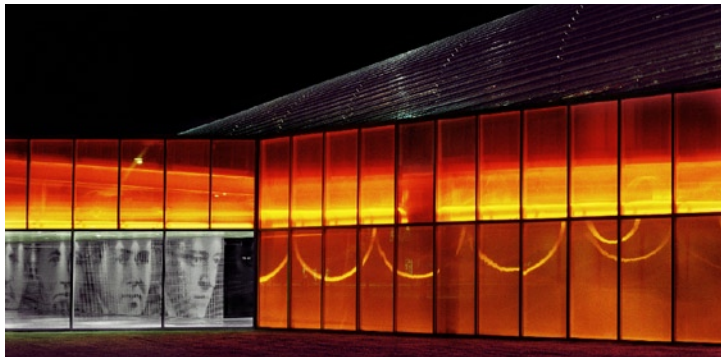

ClearShade™ IGU

Panelite is the original developer and supplier of innovative, resource-efficient translucent honeycomb materials for architecture and design. Beyond a compelling aesthetic, our panels offer real environmental benefits that focus on resource conservation – benefits that include low embodied energy, natural daylighting, structural efficiency, and in the case of exterior panels, outstanding solar heat gain control. Our ClearShade Insulating Glass Units provide significant energy-saving and daylighting benefits and are suitable for exterior facades, sloped glazing and canopies, as well as interior wall applications.

Clockwise from top left: 1. PANELITE™ IG-TC8 • Henry Madden Library at CSUF • Design: AC Martin • Photography: Art Gray 2. PANELITE™ IB-TC4 • Burnsville Performing Arts Center • Design: Akeny Kell Architects • Photography: Jim Gallop 3. PANELITE™ IG-TC8 • Henry Madden Library at CSUF Design: AC Martin • Photography: Art Gray 4. PANELITE™ IB-TO4 • IIT McCormick Tribune Campus Center, Chicago IL • Design: OMA • Photography: Floto + Warner 5. PANELITE™ IB-TO4

www.panelite.us

NY : 212.947.8292
LA : 323.297.0115

PANELITE

CLEARSHADE™ IGU SERIES: PRODUCT OVERVIEW

PANELITE™ IG-TC8 • Henry Madden Library at CSUF
Design: AC Martin • Photography: Art Gray

PANELITE™ IB-TO4 • IIT McCormick Tribune Campus Center, Chicago IL • Design: OMA • Photography: Floto + Warner

PANELITE™ IB-TC4 • Burnsville Performing Arts Center
Design: Akeny Kell Architects • Photography: Jim Gallop

FEATURES

- Panelite's ClearShade IGU uses patented polycarbonate core technology to reduce solar heat gain and improve shading - providing important energy and cost savings.
- Solar Heat Gain Coefficient as low as 0.14 at mid-day
- Visible Light Transmission values up to 48% depending on honeycomb core specification
- Directional transparency and visual privacy
- Available with a wide range of standard and high performance core, glass and spacer specifications to satisfy the most stringent code requirements

APPLICATIONS: EXTERIOR

- Curtain Wall
- Clerestory
- Skylight, Canopy and Sloped glazing
- Hurricane and Blast Resistant glazing

APPLICATIONS: INTERIOR

- Conference Room and Office enclosures
- Interior Curtain Wall
- Privacy Screens and Walls
- Railing and Balustrade Panels

BUILDING TYPES

- Education
- Healthcare
- Institutional: Library, Museum, Civic, Event Centers
- Transportation Facilities
- Sports Architecture: Stadium, Arena
- Commercial: High and Low Rise Commercial Glazing
- Hospitality: Mixed Use and Residential development

INSTALLATION SYSTEM COMPATIBILITY

- Compatible with most commercially available storefront , curtainwall and skylight systems designed to receive standard insulating glass units.

