

33.2 PLUS (8.35 Argon 90) 0.5 (8.35 Argon 90) 4

Coating: PLANITHERM TOTAL+ FG #4 / PLANITHERM TOTAL+ FG #7

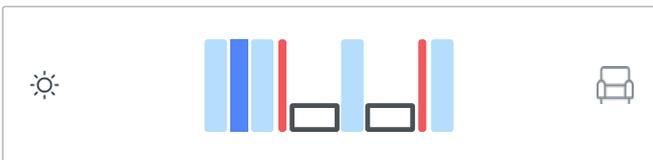
Computed by: Steven Massey

Computed on: 20/01/2026

Product catalog: United Kingdom

Norms: EN410:2011

Glazing type



	Glazing 1	<ul style="list-style-type: none"> • PLANICLEAR (3mm) - Annealed • PVB STANDARD PLUS (0.76mm) • PLANICLEAR (3mm) - Annealed • PLANITHERM TOTAL+ FG
	Cavity 1	<ul style="list-style-type: none"> • Argon 90% 8.35 mm
	Glazing 2	<ul style="list-style-type: none"> • Ultra Thin Glass (0.5mm) - Annealed
	Cavity 2	<ul style="list-style-type: none"> • Argon 90% 8.35 mm
	Glazing 3	<ul style="list-style-type: none"> • PLANITHERM TOTAL+ FG • PLANICLEAR (4mm) - Annealed

Simulated performance datas

	Luminous Factors	CIE015:2018
	Light Transmittance (TL)	69.5%
	Outdoor Reflectance (RLe)	16.7%
	Indoor Reflectance (RLi)	16.8%
	Energy Factors	EN410:2011
	Transmittance (TE)	48.5%
	UV (Tuv)	0.1%
	Outdoor Reflectance (Ree)	21.5%
	Indoor Reflectance (Rei)	26.1%
	Absorptance A1 (AE1)	23.5%
	Absorptance A2 (AE2)	0.0%
	Absorptance A3 (AE3)	6.6%
	Solar Factors	EN410:2011
	Solar Factor (g)	0.551
	Shading Coefficient (SC)	0.634
	Thermal Transmission	EN673:2011
	Angle relative to the vertical	0°
	Ug	0.986 W/(m2.K)
	Acoustics	
	Rw (C;Ctr)	N/A
	Ra	N/A
	Ra,tr	N/A
	STC (ASTM E413)	N/A
	OITC (ASTM E1332)	N/A
	Color Rendering	CIE015:2018
	Transmission (Ra)	98.3
	Reflection (Ra)	91.5
	Safety Class	EN12600
	Pendulum Body Resistance	NPD
	Anti-Burglary	EN356
	Burglar Resistance	NPD
	Manufacturing Sizes	
	Nominal Thickness	27.96 mm
	Weight	27.1 kg/m²
	Sustainability	
	Carbon footprint	
	<i>The value is calculated regarding the composition computed based on the standard EN 15804+A2 (2019)</i>	
	Global Warming Potential (GWP) - A1-A3	EN 15804+A2 (2019)
	(kg, CO ₂ eq./m²) European average	N/A



Calumen® calculates the photometric characteristics and thermal transmission of glass using calculation algorithms which comply with the following standards: the European standards EN 410 and EN 673, the international standard ISO9050, the Japanese standard JIS R 3106/3107 and the Korean standard KS L 2514/2525. The functional output and calculation rules of Calumen® for standards EN 410 and EN 673 have been validated by TÜV Rheinland (report 89212153-01). The technical performances obtained according to these standards are provided for information only and are subject to amendment. Only the values entered in the performance declaration available on the CE marking site of Saint-Gobain Glass are official. The sound attenuation indices are measured under laboratory conditions according to the standards EN ISO 10140 and EN 12758. The calculated indices are provided for information only. The accuracy for Rw index lies within a range of +/-2dB. The glass thickness calculations comply with the 2012 version of the DTU39-P4 description. The USER is responsible for ensuring that the correct calculation hypotheses are entered and the DTU39 is applied appropriately for the project concerned.

4 (9.75 Argon 90) 0.5 (9.75 Argon 90) 4

Coating: PLANITHERM ONE T FG #2 / PLANITHERM ONE T FG #5

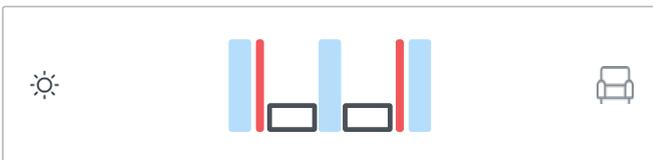
Computed by: Steven Massey

Computed on: 06/10/2025

Product catalog: United Kingdom

Norms: EN410:2011

Glazing type



	Glazing 1 <ul style="list-style-type: none"> • PLANICLEAR (4mm) - Annealed • PLANITHERM ONE T FG
	Cavity 1 <ul style="list-style-type: none"> • Argon 90% 9.75 mm
	Glazing 2 <ul style="list-style-type: none"> • Ultra Thin Glass (0.5mm) - Annealed
	Cavity 2 <ul style="list-style-type: none"> • Argon 90% 9.75 mm
	Glazing 3 <ul style="list-style-type: none"> • PLANITHERM ONE T FG • PLANICLEAR (4mm) - Annealed

