VIRACON®

GREAT BUILDINGS DESERVE GREAT GLASS™

CHOOSING THE OPTIMAL GLASS FOR YOUR PROJECT REQUIRES UNDERSTANDING THE FEATURES THAT UNLOCK THE BEST PERFORMANCE IN ARCHITECTURAL GLASS.

WE CAN HELP.

You've started with a vision for your project and put together the best team from developer, architect, engineers and the general contractor. Integral to this team delivering your design vision is the building materials selection.

At Viracon we know architectural glass, and we understand that the process of selecting the perfect glass for each project is complicated. There are so many features from substrate colors, our solar control coatings, multiple glass thicknesses, warm edge spacer and gas fill options, print on glass, matching vision and spandrel; we estimate we offer over a million possible configurations – choosing from all of that can be complicated and we want to help.

There are key features that you may not always consider, that will positively impact the long term performance of your projects. For optimal architectural glass aesthetics, performance, safety and cost, Viracon recommends the following:

HEAT SOAK TEMPERED GLASS

A SAFETY AND LIABILITY MITIGATING OPTION

100% TESTED

Heat soaking tempered glass will diminish and statistically eliminate breakages due to nickel sulfide, reducing the legal liability, costly replacements, tenant disruption expenses and the risk of the facade being classified as unsafe.

HEAT SOAK WARRANTY

We're so confident in our process that our warranty not only covers the glass but also the reasonable cost of labor to install the replacement.

See Viracon's Standard Limited Warranty for heat soak terms.

PEACE OF MIND

Rest assured that you have done what you can to minimize spontaneous breakage.

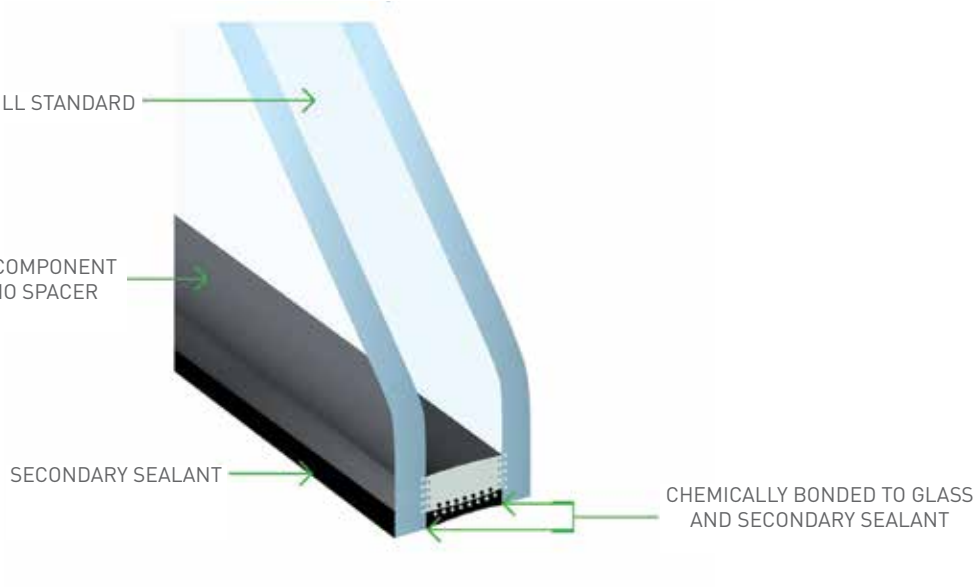
There is substantial justification for the cost of heat soaking your tempered glass.

Non-heat soaked tempered glass breaks more than you may know. Throughout the commercial market, building owners are experiencing spontaneous breakage of tempered glass with greater publicity when it occurs. Spontaneous breakage of tempered glass is a natural phenomenon, but the risk can be mitigated through the process of heat soaking the tempered glass during its fabrication.

Did you know that should a claim occur on your project, our warranty not only covers the glass but also the reasonable cost of labor to install the replacement? In the event that Viracon's heat soaked tempered glass breaks in excess of the 0.3% rate as a result of a verifiable NiS inclusion, Viracon will replace the broken heat soaked tempered glass without charge, FOB nearest shipping point to the place of installation and pay for the costs of reasonable market replacement labor. Minimal cost. Maximum protection.

WARM-EDGE THERMAL SPACER

IMPROVES THERMAL PERFORMANCE AND SPACER AESTHETICS



SUPERIOR SEAL INTEGRITY	SUPERIOR THERMAL PERFORMANCE	SUPERIOR AESTHETICS
VTS™ is chemically bonded to the glass and secondary sealant, providing increased stability in extreme temperatures.	Improves edge-of-glass U-value performance 14.4% over aluminum spacers and 7% over stainless steel spacers.	Smooth matte black extrusion results in monolithic appearance with a cleaner appearance of the edge deletion and no PIB creep. Eliminates metal spacer shine, connection splices and top profile perforation.