SUSTAINABILITY + LEED

ClearShade IGU offers outstanding Solar Heat Gain performance while maximizing Visible Light Transmission, daylight and views.
EQ 8.1 + 8.2 Indoor Environmental Quality Credit: Daylight and views
ID 1.1 - 1.4 Innovation in design
MR 5.1 Regional Materials

PANELITE™ IG-TC8 • Henry Madden Library at CSUF
Design: AC Martin • Photography: Art Gray

PANELITE™ IB-TC4 • Fuller Theological Seminary David Allan Hubbard Library, Pasadena, CA • Design: William McDonough + Partners

PANELITE™ IB-TC4 • Burnsville Performing Arts Center
Design: Akeny Kell Architects • Photography: Jim Gallop

US Patent Pending
Please consult Panelite's installation specifications under "Specifications" at www.panelite.us for complete handling, installation and technical information.

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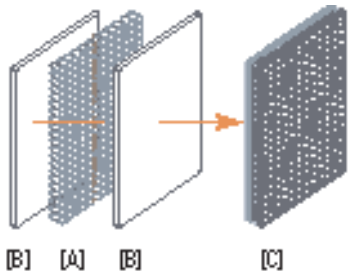
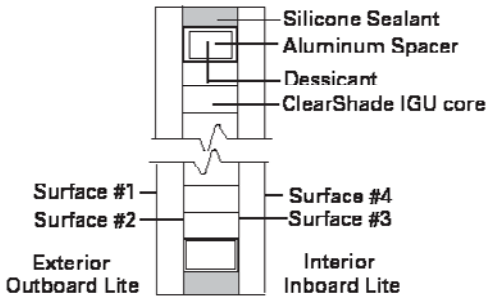
CLEARSHADE™ IGU SERIES: SPECIFICATION OVERVIEW

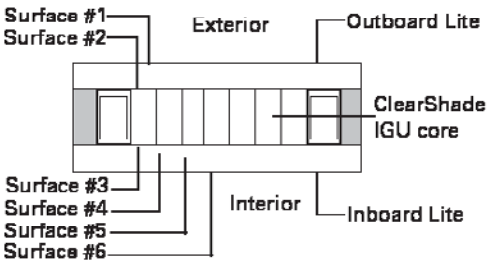


[A] tubular honeycomb core
[B] glass facings
[C] core + facings + spacer/seal = hemetically sealed unit

IGU COMPOSITION



IGU COMPOSITION: Vertical Glazing IGU Diagram



IGU COMPOSITION: Canopy, Skylight, Sloped or Laminated Glass IGU Diagram

STANDARD UNIT COMPOSITION

1" overall unit thickness
Inboard Lite: 1/4" clear tempered glass
Interior: 1/2" airspace with Panelite ClearShade™ honeycomb core:
Outboard Lite: 1/4" clear tempered glass

PANEL DIMENSIONS

Units are produced to specified dimensions per project
Maxiumum dimensions: 52" X 122"
Panel thickness is subject to unit composition

HONEYCOMB CORE OPTIONS

Cell Diameter: 1/8" (white only), 1/4", and 3/8"
Standard core thickness: 1/2"
Standard Colors: Clear, Orange, Blue, Black, White, Red
All colors UV-stabilized.
Custom color cores available for 1600 sqft. minimum order.

GLASS LITE FACING OPTIONS

Laminated (1/4", 5/16", 3/8", 7/16", 1/2", and 9/16")
Tempered (1/4", 3/8", and 1/2")
Custom colored PVB interlayer (laminated glass only).
Standard Glass colors: bronze, grey, blue, green, and white
Acid-etched, low-e coated glass, starphire low iron
Ceramic frit patterns

CERTIFICATION

Developed, manufactured and tested in accordance with IGCC and ISO 9001:2000 Specifications, the ClearShade™ IGU is certified for both exterior and interior applications. A dual-seal construction, IGCC certified and CBA rated, provides excellent resistance to MVT (moisture vapor transmittance) and to UV degradation. All glass used in Panelite™ IGU fabrication is tested and certified per ASTM1036 (float glass), ASTM (heat treated, tempered glass) and SGCC (heat-treated glass.)

