ Clear	Pilkington Optifloat™ Clear	0.59	0.15	0.32	0.37	1.0
Pilkington Planar™ Sun 62/29	Pilkington Optifloat™ Clear	Pilkington Optifloat™ Clear	0.52	0.12	0.26	0.30	1.0
Pilkington Planar™ Sun 50/27	Pilkington Optifloat™ Clear	Pilkington Optifloat™ Clear	0.42	0.11	0.24	0.28	1.0
Pilkington Planar™ Sun 30/17	Pilkington Optifloat™ Clear	Pilkington Optifloat™ Clear	0.26	0.25	0.17	0.20	1.0
Pilkington Optifloat™ Clear	Pilkington K Glass™	Pilkington K Glass™	0.59	0.22	0.53	0.61	1.0
Pilkington Planar™ Sun 73/42	Pilkington Optifloat™ Clear	Pilkington K Glass™	0.57	0.16	0.34	0.39	0.9
Pilkington Planar™ Sun 70/39	Pilkington Optifloat™ Clear	Pilkington K Glass™	0.55	0.17	0.32	0.37	0.8
Pilkington Planar™ Sun 69/37	Pilkington Optifloat™ Clear	Pilkington K Glass™	0.54	0.16	0.31	0.36	0.8
Pilkington Planar™ Sun 62/29	Pilkington Optifloat™ Clear	Pilkington K Glass™	0.48	0.13	0.25	0.29	0.8
Pilkington Planar™ Sun 50/27	Pilkington Optifloat™ Clear	Pilkington K Glass™	0.39	0.12	0.22	0.25	0.8
Pilkington Planar™ Sun 30/17	Pilkington Optifloat™ Clear	Pilkington K Glass™	0.24	0.25	0.16	0.18	0.8
Pilkington Optifloat™ Clear	Pilkington Optitherm™ S3	Pilkington Optitherm™ S3	0.68	0.16	0.47	0.54	0.8
Pilkington Planar™ Sun 73/42	Pilkington Optifloat™ Clear	Pilkington Optitherm™ S3	0.61	0.13	0.35	0.40	0.8
Pilkington Planar™ Sun 70/39	Pilkington Optifloat™ Clear	Pilkington Optitherm™ S3	0.59	0.14	0.33	0.38	0.7
Pilkington Planar™ Sun 69/37	Pilkington Optifloat™ Clear	Pilkington Optitherm™ S3	0.58	0.14	0.31	0.36	0.7
Pilkington Planar™ Sun 62/29	Pilkington Optifloat™ Clear	Pilkington Optitherm™ S3	0.52	0.11	0.26	0.30	0.7
Pilkington Planar™ Sun 50/27	Pilkington Optifloat™ Clear	Pilkington Optitherm™ S3	0.42	0.11	0.23	0.26	0.7
Pilkington Planar™ Sun 30/17	Pilkington Optifloat™ Clear	Pilkington Optitherm™ S3	0.26	0.25	0.16	0.18	0.7
Pilkington Optiwhite™	Pilkington Optiwhite™	Pilkington Optiwhite™	0.76	0.21	0.74	0.85	1.8
Pilkington Planar™ Sun 73/42	Pilkington Optiwhite™	Pilkington Optiwhite™	0.68	0.15	0.40	0.46	1.1
Pilkington Planar™ Sun 69/37	Pilkington Optiwhite™	Pilkington Optiwhite™	0.65	0.16	0.35	0.40	1.0
Pilkington Planar™ Sun 62/29	Pilkington Optiwhite™	Pilkington Optiwhite™	0.57	0.13	0.27	0.31	1.0
Pilkington Planar™ Sun 50/27	Pilkington Optiwhite™	Pilkington Optiwhite™	0.47	0.12	0.25	0.29	1.0
Pilkington Optiwhite™	Pilkington K Glass™ OW	Pilkington K Glass™ OW	0.66	0.24	0.66	0.76	1.0
Pilkington Planar™ Sun 73/42	Pilkington Optiwhite™	Pilkington K Glass™ OW	0.63	0.17	0.39	0.45	0.9
Pilkington Planar™ Sun 69/37	Pilkington Optiwhite™	Pilkington K Glass™ OW	0.60	0.18	0.34	0.39	0.8
Pilkington Planar™ Sun 62/29	Pilkington Optiwhite™	Pilkington K Glass™ OW	0.53	0.14	0.26	0.30	0.8
Pilkington Planar™ Sun 50/27	Pilkington Optiwhite™	Pilkington K Glass™ OW	0.43	0.13	0.24	0.28	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. Technical data has been calculated according to BS EN 410 and BS 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. Due to the versatility of this product multiple combinations are possible. If you require different performance characteristics please contact Pilkington Architectural for advice.