VTS is Viracon's most superior warm edge spacer. VTS's exclusive formulation consists of a black thermoplastic with integrated desiccant and polyisobutylene (PIB) that is chemically bonded directly to the glass; argon fill is included and a secondary sealant is applied. A single component replacing a traditional spacer, desiccant and primary sealant.

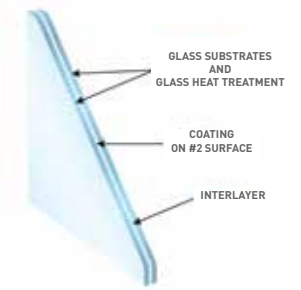
Viracon Thermal Spacer (VTS™) technology has been engineered to out-perform all other spacers and edge seal systems and carries a special 12 year insulating warranty. 20% longer than the standard 10 year warranty for insulated glass units. Over 11 million square feet of VTS is in service to date and its percentage of overall Viracon spacer sales continues to grow exponentially each year.

LAMINATED GLASS

PROVIDES PROTECTION AGAINST MAN-MADE THREATS OR MOTHER NATURE

POST BREAKAGE SAFETY	ENHANCED SECURITY	ENHANCED UNIT STRENGTH	REDUCED NOISE POLLUTION
Laminated glass is a durable, high-performance glazing product, designed to keep broken glass in the glazing opening should damage occur.	Provides superior impact resistance from natural disasters or vandalism.	Facilitates over-sized glass design. Enables thinner glass to reduce weight & cost.	Easy way to meet Sound Transmission Control and Outdoor/Indoor Transmission Class (OITC) requirements.

Laminated glass provides fall-out protection by supporting and holding broken glass in place, and reduces the ability to penetrate the opening. Options available to meet Miami Dade code requirements. Laminated glass also provides 99% UV light blockage and can improve sound transmission control (STC) and Outdoor/Indoor Transmission Class (OITC). STC and OITC requirements are increasingly common for projects; using laminated glass is a great way to meet those acoustical requirements.

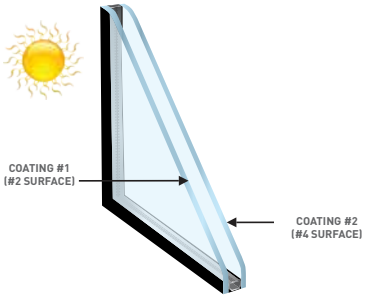


Available in a variety of colors and opacities, laminated glass can be combined with tinted glass substrates, high-performance coatings, print patterns and pigmented interlayers. It offers a greater availability of coatings than monolithic glass. Low-E coatings which cannot be exposed can be used inside a laminated unit where the coating(s) are protected; outboard or inboard of the insulate glass unit.

TWO COATINGS WITHIN ONE INSULATED GLASS UNIT

IMPROVES PERFORMANCE WITH LITTLE AESTHETIC IMPACT

IMPROVE SOLAR & THERMAL PERFORMANCE	A SINGLE-SOURCE WARRANTY
Use two coatings on two piles of glass vs. the cost of a triple glass ply unit.	Viracon warrants the complete IGU. Something not all fabricators can provide.



Applying two coatings within an insulated glass unit (IGU) is an effective way to improve performance without impacting the aesthetics or the cost and weight of a triple pane IGU.

The specific coating needed for a given project is typically dictated by a required solar performance or a desired appearance. With Viracon's extensive catalog of proprietary high-performance coatings and access to the industry's leading substrates, we can assist you in finding the best performing and aesthetically pleasing combination for your project.

ROOMSIDE™ LOW-E:
Applied to the interior glass surface, this coating reflects indoor heat back into the interior space improving U-Value up to 20%.

VZE-SC:
Third-surface coating improves solar heat gain performance up to 22%.

CYBERSHIELD™:
Engineered to reduce the transmission of radio frequency (RF) electromagnetic radiation, also known as RF Shielding; protecting private conversations and boardroom discussions from electronic eavesdropping.

PRINT ON GLASS

ENHANCE BOTH THE APPEARANCE AND PERFORMANCE OF A BUILDING FACADE

BIRD-FRIENDLY	DISTINCTIVE AESTHETICS	IMPROVED PERFORMANCE
Several print patterns tested and approved to industry threat factor standards are available.	Lines, dots or complex images, print on glass can deliver distinctive designs for your project.	Print on glass improves solar performance and reduces interior glare by reflecting the sun's heat off the exterior glass.

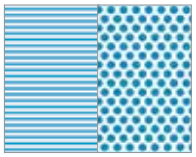
The feature of print on glass provides unlimited artistic possibilities and bird-friendly options along with improved solar performance and reduction in glare achieved when inks and enamels block solar transmission into the building. To improve solar performance even more, Viracon's Low-E coatings can be applied over the ceramic enamel - print and a Low-E coating on the same glass surface provides better aesthetics and superior solar control.

