

Go Beyond Energy Star.  
Achieve triple-glazed performance  
in a double-glazed window.



BEYOND GLASS™



4th SURFACE TECHNOLOGY

## How Can You Stay Competitive? AGC, That's How.

Consumer demands for thermal efficiency are growing stronger every day. New ENERGY STAR® standards could drastically impact your production and the market. The good news: You have a partner who can give you a competitive edge today—and for whatever tomorrow holds.

The AGC logo consists of the letters 'AGC' in a bold, blue, sans-serif font. A small red square is positioned between the 'A' and the 'G'. The logo is centered within a white square that has a thin blue border.

**AGC**

BEYOND GLASS™

## Achieve triple-glazed performance in a double-glazed window.

Manufacturing triple-glazed windows is one way to meet increased ENERGY STAR® standards for thermal performance. However, capital investment and costly new production processes can cause you to lose your competitive edge. These issues are eliminated with U4 Technology.

- Easily integrates into your current double-glazed manufacturing processes
- Allows you to maintain your current productivity levels
- Costs 50%–60% less to manufacture than triple-glazed IGU's
- Requires no additional SKUs for heavy-duty window operating hardware to accommodate triple IGU's
- Will meet or exceed new ENERGY STAR standards
- Increases thermal efficiency by 0.04 or more, without additional costs for glass, labor and freight to produce triple-glazed IGU's.

## The technology is baked in.

The innovative Comfort Select 73 coating that gives U4 its outstanding performance is applied to the glass while it's still in a molten state (approximately 600° C). As the glass cools, the coating and the glass become one single, high-performance, hard-coated glazing.

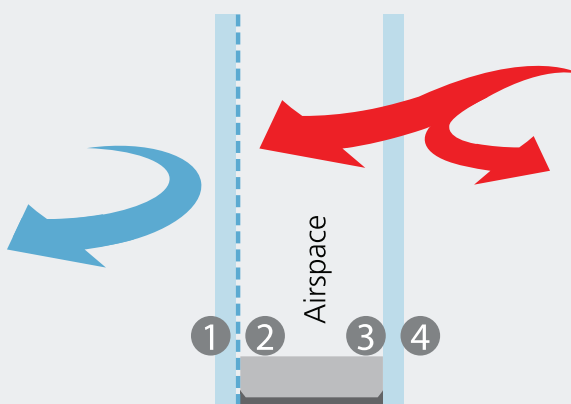
- Unlimited shelf life
- Requires no edge deletion, minimizing labor
- Easy to cut; no special tools required
- No special cleaning requirements
- Annealed, but can easily be tempered or heat-strengthened
- Comes with a 10-year warranty against cracking, chipping, peeling, flaking, and deterioration



## How does U4 technology maximize thermal efficiency?

### Standard Low-e IGU

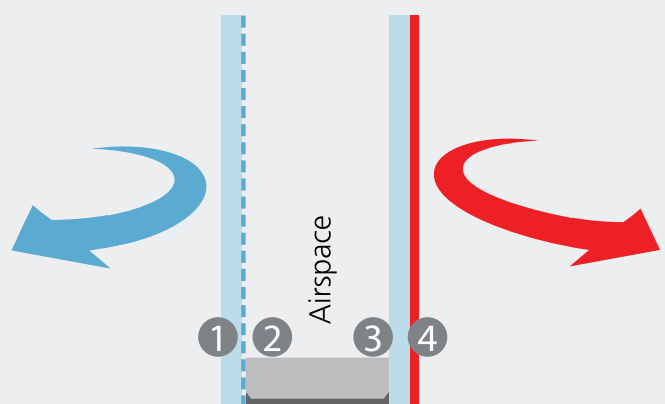
*No coating on surface #4 results in a loss of heat*



Adding a low-e coating to surface #2 allows the window to reflect solar energy outside when the sun is shining, thus lowering solar heat gain during warm conditions. During cold conditions, the coating on surface #2 reduces energy transmitted across the airspace to the outside. However, some heat from the room is lost to the airspace due to no coating on surface #4. This ultimately lowers the window's thermal performance.

### Low-e IGU with U4 Technology

*U4 on surface #4 keeps more heat in*



Adding a low-e coating to surfaces #2 and #4 of an IGU allows the window to reflect energy both to the outside and inside. The coating on surface #2 will reflect solar energy to the outside when the sun is shining. During cold conditions, the coating on surface #4 will reflect energy back into the room. This reduces the amount of energy transferred across the airspace, therefore improving overall insulating properties of the glass by an additional 15%–20% versus a conventional IGU. The low-e coating on surface #2 may be a soft-coating, but the coating on surface #4 must be Comfort Select 73, AGC's pyrolytic hard-coating.

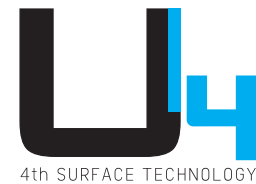
## Select the right glass for the right region.

It doesn't make sense to offer the exact same type of glass in every region. That's why AGC created Comfort Select™— the AGC family of residential low-emissivity coated glass targeted to the needs of differing geographic zones. From passive solar and lower U-values in northern climates to solar control and low solar heat gain in southern zones, there's a product designed to be the most efficient for each region.

**COMFORT** *Select*™

## Exceed expectations— and ENERGY STAR® standards.

Adding U4 – 4th Surface Technology to your IGUs is a true game-changer. You can improve your total window U-value performance by 0.04 or more, without changing your manufacturing processes. Now, you'll be able to exceed new ENERGY STAR standards and still maintain your competitive edge. It's all part of AGC's commitment to developing innovations that keep you ahead of the curve.



Adding U4 can improve total window U-value performance by 0.04 or more.