Simulated performance datas

	Luminous Factors Light Transmittance (TL) Outdoor Reflectance (RLe) Indoor Reflectance (RLi)	CIE015:2018 52.1% 34.8% 34.8%
	Energy Factors Transmittance (TE) UV (Tuv) Outdoor Reflectance (Ree) Indoor Reflectance (Rei) Absorptance A1 (AE1) Absorptance A2 (AE2) Absorptance A3 (AE3)	EN410:2011 29.9% N/A 48.6% 48.6% 16.8% 0.2% 4.6%
	Solar Factors Solar Factor (g) Shading Coefficient (SC)	EN410:2011 0.346 0.397
	Thermal Transmission Angle relative to the vertical Ug	EN673:2011 0° 0.802 W/(m2.K)
	Acoustics Rw (C;Ctr) Ra Ra,tr STC (ASTM E413) OITC (ASTM E1332)	N/A N/A N/A N/A N/A
	Color Rendering Transmission (Ra) Reflection (Ra)	CIE015:2018 95.5 96.7
	Safety Class Pendulum Body Resistance	EN12600 NPD
	Anti-Burglary Burglar Resistance	EN356 NPD
	Manufacturing Sizes Nominal Thickness Weight	28.0 mm 21.3 kg/m²
	Sustainability Carbon footprint The value is calculated regarding the composition computed based on the standard EN 15804+A2 (2019)	EN 15804+A2 (2019) Global Warming Potential (GWP) - A1-A3 (kg, CO ₂ eq./m²) European average N/A



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33.2 PLUS (8.35 Argon 90) 0.5 (8.35 Argon 90) 4

Coating: PLANITHERM ONE T FG #4 / PLANITHERM ONE T FG #7

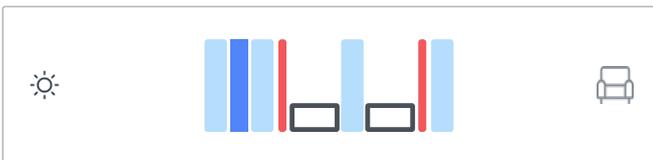
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Computed on: 20/01/2026

Product catalog: United Kingdom

Norms: EN410:2011

Glazing type



	Glazing 1 <ul style="list-style-type: none"> • PLANICLEAR (3mm) - Annealed • PVB STANDARD PLUS (0.76mm) • PLANICLEAR (3mm) - Annealed • PLANITHERM ONE T FG
	Cavity 1 <ul style="list-style-type: none"> • Argon 90% 8.35 mm
	Glazing 2 <ul style="list-style-type: none"> • Ultra Thin Glass (0.5mm) - Annealed
	Cavity 2 <ul style="list-style-type: none"> • Argon 90% 8.35 mm
	Glazing 3 <ul style="list-style-type: none"> • PLANITHERM ONE T FG • PLANICLEAR (4mm) - Annealed

Simulated performance datas

	Luminous Factors Light Transmittance (TL) Outdoor Reflectance (RLe) Indoor Reflectance (RLi)	CIE015:2018 51.7% 34.4% 34.8%
	Energy Factors Transmittance (TE) UV (Tuv) Outdoor Reflectance (Ree) Indoor Reflectance (Rei) Absorptance A1 (AE1) Absorptance A2 (AE2) Absorptance A3 (AE3)	EN410:2011 28.4% 0.1% 41.4% 48.6% 26.3% 0.0% 3.9%
	Solar Factors Solar Factor (g) Shading Coefficient (SC)	EN410:2011 0.329 0.378
	Thermal Transmission Angle relative to the vertical Ug	EN673:2011 0° 0.906 W/(m2.K)
	Acoustics Rw (C;Ctr) Ra Ra,tr STC (ASTM E413) OITC (ASTM E1332)	N/A N/A N/A N/A N/A
	Color Rendering Transmission (Ra) Reflection (Ra)	CIE015:2018 95.1 96.4
	Safety Class Pendulum Body Resistance	EN12600 NPd
	Anti-Burglary Burglar Resistance	EN356 NPd
	Manufacturing Sizes Nominal Thickness Weight	27.96 mm 27.1 kg/m²
	Sustainability Carbon footprint The value is calculated regarding the composition computed based on the standard EN 15804+A2 (2019) Global Warming Potential (GWP) - A1-A3 (kg, CO ₂ eq./m²) European average	EN 15804+A2 (2019) N/A



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4 (9.75 Argon 90) 0.5 (9.75 Argon 90) 4

Coating: PLANITHERM TOTAL+ FG #2 / PLANITHERM TOTAL+ FG #5

Computed by: Steven Massey

Computed on: 06/10/2025

Product catalog: United Kingdom

Norms: EN410:2011

Glazing type



	Glazing 1 <ul style="list-style-type: none"> PLANICLEAR (4mm) - Annealed PLANITHERM TOTAL+ FG
	Cavity 1 <ul style="list-style-type: none"> Argon 90% 9.75 mm
	Glazing 2 <ul style="list-style-type: none"> Ultra Thin Glass (0.5mm) - Annealed
	Cavity 2 <ul style="list-style-type: none"> Argon 90% 9.75 mm
	Glazing 3 <ul style="list-style-type: none"> PLANITHERM TOTAL+ FG PLANICLEAR (4mm) - Annealed

