

Pilkington Planar™ System Information

Pilkington Planar™ Triple



Pilkington Toughened and Heat Soaked Glass Outer Pane (10mm)	Pilkington Toughened and Heat Soaked Glass Centre Pane (6mm)	Pilkington Toughened and Heat Soaked Glass Inner Pane (6mm)	Light Transmittance (Tvis)	Light Reflectance (Rfvis)	Solar Heat Gain Coefficient (SHGC)	Total Shading Coefficient (SC)	'U'-value (Summer) (Btu/hr-ft ² -°F)	'U'-value (Winter) (Btu/hr-ft ² -°F)	OITC Rating
Pilkington Optifloat™ Clear	Pilkington Optifloat™ Clear	Pilkington Optifloat™ Clear	0.72	0.20	0.65	0.74	0.32	0.30	36
Pilkington Planar™ Sun 60/27	Pilkington Optifloat™ Clear	Pilkington Optifloat™ Clear	0.53	0.18	0.23	0.27	0.18	0.21	36
Pilkington Planar™ Sun 62/29	Pilkington Optifloat™ Clear	Pilkington Optifloat™ Clear	0.55	0.12	0.25	0.28	0.18	0.21	36
Pilkington Suncool™ 70/40	Pilkington Optifloat™ Clear	Pilkington Optifloat™ Clear	0.65	0.14	0.36	0.41	0.19	0.21	36
Pilkington Suncool™ 70/35	Pilkington Optifloat™ Clear	Pilkington Optifloat™ Clear	0.63	0.19	0.31	0.36	0.18	0.21	36
Pilkington Suncool™ 66/33	Pilkington Optifloat™ Clear	Pilkington Optifloat™ Clear	0.60	0.19	0.30	0.35	0.18	0.21	36
Pilkington Suncool™ 50/25	Pilkington Optifloat™ Clear	Pilkington Optifloat™ Clear	0.45	0.20	0.23	0.27	0.18	0.21	36
Pilkington Optifloat™ Clear	Pilkington K Glass™	Pilkington K Glass™	0.62	0.24	0.57	0.66	0.18	0.18	36
Pilkington Planar™ Sun 60/27	Pilkington Optifloat™ Clear	Pilkington K Glass™	0.49	0.20	0.22	0.25	0.15	0.16	36
Pilkington Planar™ Sun 62/29	Pilkington Optifloat™ Clear	Pilkington K Glass™	0.51	0.14	0.23	0.27	0.15	0.16	36
Pilkington Suncool™ 70/40	Pilkington Optifloat™ Clear	Pilkington K Glass™	0.60	0.16	0.34	0.39	0.15	0.17	36
Pilkington Suncool™ 70/35	Pilkington Optifloat™ Clear	Pilkington K Glass™	0.58	0.21	0.30	0.34	0.15	0.16	36
Pilkington Suncool™ 66/33	Pilkington Optifloat™ Clear	Pilkington K Glass™	0.55	0.21	0.29	0.33	0.15	0.16	36
Pilkington Suncool™ 50/25	Pilkington Optifloat™ Clear	Pilkington K Glass™	0.42	0.21	0.22	0.25	0.15	0.16	36
Pilkington Optifloat™ Clear	Pilkington Optitherm™ S1 Plus	Pilkington Optitherm™ S1 Plus	0.53	0.30	0.33	0.37	0.13	0.14	36
Pilkington Planar™ Sun 60/27	Pilkington Optifloat™ Clear	Pilkington Optitherm™ S1 Plus	0.45	0.22	0.20	0.23	0.13	0.14	36
Pilkington Planar™ Sun 62/29	Pilkington Optifloat™ Clear	Pilkington Optitherm™ S1 Plus	0.46	0.16	0.21	0.24	0.13	0.14	36
Pilkington Suncool™ 70/40	Pilkington Optifloat™ Clear	Pilkington Optitherm™ S1 Plus	0.55	0.19	0.30	0.34	0.13	0.15	36
Pilkington Suncool™ 70/35	Pilkington Optifloat™ Clear	Pilkington Optitherm™ S1 Plus	0.53	0.24	0.27	0.30	0.13	0.14	36
Pilkington Suncool™ 66/33	Pilkington Optifloat™ Clear	Pilkington Optitherm™ S1 Plus	0.51	0.24	0.26	0.30	0.13	0.14	36
Pilkington Suncool™ 50/25	Pilkington Optifloat™ Clear	Pilkington Optitherm™ S1 Plus	0.39	0.22	0.20	0.23	0.13	0.14	36
Pilkington Optiwhite™	Pilkington Optiwhite™	Pilkington Optiwhite™	0.77	0.21	0.75	0.87	0.32	0.30	36
Pilkington Planar™ Sun 60/27 OW	Pilkington Optiwhite™	Pilkington Optiwhite™	0.56	0.19	0.24	0.27	0.18	0.21	36
Pilkington Planar™ Sun 62/29 OW	Pilkington Optiwhite™	Pilkington Optiwhite™	0.58	0.13	0.25	0.29	0.18	0.21	36
Pilkington Suncool™ 70/40 OW	Pilkington Optiwhite™	Pilkington Optiwhite™	0.69	0.15	0.38	0.44	0.19	0.21	36
Pilkington Suncool™ 70/35 OW	Pilkington Optiwhite™	Pilkington Optiwhite™	0.67	0.20	0.33	0.38	0.18	0.21	36
Pilkington Suncool™ 66/33 OW	Pilkington Optiwhite™	Pilkington Optiwhite™	0.63	0.20	0.32	0.36	0.18	0.21	36
Pilkington Suncool™ 50/25 OW	Pilkington Optiwhite™	Pilkington Optiwhite™	0.48	0.21	0.24	0.28	0.18	0.21	36
Pilkington Optiwhite™	Pilkington K Glass™ OW	Pilkington K Glass™ OW	0.67	0.25	0.67	0.77	0.18	0.18	36
Pilkington Planar™ Sun 60/27 OW	Pilkington Optiwhite™	Pilkington K Glass™ OW	0.52	0.21	0.23	0.26	0.15	0.16	36
Pilkington Planar™ Sun 62/29 OW	Pilkington Optiwhite™	Pilkington K Glass™ OW	0.54	0.15	0.24	0.27	0.15	0.16	36
Pilkington Suncool™ 70/40 OW	Pilkington Optiwhite™	Pilkington K Glass™ OW	0.64	0.17	0.37	0.42	0.15	0.17	36
Pilkington Suncool™ 70/35 OW	Pilkington Optiwhite™	Pilkington K Glass™ OW	0.62	0.22	0.31	0.36	0.15	0.16	36
Pilkington Suncool™ 66/33 OW	Pilkington Optiwhite™	Pilkington K Glass™ OW	0.59	0.22	0.30	0.35	0.15	0.16	36
Pilkington Suncool™ 50/25 OW	Pilkington Optiwhite™	Pilkington K Glass™ OW	0.45	0.22	0.23	0.27	0.15	0.16	36

