

Low-E / Energy Glass

Low-emissivity coatings — the single most effective thermal upgrade

Overview

Low-E is the single most effective upgrade for sealed unit thermal performance — reducing U-value from 2.8 to 1.1 W/m²K, a 61% improvement in a standard DGU. Low-E is now the default for virtually all residential and commercial sealed unit production.

Complete Brand Reference

Manufacturer	Product	Type	Emissivity	U-value*
Pilkington	Optitherm™ S3	Soft coat	0.03	1.0
Pilkington	K Glass™ S	Soft coat	0.05	1.1
Saint-Gobain	Planitherm® Total+	Soft coat	0.03	1.0
Guardian	ClimaGuard® Premium2	Soft coat	0.03	1.0
AGC	iplus Top 1.1	Soft coat	0.03	1.1

*Centre-pane U-value in 4-16-4 DGU with argon.

Coating Position

Surfaces are numbered 1-4 outside to inside; position determines function.

- **Surface 3 (standard):** inner pane cavity face — reflects room heat back inside. Default for all residential/commercial.
- **Surface 2 (solar):** outer pane cavity face — reflects solar heat outward, for overheating control.
- **Surfaces 2+5 (TGU):** dual Low-E for maximum triple glazing performance — U-values to 0.5.

Soft Coat vs Hard Coat

	Emissivity	Typical U-value*	Best Fit
Soft Coat (sputtered)	0.02-0.05	1.0-1.1	Standard for all new sealed units
Hard Coat (pyrolytic)	0.15-0.20	1.5-1.6	Secondary glazing, exposed edges

Pairing with Argon and Warm Edge

Low-E does the majority of the work, but centre-pane U-value only tells part of the story. An argon gas fill in the cavity reduces convective heat transfer between the panes. A warm edge spacer cuts the thermal bridge at the perimeter of the unit. Low-E, argon and warm edge together — rather than any one in isolation — is what gets a whole-window U-value down to the level needed for demanding Part L specifications.

How to Order

Contact our sales team: 020 8574 9342 | 07305 993794 | sales@csultd.co.uk | csultd.co.uk — quotes returned within 2 business hours (Mon-Fri, 8am-5pm).