Simulated performance datas

	Luminous Factors	CIE015:2018
	Light Transmittance (TL)	70.0%
	Outdoor Reflectance (RLe)	16.9%
	Indoor Reflectance (RLi)	16.9%
	Energy Factors	EN410:2011
	Transmittance (TE)	51.0%
	UV (Tuv)	N/A
	Outdoor Reflectance (Ree)	26.1%
	Indoor Reflectance (Rei)	26.1%
	Absorptance A1 (AE1)	15.3%
	Absorptance A2 (AE2)	0.2%
	Absorptance A3 (AE3)	7.4%
	Solar Factors	EN410:2011
	Solar Factor (g)	0.581
	Shading Coefficient (SC)	0.668
	Thermal Transmission	EN673:2011
	Angle relative to the vertical	0°
	Ug	0.887 W/(m2.K)
	Acoustics	
	Rw (C;Ctr)	N/A
	Ra	N/A
	Ra,tr	N/A
	STC (ASTM E413)	N/A
	OITC (ASTM E1332)	N/A
	Color Rendering	CIE015:2018
	Transmission (Ra)	98.5
	Reflection (Ra)	91.8
	Safety Class	EN12600
	Pendulum Body Resistance	NPD
	Anti-Burglary	EN356
	Burglar Resistance	NPD
	Manufacturing Sizes	
	Nominal Thickness	28.0 mm
	Weight	21.3 kg/m²
	Sustainability	
	Carbon footprint	
	<i>The value is calculated regarding the composition computed based on the standard EN 15804+A2 (2019)</i>	
	Global Warming Potential (GWP) - A1-A3	EN 15804+A2 (2019)
	(kg, CO ₂ eq./m²) European average	N/A



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33.2 PLUS (12.35 Argon 90) 0.5 (12.35 Argon 90) 4

Coating: PLANITHERM TOTAL+ FG #4 / PLANITHERM TOTAL+ FG #7

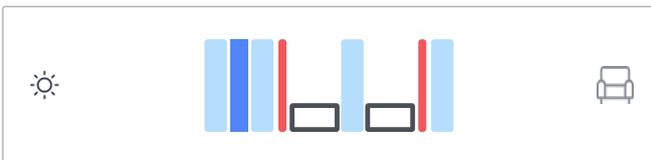
Computed by: Steven Massey

Computed on: 20/01/2026

Product catalog: United Kingdom

Norms: EN410:2011

Glazing type



	Glazing 1 <ul style="list-style-type: none"> • PLANICLEAR (3mm) - Annealed • PVB STANDARD PLUS (0.76mm) • PLANICLEAR (3mm) - Annealed • PLANITHERM TOTAL+ FG
	Cavity 1 <ul style="list-style-type: none"> • Argon 90% 12.35 mm
	Glazing 2 <ul style="list-style-type: none"> • Ultra Thin Glass (0.5mm) - Annealed
	Cavity 2 <ul style="list-style-type: none"> • Argon 90% 12.35 mm
	Glazing 3 <ul style="list-style-type: none"> • PLANITHERM TOTAL+ FG • PLANICLEAR (4mm) - Annealed

Simulated performance datas

	Luminous Factors Light Transmittance (TL) Outdoor Reflectance (RLe) Indoor Reflectance (RLi)	CIE015:2018 69.5% 16.7% 16.8%
	Energy Factors Transmittance (TE) UV (Tuv) Outdoor Reflectance (Ree) Indoor Reflectance (Rei) Absorptance A1 (AE1) Absorptance A2 (AE2) Absorptance A3 (AE3)	EN410:2011 48.5% 0.1% 21.5% 26.1% 23.5% 0.0% 6.6%
	Solar Factors Solar Factor (g) Shading Coefficient (SC)	EN410:2011 0.551 0.633
	Thermal Transmission Angle relative to the vertical Ug	EN673:2011 0° 0.744 W/(m2.K)
	Acoustics Rw (C;Ctr) Ra Ra,tr STC (ASTM E413) OITC (ASTM E1332)	N/A N/A N/A N/A N/A
	Color Rendering Transmission (Ra) Reflection (Ra)	CIE015:2018 98.3 91.5
	Safety Class Pendulum Body Resistance	EN12600 NPD
	Anti-Burglary Burglar Resistance	EN356 NPD
	Manufacturing Sizes Nominal Thickness Weight	35.96 mm 27.1 kg/m²
	Sustainability Carbon footprint The value is calculated regarding the composition computed based on the standard EN 15804+A2 (2019)	Global Warming Potential (GWP) - A1-A3 (kg, CO ₂ eq./m ²) European average EN 15804+A2 (2019) N/A



Calumen® calculates the photometric characteristics and thermal transmission of glass using calculation algorithms which comply with the following standards: the European standards EN 410 and EN 673, the international standard ISO9050, the Japanese standard JIS R 3106/3107 and the Korean standard KS L 2514/2525. The functional output and calculation rules of Calumen® for standards EN 410 and EN 673 have been validated by TÜV Rheinland (report 89212153-01). The technical performances obtained according to these standards are provided for information only and are subject to amendment. Only the values entered in the performance declaration available on the CE marking site of Saint-Gobain Glass are official. The sound attenuation indices are measured under laboratory conditions according to the standards EN ISO 10140 and EN 12758. The calculated indices are provided for information only. The accuracy for Rw index lies within a range of +/-2dB. The glass thickness calculations comply with the 2012 version of the DTU39-P4 description. The USER is responsible for ensuring that the correct calculation hypotheses are entered and the DTU39 is applied appropriately for the project concerned.