INSTALLATION

ClearShade™ IGUs are compatible with most commercially available storefront and curtain wall systems.

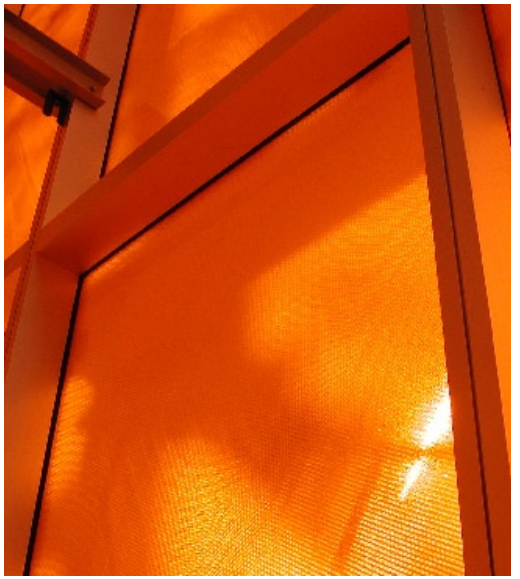
WARRANTY

The Panelite ClearShade™ IGU carries a 10-year limited liability warranty. Please inquire regarding project-specific technical requirements

MINIMUM ORDER

$25,000 (approx. 800 sqft) for standard color units
1600 sqft for custom color core units, color matching costs apply

PANELITE™ IB-TC4 • INV Management, New York
Design: Gluckman Mayner• Photography: Michael Davis



PANELITE™ IB-TO4 • IIT McCormick Tribune Campus Center, Chicago IL • Design: OMA • Photography: Panelite

US Patent Pending
Please consult Panelite's installation specifications under "Specifications" at www.panelite.us for complete handling, installation and technical information.

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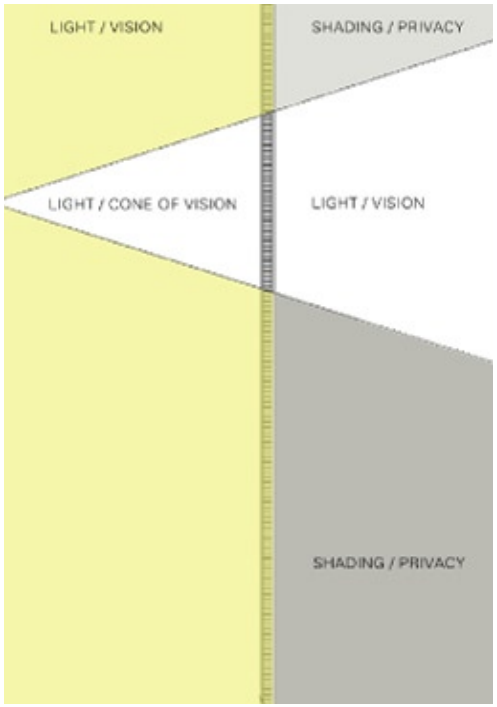
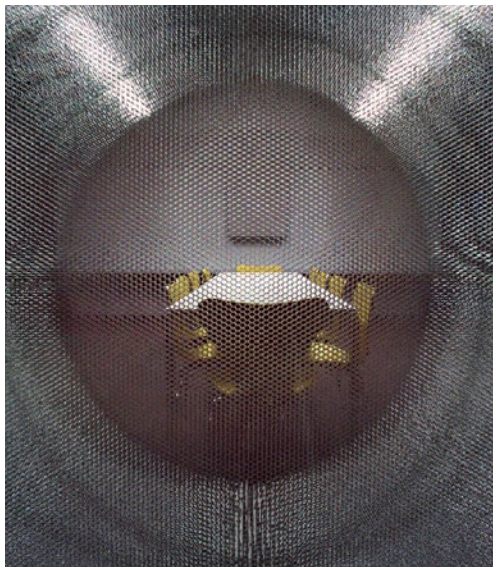
PANELITE

CLEARSHADE™ IGU SERIES: PERFORMANCE OVERVIEW





PANELITE™ IB-TC4 • IIT McCormick Tribune Campus Center,
Chicago IL • Design: OMA
Photography: Floto + Warner

SOLAR HEAT GAIN PERFORMANCE

HOW DOES "SUN ANGLE" RELATE TO PANELITE CLEARSHADE™ IGU PERFORMANCE?