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.

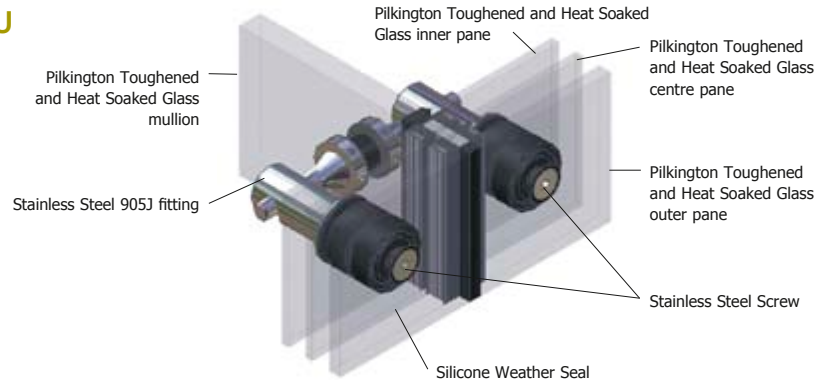
Technical data has been calculated using Window 7.3.4.0 (NFRC 100-2010).

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	6 mm	10 mm	12 mm	15 mm	19 mm	Notes
Pilkington Optifloat™ Clear	+	+	+	+	+	
Pilkington Optifloat™ Bronze	+	+				
Pilkington Optifloat™ Grey	+	+				
Pilkington Optifloat™ Green	+	+				
Pilkington Suncool™ 70/40	+	+	+			Campaign Product. Must be forecast in advance of manufacturing
Pilkington Suncool™ 66/33	+	+	+			Campaign Product. Must be forecast in advance of manufacturing
Pilkington Suncool™ 50/25	+	+	+			Campaign Product. Must be forecast in advance of manufacturing
Pilkington Optiwhite™	+	+	+	+	+	
Pilkington Suncool™ 70/40 OW	+	+	+			Campaign Product. Must be forecast in advance of manufacturing
Pilkington Suncool™ 66/33 OW	+	+	+			Campaign Product. Must be forecast in advance of manufacturing
Pilkington Suncool™ 50/25 OW	+	+	+			Campaign Product. Must be forecast in advance of manufacturing
Pilkington Arctic Blue™	+	+				
Pilkington Activ™ Clear	+	+				
Pilkington Activ™ Blue	+	+				
Pilkington K Glass™	+					
Pilkington K Glass™ OW	+					
Pilkington Optitherm™ S1	+	+	+			Campaign Product. Must be forecast in advance of manufacturing
Pilkington Screen Printed Glass	+	+	+	+	+	Maximum screened area 2400x4500 mm (See enclosed data sheet for further details)

905J Fitting to Pilkington Planar™ TGU



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:	2500 × 5000 mm	0 + 4.5 mm
Minimum:	300 × 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

Max. overall unit thickness: 54 mm (greater upon request) ±2 mm

Maximum weight: 1000 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
	$t > 8$ mm	0.02 mm

Coated glass: 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. Where a unit uses a Pilkington **Planar™** Sun, Pilkington **Suncool™** or Pilkington **Optitherm™** S1 coating, it must 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.

ARGON FILLING

It is generally accepted that Argon gas will slowly dissolve through the seals over a period of time, the rate of diffusion being dependent on several factors such as unit size and the environment in which it is glazed. The total retention of Argon in the unit cannot therefore be guaranteed for the life of the unit.

HOLE DRILLING – RECTANGLES

Diameter: 34 mm ±1 mm

Diameter: 19 mm ±1 mm Countersunk

23 mm ±1 mm Countersunk (minimum glass thickness = 12 mm)

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 (more on request)

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.

LITESENTRY OSPREY SCANNER

A LiteSentry Osprey Scanner is used to monitor and ensure high quality aesthetics of the Pilkington Planar glass products.

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.

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