4 (13.75 Argon 90) 0.5 (13.75 Argon 90) 4

Coating: PLANITHERM ONE T FG #2 / PLANITHERM ONE T FG #5

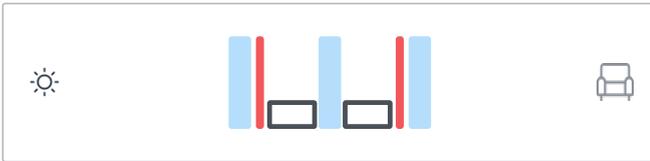
Computed by: Steven Massey

Computed on: 06/10/2025

Product catalog: United Kingdom

Norms: EN410:2011

Glazing type



	Glazing 1 <ul style="list-style-type: none"> PLANICLEAR (4mm) - Annealed PLANITHERM ONE T FG
	Cavity 1 <ul style="list-style-type: none"> Argon 90% 13.75 mm
	Glazing 2 <ul style="list-style-type: none"> Ultra Thin Glass (0.5mm) - Annealed
	Cavity 2 <ul style="list-style-type: none"> Argon 90% 13.75 mm
	Glazing 3 <ul style="list-style-type: none"> PLANITHERM ONE T FG PLANICLEAR (4mm) - Annealed

Simulated performance datas

	Luminous Factors Light Transmittance (TL) Outdoor Reflectance (RLe) Indoor Reflectance (RLi)	CIE015:2018 52.1% 34.8% 34.8%
	Energy Factors Transmittance (TE) UV (Tuv) Outdoor Reflectance (Ree) Indoor Reflectance (Rei) Absorptance A1 (AE1) Absorptance A2 (AE2) Absorptance A3 (AE3)	EN410:2011 29.9% N/A 48.6% 48.6% 16.8% 0.2% 4.6%
	Solar Factors Solar Factor (g) Shading Coefficient (SC)	EN410:2011 0.345 0.397
	Thermal Transmission Angle relative to the vertical Ug	EN673:2011 0° 0.600 W/(m2.K)
	Acoustics Rw (C;Ctr) Ra Ra,tr STC (ASTM E413) OITC (ASTM E1332)	N/A N/A N/A N/A N/A
	Color Rendering Transmission (Ra) Reflection (Ra)	CIE015:2018 95.5 96.7
	Safety Class Pendulum Body Resistance	EN12600 NPD
	Anti-Burglary Burglar Resistance	EN356 NPD
	Manufacturing Sizes Nominal Thickness Weight	36.0 mm 21.3 kg/m²
	Sustainability Carbon footprint The value is calculated regarding the composition computed based on the standard EN 15804+A2 (2019)	Global Warming Potential (GWP) - A1-A3 EN 15804+A2 (2019) (kg, CO ₂ eq./m²) European average N/A



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33.2 PLUS (12.35 Argon 90) 0.5 (12.35 Argon 90) 4

Coating: PLANITHERM ONE T FG #4 / PLANITHERM ONE T FG #7

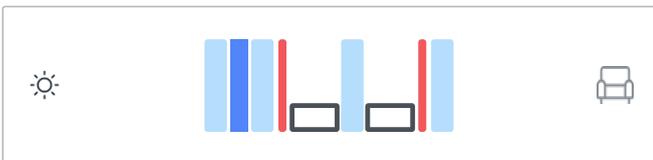
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Norms: EN410:2011

Glazing type



	Glazing 1 <ul style="list-style-type: none"> • PLANICLEAR (3mm) - Annealed • PVB STANDARD PLUS (0.76mm) • PLANICLEAR (3mm) - Annealed • PLANITHERM ONE T FG
	Cavity 1 <ul style="list-style-type: none"> • Argon 90% 12.35 mm
	Glazing 2 <ul style="list-style-type: none"> • Ultra Thin Glass (0.5mm) - Annealed
	Cavity 2 <ul style="list-style-type: none"> • Argon 90% 12.35 mm
	Glazing 3 <ul style="list-style-type: none"> • PLANITHERM ONE T FG • PLANICLEAR (4mm) - Annealed