Because of the extruded tubular nature of its honeycomb core, the Panelite ClearShade™ IGU acts as a shading device. Just as the unit allows for full visual transparency when viewed frontally, but obscures the line of site when viewed from oblique angles, it allows more light and passive solar heat to enter the building in the morning and late afternoon when the sun is low but creates the most shading at mid-day when the sun is highest in the sky and most intense. See chart on page 11.

WHAT IS THE SOLAR HEAT GAIN COEFFICIENT?

The Solar Heat Gain Coefficient (SHGC) is the IGU industry standard for measuring the amount of passive solar heat that is gained into an interior space through an Insulating Glass Unit (IGU). Typical methods of improving the SHGC of an IGU include reflective films, tinted glass lites, and ceramic frit patterns. The lower the SHGC, the better the unit's performance.

HOW IS THE SHGC DIFFERENT FROM THE SHADING COEFFICIENT [SC]?

The Shading Coefficient is directly related to the SHGC by the following formula:
Shading Coefficient = Solar Heat Gain Coefficient (SHGC) / 0.87

WHAT IS U-VALUE?

The U-Value measures the thermal performance of the unit, i.e. the amount of heat/cold that is transferred through an IGU from one side to another. The U-Value is independent of the SHGC and is an important measure of a unit's overall performance.

U-Value is usually improved with thicker glass or airspaces, low-e coatings and through the use of argon in the airspace. Because the tubular core in Panelite's Clearshade™ IGU is very low density, it does not greatly affect the U-Value of the IGU, but we do offer the above options to improve U-Value performance down to 0.29.

WHY IS IT IMPORTANT TO KNOW THE SHGC OF YOUR SPECIFIED GLAZING PANEL?

Many IGU specifiers look solely at a unit's U-Value as a measure of its performance, but a unit with a very low SHGC can be a key factor in designing the most energy efficient facade possible.

HOW DOES THE SHGC AFFECT BUILDING MEP AND ENERGY REQUIREMENTS?

Reducing the amount of passive solar heat transmitted into the building by the sun (i.e. by using an IGU with a low SHGC) reduces the amount of energy required to cool interior spaces.

PANELITE™ IB-TO4 • IIT McCormick Tribune Campus • Design: OMA
Photography: Panelite • Graphics: 2 x 4

Please consult Panelite's installation specifications under "Specifications" at www.panelite.us for complete handling, installation and technical information.

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CLEARSHADE™ IGU SERIES: PERFORMANCE OVERVIEW

PANELITE™ IB-TB4 • Jet Blue Terminal 5, New York, NY
Design: Gensler • Photography: Nic Lehoux

PANELITE™ IB-TC4 • INV Management
Design: Gluckman Mayner • Photography: Michael Davis

PANELITE™ IB-TO4 • Falcon Headquarters, Mexico City, Mexico • Design: Rojkind Arquitectos
Photography: Panelite

SOLAR HEAT GAIN PERFORMANCE (SHGC)

Panelite ClearShade IGU offers significant solar heat gain control and opportunities for passive solar design. See performance chart below.

THERMAL PERFORMANCE (U VALUE)

See comparative thermal performance chart below for performance values of Panelite ClearShade™ IGU's. For increased insulating properties, Panelite can provide units with low-e coating or high performance glass lites.

STC RATING (ACOUSTICAL)

While the standard ClearShade™ IGU already provides an excellent sound barrier with an STC rating of 36, specified STC requirements up to 49 can be met by adjusting the glass compostion and airspace/core ratio.

