



Technical Data Sheet  
V67.2

Glass Dynamics, Inc.

## PRODUCT TECHNICAL DATA SHEET

### Product Description

A high-performance dynamic insulating glass unit (DGU) incorporating advanced electrochromic glass technology. The DGU integrates with standard window frames and transitions between transparent, partial transparent, and dark states electrically, while delivering premium privacy and solar control performance for exterior glazing applications.

### Product Variants

Product variants are available to provide maximum light transmission and four season solar performance in specific Windows 7 ENERGY STAR regions, while others are intended for home front entryway applications requiring greater privacy.

### Product Applications

#### **Exterior high-end residential home installations including:**

- Home front entryways with light and privacy requirements
- Transoms requiring dynamic light control
- High solar control performance applications
- Glare control situations

#### **Integration with building automation, occupant control, and daylighting strategies:**

- Amazon / Alexa
- Control4, etc.

#### **Retrofit of existing window systems:**

- Energy efficiency upgrades
- Light control
- Privacy
- Glare control

## System Components & Construction

### Dynamic Glass Layer:

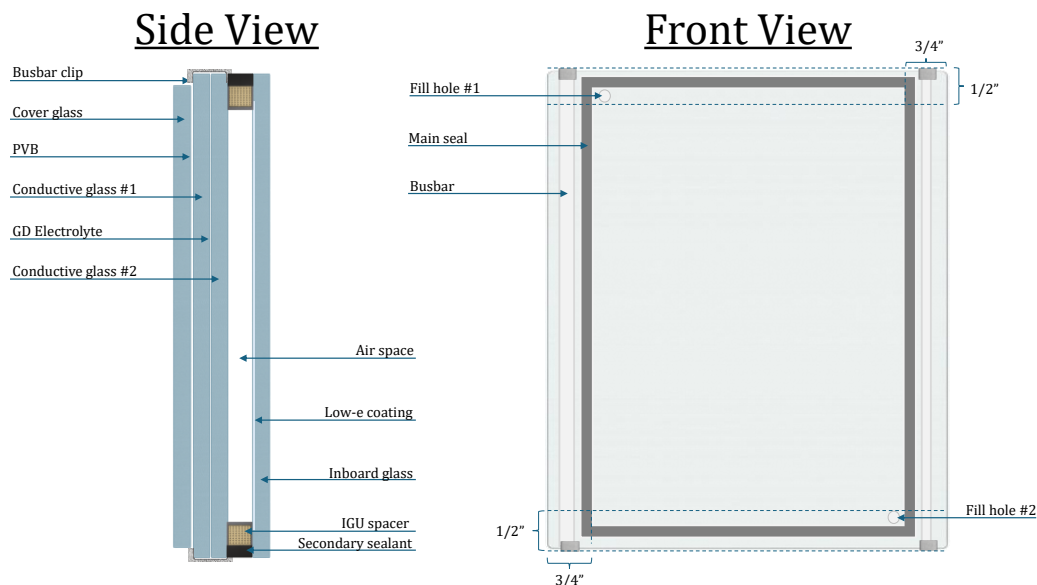
- A three-ply electrochromic glass laminate including a cover glass laminated with PVB to an electrochromic panel
- The electrochromic panel is a glass cavity, made with two sheets of conductive glass, that contains Glass Dyneamics' proprietary electrolyte with advanced electrochromic materials

### Dynamic Insulating Glass Unit Assembly:

- DGU construction available in double pane units:
  - Outboard glass: Dynamic Glass Layer
  - Inboard glass: Industry standard low-e glass
  - Argon fill
  - Warm-edge spacer system
  - Sealed units with fully captured edge design
- Low-E coatings on inboard glass surfaces #3
- Inboard glass fully tempered or heat-soaked/annealed as required for structural/seismic conditions

### Window Frame Assembly & Compatibility:

- DGU is designed to integrate into standard one-inch residential or retrofit window systems
- Window frame will require conduits drilled to allow wires to extend through the frame to a power source
- Window contractor to certify that the window frame channels are sufficient for desired sight-lines and edge capture (see drawings and edge/channel dimensions below)



## Dynamic Glass Unit (DGU) Performance Specifications

Property	Configuration Specification <sup>1,2</sup>		
	North <sup>3</sup>	South <sup>3</sup>	Privacy
Clear VLT (%)	68%	60%	60%
Intermediate VLT (%)	12%	10%	9%
Dark VLT (%)	5%	4%	1%
Clear R [ext / int ] (%)	13% / 12%	14% / 12%	14% / 13%
Intermediate R (%)	8% / 10%	8% / 10%	8% / 11%
Dark R (%) approximate	7% / 10%	7% / 10%	7% / 10%
Clear SHGC	0.5	0.39	0.5
Intermediate SHGC	0.25	0.14	0.24
Dark SHGC	0.2	0.11	0.2
U-value (all states)	0.2	0.25	0.29
UV-blocking (all states)	>99%		
Switching speed, for 32"-wide DGU	<200s		
Switching speed, visual response	<3s		
Haze (all states and angles)	<3%		
Soud transmission control (STC)	37+		
Safety position (no power)	Clear		
Power consumption	0.5w/m		