### Double Glazed Configurations

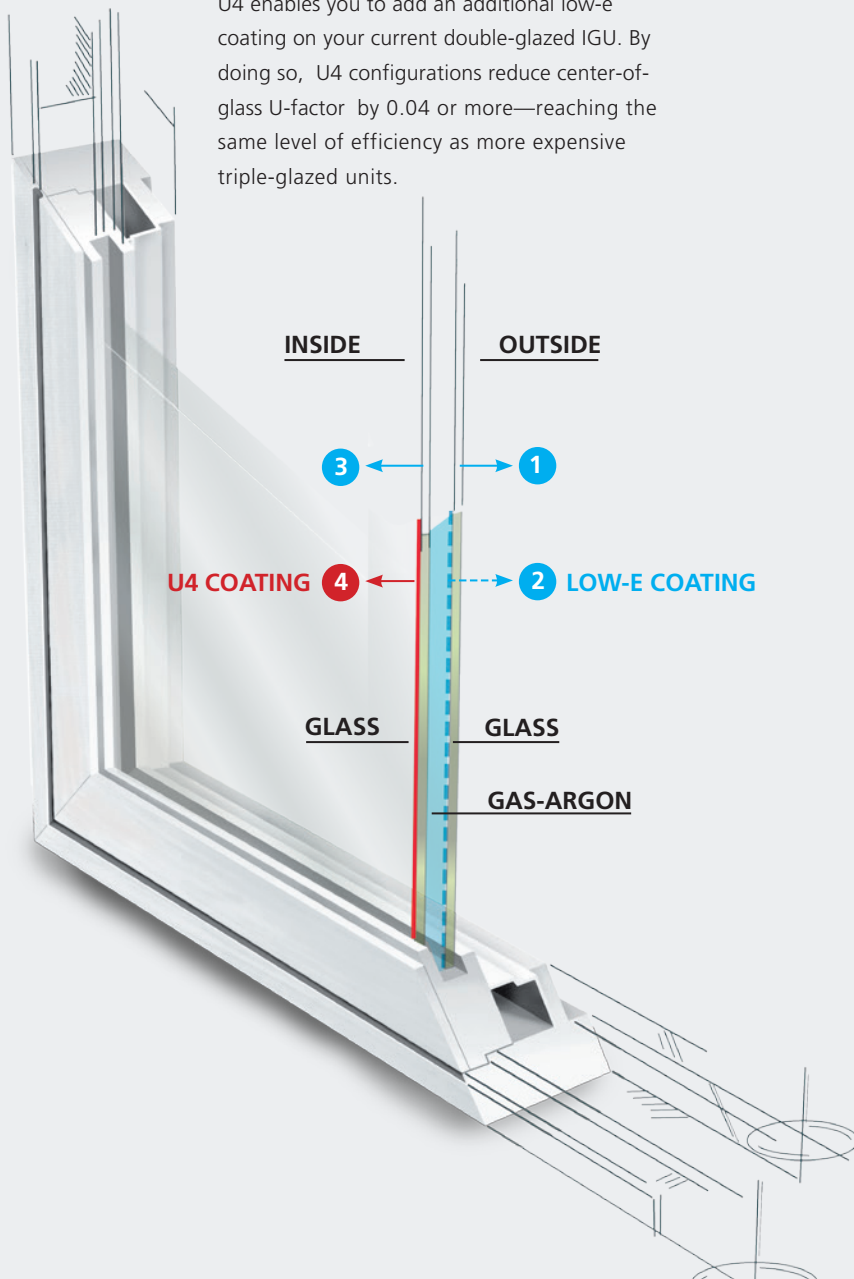
Standard IGU Configurations with One Low-E Coating		U4 Configurations Comfort Select 73 #4 = U4		U4 Performance Advantage	
IGU Configuration	COG U-factor	U4 Configuration	COG U-factor	COG U-factor Difference	Performance Improvement
Clear   CS 73 #3	0.29	CS 73   CS 73 = U4	0.23	<b>0.06</b>	<b>20.7%</b>
Clear   CS 63 #3	0.26	CS 63   CS 73 = U4	0.21	<b>0.05</b>	<b>19.2%</b>
CS 40 #2   Clear	0.25	CS 40   CS 73 = U4	0.20	<b>0.05</b>	<b>20.0%</b>
CS 36 #2   Clear	0.25	CS 36   CS 73 = U4	0.20	<b>0.05</b>	<b>20.0%</b>
CS 28 #2   Clear	0.24	CS 28   CS 73 = U4	0.20	<b>0.04</b>	<b>16.7%</b>
CS R42 #2   Clear	0.25	CS R42   CS 73 = U4	0.20	<b>0.05</b>	<b>20.0%</b>

## Position Yourself Ahead of the Energy Performance Curve

Pioneered by AGC in 2010, *U4 – 4th Surface Technology* allows you to improve window performance by 0.04 or more—without changing your manufacturing processes.

Improve efficiency without impacting productivity.

U4 enables you to add an additional low-e coating on your current double-glazed IGU. By doing so, U4 configurations reduce center-of-glass U-factor by 0.04 or more—reaching the same level of efficiency as more expensive triple-glazed units.



**U4**  
4th SURFACE TECHNOLOGY



BEYOND GLASS™

For now, for the future,  
for greater efficiency.

As a vertically integrated glass company, AGC is uniquely qualified to deliver the most efficient products today—and to be your strategic partner for tomorrow. Talk to your representative to find out how AGC goes Beyond Glass™ to exceed your expectations.

To learn more about AGC *U4 - 4th Surface Technology*, as well as other innovative AGC products, call 800-251-0441, visit [www.u4glass.com](http://www.u4glass.com) or email us at [info@us.agc.com](mailto:info@us.agc.com).

**800.251.0441 | [U4glass.com](http://U4glass.com)**

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Reference #072715

