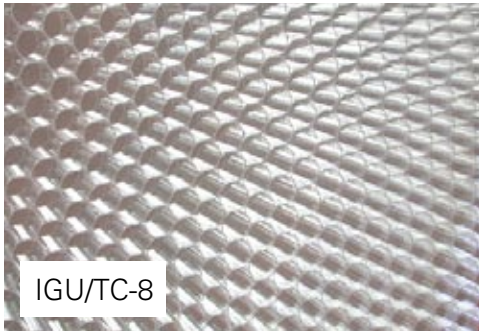
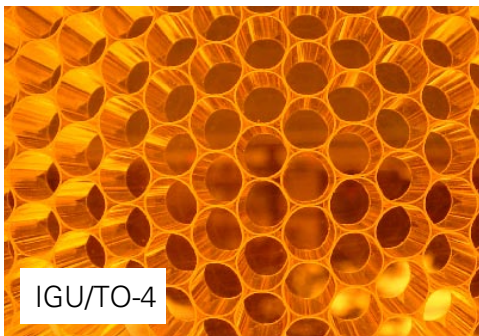


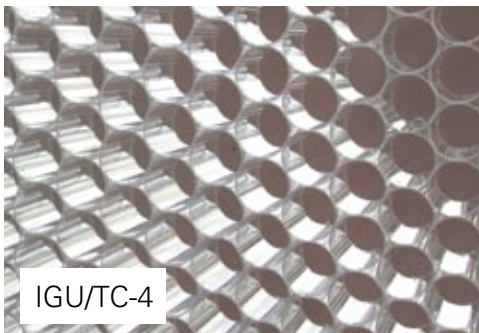
CLEARSHADE™ IGU SERIES



IGU/TC-8



IGU/TO-4



IGU/TC-4

The Panelite ClearShade™ insulating glass unit was developed for exterior glazing applications using a tubular honeycomb core with patented polymer technology that offers superior shading performance. In addition to the benefits of visual privacy and a Visible Light Transmittance of up to 50%, the ClearShade™ IGU achieves a Solar Heat Gain Coefficient of 0.18 at midday, approximately 75% lower than that of other insulating glass units without the need for tinted, reflective or specialty glass. This dramatically reduces climate control requirements and results in significant energy savings over the life of the building.

The ClearShade™ IGU may be customized to meet a broad range of performance and aesthetic requirements.

PANEL COMPOSITION

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

CORE OPTIONS: TUBULAR POLYCARBONATE HONEYCOMB

Cell diameter: 1/8" or 1/4"
 Standard core thickness: 1/2"
 Standard colors: Clear, Orange
 Special order: White, Black, Bright Green, Light Blue, Blue, Raspberry. All colors UV-stabilized. Longer lead times and minimum orders apply to colored cores and glass.

FACING OPTIONS: GLASS LIGHT

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

PANEL DIMENSIONS:

Units are produced to specified dimensions per project
 Maximum dimensions 48" x 120"
 Panel thickness is subject to unit composition

MINIMUM ORDER: 500 SF for standard units
 2000 SF for colored core units



PANELITETM IGU/TO-4 • IIT McCormick Tribune Campus Center, Chicago IL • Design: OMA, Photography: Floto + Warner, Graphics: 2 x 4



PANELITETM AO/RVLB, IGU/TC-8 • Panelite New York Showroom, New York, NY • Design: Panelite, Photography: Floto + Warner



PANELITETM IGU/TO-4 • Falcón Headquarters, Mexico City, Mexico • Design: Rojkind Arquitectos
 Photography: Panelite

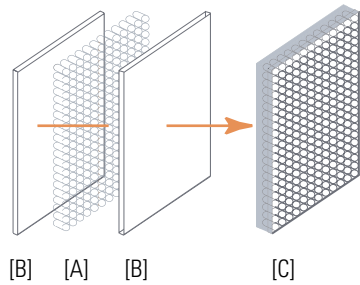
US Patent Pending

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



CLEARSHADE™ IGU SERIES

TECHNICAL PERFORMANCE



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

THERMAL PERFORMANCE:

See chart at left for comparative thermal performance of standard unit. For increased insulating properties, Panelite can provide low-e coatings and/or argon filled units.

STC RATING (ACOUSTICAL): 31

While the standard ClearShade™ IGU already provides an excellent sound barrier, specified STC requirements can be met by adjusting the glass composition and airspace/core ratio.

FIRE RATING:

Class A, non-combustible

WIND LOAD

Up to hurricane force wind-load requirements may be met using specifically designed glass composition

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 1048 [heat treated, tempered glass] and SGCC (heat-treated glass.)

