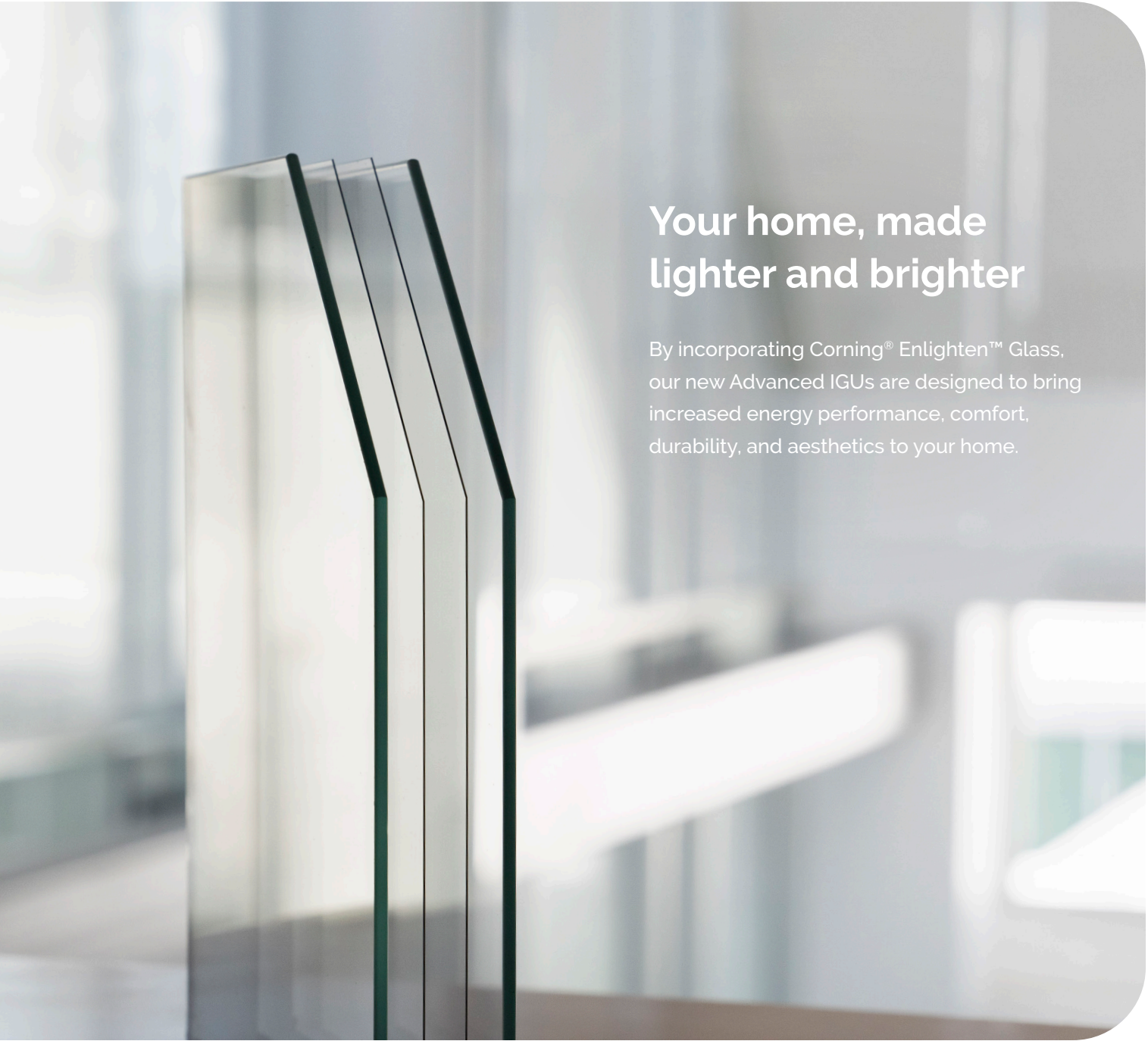


NEW

Advanced IGUs

powered by **Corning® Enlighten™ Glass**



Your home, made
lighter and brighter

By incorporating Corning® Enlighten™ Glass, our new Advanced IGUs are designed to bring increased energy performance, comfort, durability, and aesthetics to your home.

CORNING | Enlighten™ Glass

 ALL WEATHER
AT HOME™



Corning's proprietary fusion technology

Fusion glass manufacturing has become the industry's most efficient method for producing pristine, thin, stable flat glass. Fusion-formed glass is remarkably flat, uniform in thickness, and has pristine surface quality.

Corning is working to address a significant challenge in the construction industry: thermal performance. As energy standards continue to tighten, builders are continually challenged to improve the thermal performance of the building envelope without drastically increasing building costs.

Nearly 35% of a building's heat or cooling is lost through the windows¹, despite their relatively small share of the overall building envelope. All Weather at Home's quad-pane IGUs featuring Corning® Enlighten™ Glass deliver significantly higher thermal efficiency compared to traditional dual-pane units. They reduce energy loss, improve overall insulation, and open up greater design flexibility by enabling larger window sizes thanks to the reduced IGU weight.