Simulated performance datas

	Luminous Factors Light Transmittance (TL) Outdoor Reflectance (RLe) Indoor Reflectance (RLi)	CIE015:2018 51.7% 34.4% 34.8%
	Energy Factors Transmittance (TE) UV (Tuv) Outdoor Reflectance (Ree) Indoor Reflectance (Rei) Absorptance A1 (AE1) Absorptance A2 (AE2) Absorptance A3 (AE3)	EN410:2011 28.4% 0.1% 41.4% 48.6% 26.3% 0.0% 3.9%
	Solar Factors Solar Factor (g) Shading Coefficient (SC)	EN410:2011 0.327 0.376
	Thermal Transmission Angle relative to the vertical Ug	EN673:2011 0° 0.655 W/(m2.K)
	Acoustics Rw (C;Ctr) Ra Ra,tr STC (ASTM E413) OITC (ASTM E1332)	N/A N/A N/A N/A N/A
	Color Rendering Transmission (Ra) Reflection (Ra)	CIE015:2018 95.1 96.4
	Safety Class Pendulum Body Resistance	EN12600 NPd
	Anti-Burglary Burglar Resistance	EN356 NPd
	Manufacturing Sizes Nominal Thickness Weight	35.96 mm 27.1 kg/m²
	Sustainability Carbon footprint The value is calculated regarding the composition computed based on the standard EN 15804+A2 (2019)	EN 15804+A2 (2019) Global Warming Potential (GWP) - A1-A3 (kg, CO ₂ eq./m²) European average N/A



Calumen® calculates the photometric characteristics and thermal transmission of glass using calculation algorithms which comply with the following standards: the European standards EN 410 and EN 673, the international standard ISO9050, the Japanese standard JIS R 3106/3107 and the Korean standard KS L 2514/2525. The functional output and calculation rules of Calumen® for standards EN 410 and EN 673 have been validated by TÜV Rheinland (report 89212153-01). The technical performances obtained according to these standards are provided for information only and are subject to amendment. Only the values entered in the performance declaration available on the CE marking site of Saint-Gobain Glass are official. The sound attenuation indices are measured under laboratory conditions according to the standards EN ISO 10140 and EN 12758. The calculated indices are provided for information only. The accuracy for Rw index lies within a range of +/-2dB. The glass thickness calculations comply with the 2012 version of the DTU39-P4 description. The USER is responsible for ensuring that the correct calculation hypotheses are entered and the DTU39 is applied appropriately for the project concerned.

4 (13.75 Argon 90) 0.5 (13.75 Argon 90) 4

Coating: PLANITHERM TOTAL+ FG #2 / PLANITHERM TOTAL+ FG #5

Computed by: Steven Massey

Computed on: 06/10/2025

Product catalog: United Kingdom

Norms: EN410:2011

Glazing type



	Glazing 1	<ul style="list-style-type: none"> • PLANICLEAR (4mm) - Annealed • PLANITHERM TOTAL+ FG
	Cavity 1	<ul style="list-style-type: none"> • Argon 90% 13.75 mm
	Glazing 2	<ul style="list-style-type: none"> • Ultra Thin Glass (0.5mm) - Annealed
	Cavity 2	<ul style="list-style-type: none"> • Argon 90% 13.75 mm
	Glazing 3	<ul style="list-style-type: none"> • PLANITHERM TOTAL+ FG • PLANICLEAR (4mm) - Annealed

Simulated performance datas

	Luminous Factors	CIE015:2018
	Light Transmittance (TL)	70%
	Outdoor Reflectance (RLe)	17%
	Indoor Reflectance (RLi)	17%

	Energy Factors	EN410:2011
	Transmittance (TE)	51%
	UV (Tuv)	N/A
	Outdoor Reflectance (Ree)	26%
	Indoor Reflectance (Rei)	26%
	Absorptance A1 (AE1)	15%
	Absorptance A2 (AE2)	0%
	Absorptance A3 (AE3)	7%

	Solar Factors	EN410:2011
	Solar Factor (g)	0.58
	Shading Coefficient (SC)	0.67

	Thermal Transmission	EN673:2011
	Angle relative to the vertical	0°
	Ug	0.7 W/(m2.K)

	Acoustics	
	Rw (C;Ctr)	N/A
	Ra	N/A
	Ra,tr	N/A
	STC (ASTM E413)	N/A
	OITC (ASTM E1332)	N/A

	Color Rendering	CIE015:2018
	Transmission (Ra)	98.5
	Reflection (Ra)	91.8

	Safety Class	EN12600
	Pendulum Body Resistance	NPD

	Anti-Burglary	EN356
	Burglar Resistance	NPD

	Manufacturing Sizes	
	Nominal Thickness	36.0 mm
	Weight	21 kg/m²

	Sustainability	
	Carbon footprint	
	<i>The value is calculated regarding the composition computed based on the standard EN 15804+A2 (2019)</i>	
	Global Warming Potential (GWP) - A1-A3	EN 15804+A2 (2019)
	(kg, CO ₂ eq./m²) European average	N/A



Calumen® calculates the photometric characteristics and thermal transmission of glass using calculation algorithms which comply with the following standards: the European standards EN 410 and EN 673, the international standard ISO9050, the Japanese standard JIS R 3106/3107 and the Korean standard KS L 2514/2525. The functional output and calculation rules of Calumen® for standards EN 410 and EN 673 have been validated by TÜV Rheinland (report 89212153-01). The technical performances obtained according to these standards are provided for information only and are subject to amendment. Only the values entered in the performance declaration available on the CE marking site of Saint-Gobain Glass are official. The sound attenuation indices are measured under laboratory conditions according to the standards EN ISO 10140 and EN 12758. The calculated indices are provided for information only. The accuracy for Rw index lies within a range of +/-2dB. The glass thickness calculations comply with the 2012 version of the DTU39-P4 description. The USER is responsible for ensuring that the correct calculation hypotheses are entered and the DTU39 is applied appropriately for the project concerned.