- Parameters calculated with LBNL Windows 7
- All specification details within this document are subject to change without required notice.
- Intended for ENERGY STAR North and North Central regions
- Intended for ENERGY STAR South and South Central regions

## Sizes & Dimensional Limits and Specifications

Property	Specification
Maximum DGU size	73 in x 32 in
Minimum DGU size	9 in x 15 in
Shapes	Rectangles only
Edge Conditions	Fully captured
Dynamic layer thickness	7.5 mm
DGU thickness	25 mm
DGU Weight	~5 lbs/ft <sup>2</sup> (25mm DGU)

## Environmental Conditions & Performance

Property	Specification
DGU operational temp (outside):	-30°C to 60°C
DGU controller operational temp:	10°C to 40°C
DGU impact resistance:	TAS 201/203, DP50 for modified thicker construction
Durability:	Dynamic layer and IGU tested for accelerated UV, heat, thermal cycling, humidity, and salt spray
Edge termination:	Fully captured edges ensuring structural integrity, weather runoff, and electrical isolation

## Electrical & Control Systems

Electrical Property	Specification
Wire configuration:	Wires extend from DGU through window frame to control box to building main power source
Control Box:	Contains wireless control and power input transformer electronics
Building Main Power Source:	Wires from Control Box integrate with any standard 110v electrical outlet
Power level to and from Control Box:	<5V AC
DGU and Control Box wiring:	8 gauge 2-conductor Class 3 wire
Control compatibility:	Smart phone (app), light switches, smart home systems (Google / Alexa), automation relays
Electrical certifications:	NEC Class 3 power-limited system
Mobile phone control features:	Single or multi-channel operation, Bluetooth, wifi, wifi remote updates, building automation integration
Mobile phone app:	Available for download on Apple or Android Play stores.

## Standards & Compliance

Standard Category	Specification
Dynamic materials durability:	ASTM E2141/ E2953
IGU durability:	ASTM 2188 / 2189 / 2190
IGU safety:	ANSI Z97.1, CPSC 16 CFR 1201
Hurricane safety:	TAS 201/203
Building energy code certifications:	NFRC, ENERGY STAR®
Control box:	UL 62368-1, FCC, EN 300 328 / EN 301 893



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## Warranty & Maintenance

Aftercare Category:	Specification
Warranty Coverage:	<ul style="list-style-type: none"><li>- <u>Dynamic materials</u>: 10-year limited warranty</li><li>- <u>Electronics</u>: 5-year limited warranty</li><li>- <u>DGU</u>: 15-year limited warranty</li></ul>
Cleaning:	<ul style="list-style-type: none"><li>- Use approved glass cleaning agents</li><li>- Avoid abrasives or harsh chemicals that can degrade coatings</li></ul>
Maintenance:	<ul style="list-style-type: none"><li>- Verify electrical system integrity periodically</li><li>- Monitor dynamic response and optical clarity for degradation</li></ul>

## Installation & Handling

<b>Window Installation Requirements:</b>
<ul style="list-style-type: none"><li>- Verify frame compatibility for IGU thickness, sightlines, and thermal breaks</li><li>- Window channel depth requirements:<ul style="list-style-type: none"><li>- Vertical left and right (long side) channels: 3/4" each</li><li>- Horizontal bottom and top (short side) channels: 1/2" each</li></ul></li><li>- Ensure proper edge capture, sealing and mounting per glass manufacturer guidelines</li><li>- Provide wiring pathway and power supply location for dynamic window</li></ul>
<b>Handling:</b>
<p><u>Transport:</u></p> <ul style="list-style-type: none"><li>- Protect glass during transport and installation to avoid scratching or damaging IGU surfaces</li></ul> <p><u>Commissioning:</u></p> <ul style="list-style-type: none"><li>- Coordinate with general contractor for field testing</li><li>- Verify electrical switching and optical dynamic performance</li></ul>

## Optional Features & Accessories

<b>Custom configurations are noted below:</b>
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Please contact your sales representative for additional information or project-specific requirements. Custom configurations are subject to availability; and, lead times and pricing will likely extend and increase, respectively.
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| <ol style="list-style-type: none"><li>1. Custom color cover glass with IGU construction</li><li>2. Matte/translucent privacy finish in "off" state (clear mode) with DGU construction</li><li>3. Printed frits, bird-friendly cover glass patterns with DGU construction</li><li>4. Alternative solar control coatings for greater in-room heat reduction</li><li>5. Acoustic control enhancement</li><li>6. Smart control integration: occupancy sensors, daylight sensors, building automation system interface</li></ol> |
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Made in the USA



Glass Dyneamics, Inc.

[www.glassdyneamics.com](http://www.glassdyneamics.com)