- **Thinness:** Enlighten 0.5 mm fusion-formed glass is thinner than a credit card
- **Flatness:** Features superb flatness and evenness through a draw-down process
- **Pristine surface:** Enables excellent surface quality as the glass is formed in air
- **Consistency in quality:** Enables consistent uniformity of glass thickness and properties
- **Superb transparency:** Offers optical clarity with the same transmission performance as display glass

Our IGUs with Enlighten Glass offer a unique combination of thin, lightweight, and tough properties, enabling a new generation of advanced windows.



Lightweight

Up to 53% weight reduction compared to traditional IGUs²



Energy Efficient

Enhanced thermal performance within same IGU footprint



Acoustic Performance

Improved outside noise reduction with less weight³

¹ Natural Resources Canada. (2025, January 14). *Keeping The Heat In - Section 8: Upgrading windows and exterior doors*. <https://natural-resources.canada.ca/energy-efficiency/home-energy-efficiency>

² Advanced quad pane IGU when compared to traditional triple pane IGU.

³ Advanced triple pane IGU when compared to traditional dual pane IGU.

Superior insulation and durability performance compared to conventional dual and triple glazed units

All Weather at Home's Advanced IGUs with Corning® Enlighten™ Glass offer a unique combination of thin, lightweight, and tough properties, enabling a new generation of innovative windows.



- Quad pane IGUs deliver up to 51% higher thermal rating (u-value) compared to a traditional dual-pane¹
- Quad pane IGUs featuring Enlighten Glass reduce weight by up to 53%, compared to traditional triple pane IGUs made with soda-lime glass. This enables the use of larger window sizes that align with modern architectural designs, resulting in expanded viewing areas, increased natural light, and the potential to enhance the overall value of your property
- Thermally optimized windows featuring Enlighten Glass can improve occupancy comfort²
- The higher thermal performance (lower u-value) of advanced window systems gives builders greater flexibility to balance energy performance across the building envelope
- Enlighten Glass has a 3x lower coefficient of thermal expansion, protecting windows from breakage that can occur due to drastic changes in outside temperature

Advanced Triple Product Availability³



Windows: All series excluding 2700

Shapes: Available

Doors: Not available

Patio Doors: Not available

Heat Systems

HS3E 180 / Clear / 180

HS6E 270 / Clear / 270

HS10E 366 / Clear / 366

Advanced Quad Product Availability³



Windows: All series excluding 2700 & 2200/5600 basement series

Shapes: Available

Doors: Not available

Patio Doors: Not available

Heat Systems

HS11E 180 / Clear / Clear / 180

HS12E 270 / Clear / Clear / 270

HS13E 366 / Clear / Clear / 366

³ Exclusions include but are not limited to: All entry doors, sidelites, patio doors, glass with grilles or SDL, textured glass, tinted glass, specialty glass (Lexan, CLIC), safety glass (Enlighten cannot be tempered), Atmosphere folding doors, and decorative door inserts or inserts of 1" thickness or less. Please speak to an All Weather at Home representative for a full list of exclusions.

¹ U-value measured from center of glass. Specific benefits depend on final window configuration.

² The interior glass surface on thermally optimized windows are up to 12.2°C closer to room temperature.

Enables lightweight solutions for your safety and peace of mind

Ultra-lightweight, thin, and incredibly strong, Enlighten Glass enables a revolutionary step change in Advanced IGU production.

- 3x more scratch resistant than traditional soda-lime glass, minimizing the risk of abrasion during sealed-unit manufacturing and preserving glass clarity through production
- Significant weight reduction enables easier installation
- Provides exceptional clarity due to its ultra-low iron composition
- Designed to provide a sleek, lightweight replacement for bulky glazing component in applications without sacrificing performance



Designing more energy efficient homes with lightweight, low-carbon glass

Enlighten Glass provides a reduced carbon footprint of up to 34% compared to traditional 3 mm soda-lime glass regularly used for triple-pane windows.

Additionally, Enlighten Glass is recyclable. As the industry works to improve flat-glass recovery, Corning is exploring various recycling pathways and process enhancements for Enlighten Glass.

Material Properties

Glass Type	Boro-Aluminosilicate
Form	Fusion-drawn sheets
Sheet Size (max)	2200 mm x 3200 mm
Thickness	0.5 mm $\pm 10\%$
Flatness	< 1 mm/m
Squareness	± 3 mm (ASTM C1036)
Blemishes	ASTM C1036 Type 1, Class 1, Q3; EN 572-4
Coating	Compatible with LowE coatings

Thermal & Mechanical Properties

Thermal Expansion	$32 \times 10^{-7} / ^\circ\text{C}$
Thermal Conductivity	1.09 W/m/K (23°C)
Vickers Hardness (200 g load, 25 sec dwell)	560
Density	2.38 g/cc
Fracture Toughness	0.8 - 0.9 MPa $\cdot\text{m}^{0.5}$
Youngs Modulus	74 GPa
Shear Modulus	30 GPa
Poisson Ratio	0.23

Weight

Glass	Thickness (mm)	Weight per area (kg/m ²)
Enlighten Glass	0.5	1.2
Soda-Lime Glass	3 / 4 / 6	7.5 / 10 / 15



CORNING
Enlighten™ Glass

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