33.2 (16.35 Argon 90) 0.5 (16.35 Argon 90) 4

Coating: PLANITHERM TOTAL+ FG #4 / PLANITHERM TOTAL+ FG #7

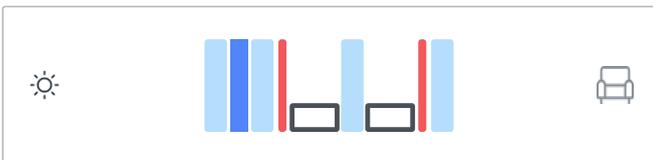
Computed by: Steven Massey

Computed on: 08/12/2025

Product catalog: United Kingdom

Norms: EN410:2011

Glazing type



	Glazing 1 <ul style="list-style-type: none"> • PLANICLEAR (3mm) - Annealed • PVB STANDARD (0.76mm) • PLANICLEAR (3mm) - Annealed • PLANITHERM TOTAL+ FG
	Cavity 1 <ul style="list-style-type: none"> • Argon 90% 16.35 mm
	Glazing 2 <ul style="list-style-type: none"> • Ultra Thin Glass (0.5mm) - Annealed
	Cavity 2 <ul style="list-style-type: none"> • Argon 90% 16.35 mm
	Glazing 3 <ul style="list-style-type: none"> • PLANITHERM TOTAL+ FG • PLANICLEAR (4mm) - Annealed

Simulated performance datas

	Luminous Factors Light Transmittance (TL) Outdoor Reflectance (RLe) Indoor Reflectance (RLi)	CIE015:2018 69.5% 16.7% 16.8%
	Energy Factors Transmittance (TE) UV (Tuv) Outdoor Reflectance (Ree) Indoor Reflectance (Rei) Absorptance A1 (AE1) Absorptance A2 (AE2) Absorptance A3 (AE3)	EN410:2011 48.5% 0.1% 21.5% 26.1% 23.5% 0.0% 6.6%
	Solar Factors Solar Factor (g) Shading Coefficient (SC)	EN410:2011 0.551 0.633
	Thermal Transmission Angle relative to the vertical Ug	EN673:2011 0° 0.610 W/(m2.K)
	Acoustics Rw (C;Ctr) Ra Ra,tr STC (ASTM E413) OITC (ASTM E1332)	N/A N/A N/A N/A N/A
	Color Rendering Transmission (Ra) Reflection (Ra)	CIE015:2018 98.3 91.5
	Safety Class Pendulum Body Resistance	EN12600 NPD
	Anti-Burglary Burglar Resistance	EN356 NPD
	Manufacturing Sizes Nominal Thickness Weight	43.96 mm 27.1 kg/m²
	Sustainability Carbon footprint The value is calculated regarding the composition computed based on the standard EN 15804+A2 (2019)	Global Warming Potential (GWP) - A1-A3 EN 15804+A2 (2019) (kg, CO ₂ eq./m²) European average N/A



Calumen® calculates the photometric characteristics and thermal transmission of glass using calculation algorithms which comply with the following standards: the European standards EN 410 and EN 673, the international standard ISO9050, the Japanese standard JIS R 3106/3107 and the Korean standard KS L 2514/2525. The functional output and calculation rules of Calumen® for standards EN 410 and EN 673 have been validated by TÜV Rheinland (report 89212153-01). The technical performances obtained according to these standards are provided for information only and are subject to amendment. Only the values entered in the performance declaration available on the CE marking site of Saint-Gobain Glass are official. The sound attenuation indices are measured under laboratory conditions according to the standards EN ISO 10140 and EN 12758. The calculated indices are provided for information only. The accuracy for Rw index lies within a range of +/-2dB. The glass thickness calculations comply with the 2012 version of the DTU39-P4 description. The USER is responsible for ensuring that the correct calculation hypotheses are entered and the DTU39 is applied appropriately for the project concerned.

33.2 (16.35 Argon 90) 0.5 (16.35 Argon 90) 4

Coating: PLANITHERM ONE T FG #4 / PLANITHERM ONE T FG #7

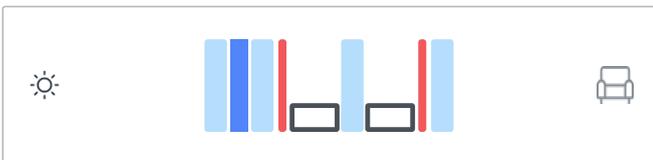
Computed by: Steven Massey

Computed on: 08/12/2025

Product catalog: United Kingdom

Norms: EN410:2011

Glazing type



	Glazing 1 <ul style="list-style-type: none"> • PLANICLEAR (3mm) - Annealed • PVB STANDARD (0.76mm) • PLANICLEAR (3mm) - Annealed • PLANITHERM ONE T FG
	Cavity 1 <ul style="list-style-type: none"> • Argon 90% 16.35 mm
	Glazing 2 <ul style="list-style-type: none"> • Ultra Thin Glass (0.5mm) - Annealed
	Cavity 2 <ul style="list-style-type: none"> • Argon 90% 16.35 mm
	Glazing 3 <ul style="list-style-type: none"> • PLANITHERM ONE T FG • PLANICLEAR (4mm) - Annealed