FIRE RATING

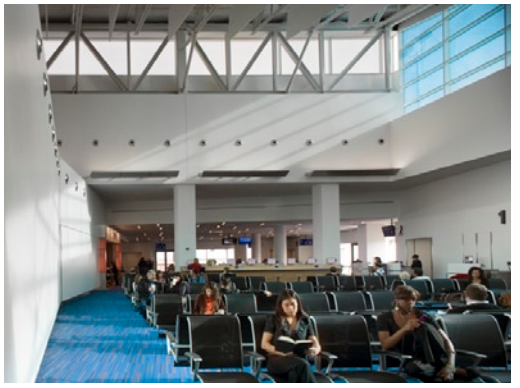
Class A, non-combustible. ClearShade™ IGU does not meet 1 or 2 hour fire rating requirements.

WIND LOAD

Up to hurricane force wind load requirements may be met using specifically designed glass composition. Panelite ClearShade™ IGU is approved for use in Dade County, FL. and other extreme weather environments

TECHNICAL DATA

CLEARSHADE IGU	TC4	TW8	TW4	TW3
ClearShade IGU Core color	Clear	White	White	White
ClearShade IGU Core cell size	1/4" diam	1/8" diam	1/4" diam	3/8" diam
Solar Heat Gain Coefficient				
SHGC: 70° Sun Angle	0.14	0.14	0.20	n/a
SHGC: 60° Sun Angle	0.29	0.29	0.29	n/a
SHGC: 45° Sun Angle	0.35	0.30	0.30	n/a
Min Solar Heat Gain Coefficient	0.14	0.14	0.20	n/a
Visible Light Transmission				
VLT 70° Offset	20%	7%	9%	n/a
VLT 50° Offset	48%	17%	24%	n/a
U-Value - with Sungate 500 low-e	0.33	0.33	0.33	n/a
Sound Transmission (min)	36	36	36	36
Sound Transmission (max)	49	49	49	49
Fire Rating	Non Combustible [Not 1-hour rated]			



PANELITE™ IB-TB4 • Jet Blue Terminal 5, New York, NY
Design: Gensler • Photography: Nic Lehoux

PANELITE™ IB-TC4 • INV Management
Design: Gluckman Mayner • Photography: Panelite

PANELITE™ IB-TO4 • Falcon Headquarters, Mexico City, Mexico • Design: Rojkind Arquitectos
Photography: Rojkind Arquitectos

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CLEARSHADE™ IGU SERIES: PRODUCT SWATCHES

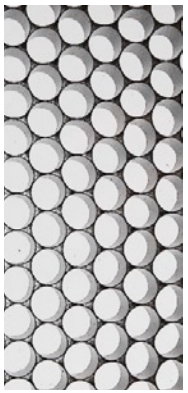
TW8
Tubular White
1/8" Diameter

CUSTOM OPTIONS AVAILABLE

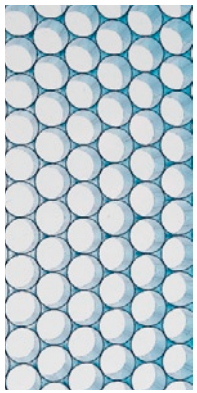
- Core color
- Glass color
- Glass finishes
- Frit patterns
- Laminated glass
- And more. Please inquire.

TC4
Tubular Clear
1/4" Diameter

TW4
Tubular White
1/4" Diameter



TBK4
Tubular Black
1/4" Diameter



TB4
Tubular Blue
1/4" Diameter

TO4
Tubular Orange
1/4" Diameter

TR4
Tubular Red
1/4" Diameter

TC3
Tubular Clear
3/8" Diameter

TW3
Tubular White
3/8" Diameter

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PANELITE MAIN OFFICES

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www.panelite.us

1. PANELITE™ C-AOBV with ITL • Panelite New York Showroom, New York, NY • Design: Panelite • Photography: Floto + Warner