Pilkington Planar™ Triple Units – Glass Types

Glass Type	Colour	6 mm	8 mm	10 mm	12 mm	15 mm	19 mm	Notes
Pilkington Optifloat™	Clear	✓	✓	✓	✓	✓	✓	
Pilkington Optifloat™	Grey	✓		✓				
Pilkington Optifloat™	Bronze	✓		✓				
Pilkington Optifloat™	Green	✓		✓				
Pilkington Optiwhite™	Extra Clear	✓	✓	✓	✓	✓	✓	
Pilkington Arctic Blue™	Blue	✓		✓				
Pilkington K Glass™	Clear	✓						
Pilkington Optitherm™ S3	Clear		✓					Subject to minimum quantity. Max. size 2400 x 4800 mm
Pilkington Planar™ Sun	Clear	✓	✓	✓	✓	✓	✓	Subject to minimum quantity. Max. size 2400 x 4800 mm
Pilkington Screen Printed Glass	All	✓	✓	✓	✓	✓	✓	Maximum screened area 2400 x 4500 mm (See enclosed data sheet for further details)
Pilkington Activ™ Clear	Clear	✓		✓				
Pilkington Activ™ Blue	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 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: 6 mm ±0.2 mm
8, 10, 12 mm ±0.3 mm

Pilkington **Planar**™ Triple Units

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

Glass size – rectangles

Maximum: 2400 x 4800 mm 0 + 4.5 mm
Minimum: 300 x 500 mm 0 + 4.5 mm
Aspect ratio: 14:1 Maximum
Diagonal tolerances: Up to 4 m: 3 mm Maximum difference
Over 4 m: 4 mm Maximum difference
Overall thickness: 54 mm Maximum (Greater upon request)
Maximum weight: 350 kg

Shape capability

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

Roller wave – all glasses same direction

Mean roller wave: $t \leq 8$ mm 0.05 mm
Mean roller wave: $t > 8$ mm 0.02 mm

Pilkington **Planar**™ Sun and Pilkington **Optitherm**™ S3

mean roller wave depth: 0.05 mm
Maximum edge dip: 0.25 mm

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. The Pilkington **Planar**™ Sun Range of coatings will be edge deleted in the area of the unit edge seal to ensure maximum unit durability. Depending on product type, orientation and light conditions the edge deleted zone may be visible to the naked eye.

Hole drilling – rectangles

Diameter: 34 mm ±1 mm
Diameter: 19 mm ±1 mm Countersunk
Position: Normally 60 mm from glass edge at corners and sometimes along edge. Other configurations subject to confirmation.
Tolerance: ±2 mm from one datum point.
Number: Up to 10

Toughening stress

Thermally toughened soda lime silicate safety glass to BS EN 12150. Classified as 1 (C) 1 to BS 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 or in excess of international specifications e.g. BS EN 14179.

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. However the thinner glass will generally be marked with a relatively discreet linear brand within the area of the unit edge seal.

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 3 m 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 Architectural should be sought prior to application.

This publication provides only a general description of the products. Further, more detailed information may be obtained from your local supplier of Pilkington products. It is the responsibility of the user to ensure that the use of these products is appropriate for any particular application and that such use complies with all relevant legislation, standards, code of practice and other requirements. To the fullest extent permitted by applicable laws, Nippon Sheet Glass Co. Ltd. and its subsidiary companies disclaim all liability for any error in or omission from this publication and for all consequences of relying on it.



Pilkington Architectural

Prescot Road St Helens WA10 3TT United Kingdom

Telephone 01744 692000 Fax 01744 692880

pilkington@respond.uk.com

www.pilkington.co.uk/planar