Simulated performance datas

	Luminous Factors Light Transmittance (TL) Outdoor Reflectance (RLe) Indoor Reflectance (RLi)	CIE015:2018 51.7% 34.4% 34.8%
	Energy Factors Transmittance (TE) UV (Tuv) Outdoor Reflectance (Ree) Indoor Reflectance (Rei) Absorptance A1 (AE1) Absorptance A2 (AE2) Absorptance A3 (AE3)	EN410:2011 28.4% 0.1% 41.4% 48.6% 26.3% 0.0% 3.9%
	Solar Factors Solar Factor (g) Shading Coefficient (SC)	EN410:2011 0.326 0.375
	Thermal Transmission Angle relative to the vertical Ug	EN673:2011 0° 0.516 W/(m2.K)
	Acoustics Rw (C;Ctr) Ra Ra,tr STC (ASTM E413) OITC (ASTM E1332)	N/A N/A N/A N/A N/A
	Color Rendering Transmission (Ra) Reflection (Ra)	CIE015:2018 95.1 96.4
	Safety Class Pendulum Body Resistance	EN12600 NPD
	Anti-Burglary Burglar Resistance	EN356 NPD
	Manufacturing Sizes Nominal Thickness Weight	43.96 mm 27.1 kg/m²
	Sustainability Carbon footprint The value is calculated regarding the composition computed based on the standard EN 15804+A2 (2019)	Global Warming Potential (GWP) - A1-A3 (kg, CO ₂ eq./m ²) European average EN 15804+A2 (2019) N/A



Calumen® calculates the photometric characteristics and thermal transmission of glass using calculation algorithms which comply with the following standards: the European standards EN 410 and EN 673, the international standard ISO9050, the Japanese standard JIS R 3106/3107 and the Korean standard KS L 2514/2525. The functional output and calculation rules of Calumen® for standards EN 410 and EN 673 have been validated by TÜV Rheinland (report 89212153-01). The technical performances obtained according to these standards are provided for information only and are subject to amendment. Only the values entered in the performance declaration available on the CE marking site of Saint-Gobain Glass are official. The sound attenuation indices are measured under laboratory conditions according to the standards EN ISO 10140 and EN 12758. The calculated indices are provided for information only. The accuracy for Rw index lies within a range of +/-2dB. The glass thickness calculations comply with the 2012 version of the DTU39-P4 description. The USER is responsible for ensuring that the correct calculation hypotheses are entered and the DTU39 is applied appropriately for the project concerned.

4 (17.75 Argon 90) 0.5 (17.75 Argon 90) 4

Coating: PLANITHERM ONE T FG #2 / PLANITHERM ONE T FG #5

Computed by: Steven Massey

Computed on: 08/12/2025

Product catalog: United Kingdom

Norms: EN410:2011

Glazing type



	Glazing 1 <ul style="list-style-type: none"> PLANICLEAR (4mm) - Annealed PLANITHERM ONE T FG
	Cavity 1 <ul style="list-style-type: none"> Argon 90% 17.75 mm
	Glazing 2 <ul style="list-style-type: none"> Ultra Thin Glass (0.5mm) - Annealed
	Cavity 2 <ul style="list-style-type: none"> Argon 90% 17.75 mm
	Glazing 3 <ul style="list-style-type: none"> PLANITHERM ONE T FG PLANICLEAR (4mm) - Annealed

Simulated performance datas

Luminous Factors	CIE015:2018
Light Transmittance (TL)	52.1%
Outdoor Reflectance (RLe)	34.8%
Indoor Reflectance (RLi)	34.8%
Energy Factors	EN410:2011
Transmittance (TE)	29.9%
UV (Tuv)	N/A
Outdoor Reflectance (Ree)	48.6%
Indoor Reflectance (Rei)	48.6%
Absorptance A1 (AE1)	16.8%
Absorptance A2 (AE2)	0.2%
Absorptance A3 (AE3)	4.6%
Solar Factors	EN410:2011
Solar Factor (g)	0.345
Shading Coefficient (SC)	0.397
Thermal Transmission	EN673:2011
Angle relative to the vertical	0°
Ug	0.482 W/(m2.K)
Acoustics	
Rw (C;Ctr)	N/A
Ra	N/A
Ra,tr	N/A
STC (ASTM E413)	N/A
OITC (ASTM E1332)	N/A
Color Rendering	CIE015:2018
Transmission (Ra)	95.5
Reflection (Ra)	96.7
Safety Class	EN12600
Pendulum Body Resistance	NPD
Anti-Burglary	EN356
Burglar Resistance	NPD
Manufacturing Sizes	
Nominal Thickness	44.0 mm
Weight	21.3 kg/m²
Sustainability	
Carbon footprint	
<i>The value is calculated regarding the composition computed based on the standard EN 15804+A2 (2019)</i>	
Global Warming Potential (GWP) - A1-A3	EN 15804+A2 (2019)
(kg, CO ₂ eq./m²) European average	N/A