GRADUATING PATTERNS

HALFTONE PATTERNS

MULTI-COLOR PATTERNS

MULTI-COLOR IMAGES

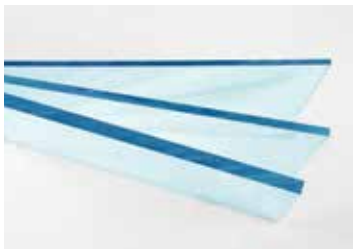


LINES/DOT PATTERNS

USING THICKER GLASS SUBSTRATES

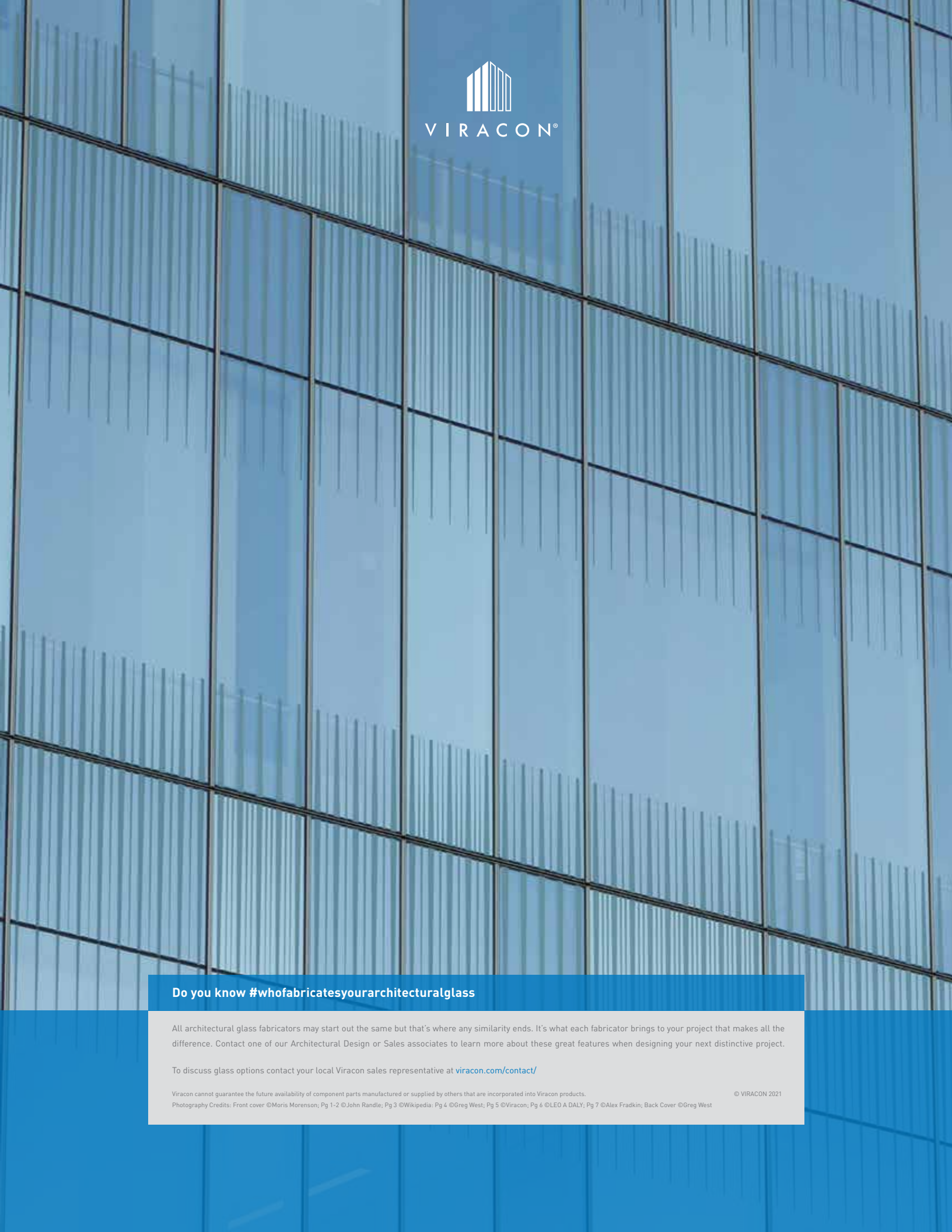
¼" (6MM) GLASS IS GOOD, BUT THICKER GLASS IS BETTER.

FLATTER GLASS	REDUCED NOISE POLLUTION	REDUCED NOISE POLLUTION
Less reflected distortion improving visual quality	Adding structural strength	Enhancing occupant experience



Thicker glass remains more rigid through the heat treatment processes producing flatter glass appearance. The thicker the glass the more durable it is adding to the structural stability of the window. In addition thicker glass provides improved sound control. The improved aesthetic, durability and sound-dampening of thicker glass deliver the exceptional quality your project requires for long-term value.

To learn more about the specific benefits, ask us about substrate options of 1/4" (6mm), 5/16" (8mm) and 3/8" (10mm) thick glass.



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Do you know #whofabricatesyourarchitecturalglass

All architectural glass fabricators may start out the same but that's where any similarity ends. It's what each fabricator brings to your project that makes all the difference. Contact one of our Architectural Design or Sales associates to learn more about these great features when designing your next distinctive project.

To discuss glass options contact your local Viracon sales representative at viracon.com/contact/

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