INSTALLATION:

ClearShade™ IGU's are compatible with most commercially available storefront and curtainwall systems

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

US Patent Pending

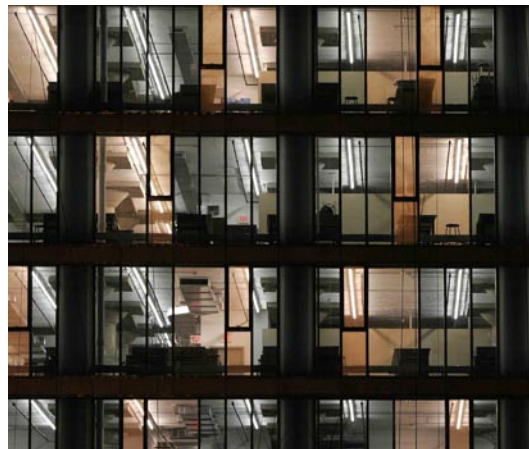
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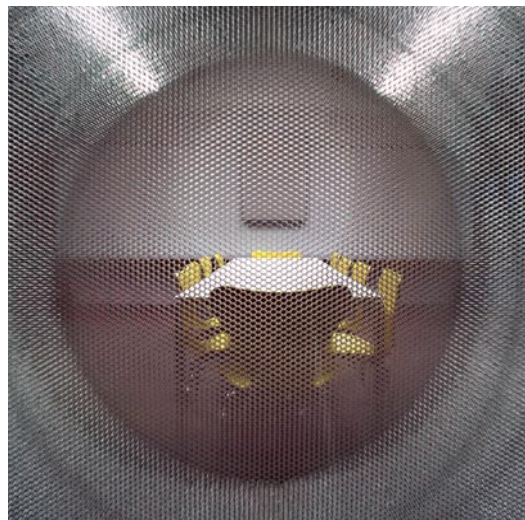
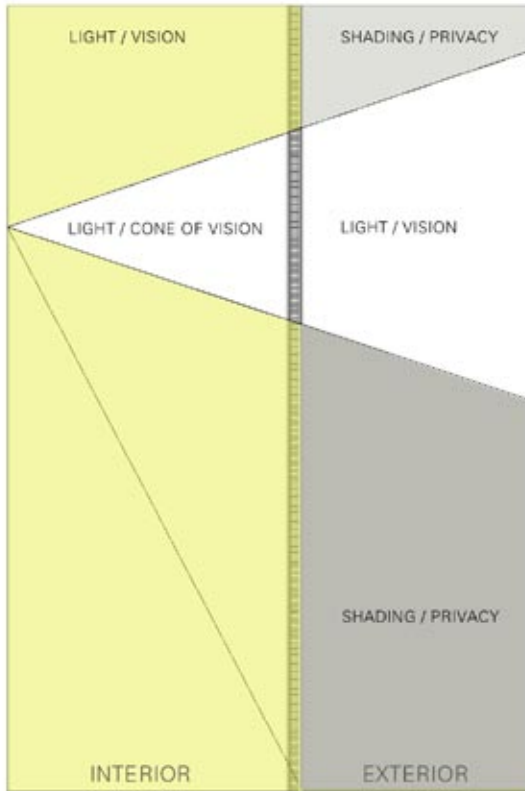
PANELITETM IGU/TX-4 with custom orange glass and ceramic frit graphics • IIT McCormick Tribune Campus Center, Chicago IL • Design: OMA, Photography: Panelite



PANELITETM IGU/TO-4 • IIT McCormick Tribune Campus Center, Chicago IL • Design: OMA, Photography: Floto + Warner



PANELITETM IGU/TO-4 • Syracuse University School of Architecture • Design: Gluckman Mayner Architects, Photography: Michael Davis, Syracuse New Times



PANELITETM IGU/TC-4 • IIT McCormick Tribune Campus Center, Chicago IL- • Design: OMA, Photography: Floto + Warner

CLEARSHADE™ IGU SERIES

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 is most intense.

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] / .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 Panelite's ClearShade™ IGU tubular honeycomb core is very low density, it does not greatly affect the U-Value of an IGU, but we do offer the above options to improve U-Value performance down to .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 façade 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.

US Patent Pending

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CLEARSHADE™ IGU SERIES

COMPARISON OF CLEARSHADE™ IGU VS. TYPICAL IGU

THE FOLLOWING GLAZING UNITS ARE COMPARED ON THESE CHARTS

PANELITE CLEARSHADE™ IGU/TC4

¼" clear tempered Glass
½" airspace + ¼" diameter cell clear Panelite tubular honeycomb core
¼" clear tempered glass

TYPICAL* CLEAR IGU: Industry standard performance values for typical 1" IGU

¼" clear tempered glass
½" airspace
¼" clear tempered glass*

* Typical ASHRAE IGU values: American Society Heating, Refrigeration and Air-Conditioning Engineers

* Typical IGU's charted with Low-e and non-Low E versions

	PANELITE IGU	NON-PANELITE TYPICAL IGU	PANELITE IGU w/ LOW-e	TYPICAL IGU w/ LOW-e
Winter U Value	.47	.49	.33	.33
Shading Coefficient	.23	.84	.23	.78
Solar Heat Gain Coefficient	.18	.72	.18	.67
R Value	2.12	2.00	0.30	3.00

Tests based on a standard PANELITE IGU, 1" overall thickness: ¼" tempered glass (inboard + outboard lites) + ½" thick clear tubular core (¼" cell).

*PANELITE offers customized units for thermal performance per project requirements.

*Solar Heat Gain average at mid-day.

PANELITE IGU/TC4: STANDARD 1" UNIT WITH 1/4" CELL CLEAR HONEYCOMB