Calumen® calculates the photometric characteristics and thermal transmission of glass using calculation algorithms which comply with the following standards: the European standards EN 410 and EN 673, the international standard ISO9050, the Japanese standard JIS R 3106/3107 and the Korean standard KS L 2514/2525. The functional output and calculation rules of Calumen® for standards EN 410 and EN 673 have been validated by TÜV Rheinland (report 89212153-01). The technical performances obtained according to these standards are provided for information only and are subject to amendment. Only the values entered in the performance declaration available on the CE marking site of Saint-Gobain Glass are official. The sound attenuation indices are measured under laboratory conditions according to the standards EN ISO 10140 and EN 12758. The calculated indices are provided for information only. The accuracy for Rw index lies within a range of +/-2dB. The glass thickness calculations comply with the 2012 version of the DTU39-P4 description. The USER is responsible for ensuring that the correct calculation hypotheses are entered and the DTU39 is applied appropriately for the project concerned.

4 (17.75 Argon 90) 0.5 (17.75 Argon 90) 4

Coating: PLANITHERM TOTAL+ FG #2 / PLANITHERM TOTAL+ FG #5

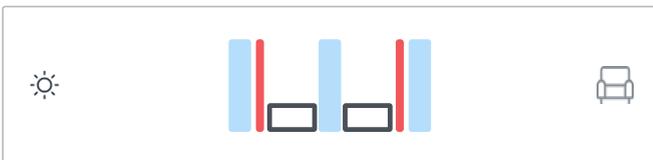
Computed by: Steven Massey

Computed on: 08/12/2025

Product catalog: United Kingdom

Norms: EN410:2011

Glazing type



	Glazing 1 <ul style="list-style-type: none"> PLANICLEAR (4mm) - Annealed PLANITHERM TOTAL+ FG
	Cavity 1 <ul style="list-style-type: none"> Argon 90% 17.75 mm
	Glazing 2 <ul style="list-style-type: none"> Ultra Thin Glass (0.5mm) - Annealed
	Cavity 2 <ul style="list-style-type: none"> Argon 90% 17.75 mm
	Glazing 3 <ul style="list-style-type: none"> PLANITHERM TOTAL+ FG PLANICLEAR (4mm) - Annealed

Simulated performance datas

	Luminous Factors	CIE015:2018
	Light Transmittance (TL)	70.0%
	Outdoor Reflectance (RLe)	16.9%
	Indoor Reflectance (RLi)	16.9%
	Energy Factors	EN410:2011
	Transmittance (TE)	51.0%
	UV (Tuv)	N/A
	Outdoor Reflectance (Ree)	26.1%
	Indoor Reflectance (Rei)	26.1%
	Absorptance A1 (AE1)	15.3%
	Absorptance A2 (AE2)	0.2%
	Absorptance A3 (AE3)	7.4%
	Solar Factors	EN410:2011
	Solar Factor (g)	0.582
	Shading Coefficient (SC)	0.669
	Thermal Transmission	EN673:2011
	Angle relative to the vertical	0°
	Ug	0.579 W/(m2.K)
	Acoustics	
	Rw (C;Ctr)	N/A
	Ra	N/A
	Ra,tr	N/A
	STC (ASTM E413)	N/A
	OITC (ASTM E1332)	N/A
	Color Rendering	CIE015:2018
	Transmission (Ra)	98.5
	Reflection (Ra)	91.8
	Safety Class	EN12600
	Pendulum Body Resistance	NPD
	Anti-Burglary	EN356
	Burglar Resistance	NPD
	Manufacturing Sizes	
	Nominal Thickness	44.0 mm
	Weight	21.3 kg/m²
	Sustainability	
	Carbon footprint	
	<i>The value is calculated regarding the composition computed based on the standard EN 15804+A2 (2019)</i>	
	Global Warming Potential (GWP) - A1-A3	EN 15804+A2 (2019)
	(kg, CO ₂ eq./m²) European average	N/A



Calumen® calculates the photometric characteristics and thermal transmission of glass using calculation algorithms which comply with the following standards: the European standards EN 410 and EN 673, the international standard ISO9050, the Japanese standard JIS R 3106/3107 and the Korean standard KS L 2514/2525. The functional output and calculation rules of Calumen® for standards EN 410 and EN 673 have been validated by TÜV Rheinland (report 89212153-01). The technical performances obtained according to these standards are provided for information only and are subject to amendment. Only the values entered in the performance declaration available on the CE marking site of Saint-Gobain Glass are official. The sound attenuation indices are measured under laboratory conditions according to the standards EN ISO 10140 and EN 12758. The calculated indices are provided for information only. The accuracy for Rw index lies within a range of +/-2dB. The glass thickness calculations comply with the 2012 version of the DTU39-P4 description. The USER is responsible for ensuring that the correct calculation hypotheses are entered and the DTU39 is applied appropriately for the project concerned.