



BUILT AROUND YOU

ENERGY-EFFICIENT SOLUTIONS

MARVIN 
Windows and Doors

Built around you.®



ZEN BARN RESIDENCE - OTTAWA, ON CANADA

ARCHITECT: Christopher Simmonds Architect Inc.

FEATURES: Certified LEED® Platinum

With an estimated 19% reduction in greenhouse gas emissions compared to an average home and a 46% reduction of energy consumption, the Zen Barn achieved an EnerGuide rating of 82 – which is 10 points higher than that required by the Ontario Building Code.



ENERGY EFFICIENCY

BUILT AROUND YOU.

Marvin® windows and doors are made-to-order to suit the design preferences and performance requirements of each customer. Our products are *Built around you*® – both the visible characteristics like size, color, and material; and performance features like U-factor and Solar Heat Gain Coefficient (SHGC). As an industry leader in energy efficiency, we offer a variety of flexible and customizable window and door options that help customers balance their initial product investment with long-term performance and energy cost savings. Select or combine options to meet the demands of any residential location, project, climate, or budget.

MARVIN PRODUCTS ARE
MADE-TO-ORDER TO
MATCH THE **PERFORMANCE**
REQUIREMENTS OF EVERY
BUILDING PROJECT.

Marvin wood or aluminum clad wood windows and doors have a reputation for quality and durability. Marvin's extremely tough surface coating applied to an

impact-resistant, extruded aluminum substrate meets the highest industry standards for finish. This translates to more years of gleaming clad exterior, backed by Marvin's 20-year warranty against loss of adhesion, chalking or fading.*

Contact your Marvin representative to find an energy-efficient solution for your home building project.

* Loss of adhesion is covered for 10 years in coastal applications. For complete warranty information see MarvinWindows.com.



KEITHAN NET ZERO HOME - KILLINGWORTH, CT

ARCHITECT: J.W. Huber Architect LLC

FEATURES: Certified LEED® Platinum, and net zero energy

This New England farmhouse-style home returns to the grid 7% of the energy it produces annually. Photo voltaic panels, solar hot water panels, Geothermal HVAC system and Marvin® Tripane windows work together to achieve net zero goals.

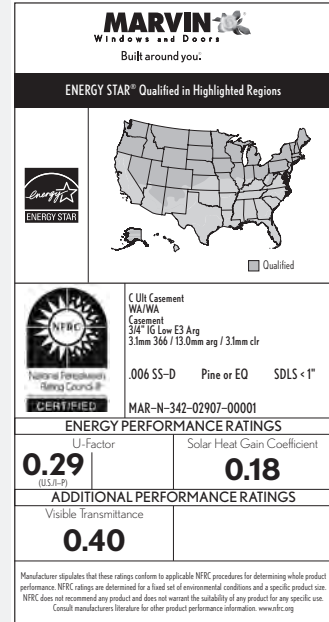
ENERGY EFFICIENCY

BASICS

NFRC RATINGS

Window performance can be compared using a system known as NFRC Ratings. The National Fenestration Research Council is an independent non-profit organization founded by the window, door, and skylight industry in 1989. Fenestration is any opening in a building's exterior walls. The NFRC evaluates windows and doors using five performance ratings – U-factor, solar heat gain coefficient, visible transmittance, air leakage, and condensation resistance. Of these ratings, U-factor and solar heat gain coefficient are the primary measure of energy efficiency in windows, but visible transmittance, air leakage, and condensation resistance also relate to energy efficiency.

Every Marvin® product leaves the factory with a sticker displaying its ENERGY STAR® qualification and NFRC certified values.



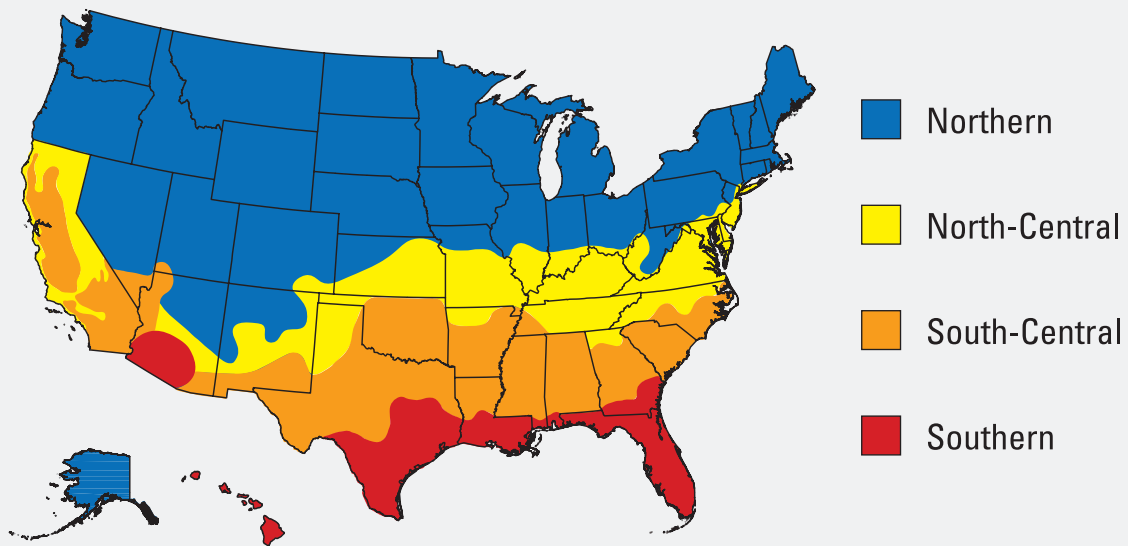
TERMS AND DEFINITIONS

U-FACTOR	Correlates to the rate of heat transfer. The lower the number, the better a window is at keeping heat inside a building and the better its insulating properties. The U-Factor is key in regions with cold winters.
R-VALUE	Measures the resistance a material has to heat loss. R-values are used to rate insulation in other parts of the building envelope; like in walls, floors and roofs.
SOLAR HEAT GAIN COEFFICIENT (SHGC)	A number between 0 and 1 that measures how well a product blocks heat from the sun. A higher solar heat gain coefficient means a window will allow more heat to pass through. Solar heat gain can provide free heat in the winter but can cause overheating in warmer climates.
VISIBLE TRANSMITTANCE (VT)	An optical property that indicates the fraction of visible light transmitted through the windows. Low E coatings can reject solar heat gain while allowing visible light to pass through glazing.
LOW EMISSIVITY (LOW E) COATINGS	Microscopically thin, transparent metal or metallic oxide layers deposited on a glazing surface to suppress radiative heat flow without compromising the amount of transmitted visible light. Low E coatings enhance thermal performance by reflecting interior infrared energy (heat) back to the inside, reducing heat loss through the glass.
GAS FILLS	Improve the thermal performance in insulating glass units by reducing conduction in the air space between panes. Argon and krypton mixes are commonly used because they slow the movement of warm and cool air and reduce overall heat transfer between interior and exterior glass panes.
INSULATING GLASS	Refers to two pieces of glass spaced apart and sealed to form a single glazed unit. IG glass is standard on all Marvin products.

ENERGY STAR

THE INDUSTRY STANDARD FOR RATING ENERGY EFFICIENCY

ENERGY STAR® is a program of the U.S. Environmental Protection Agency designed to recognize products that meet strict energy efficiency guidelines. ENERGY STAR criteria varies in different areas of the country to suit specific climate and energy efficiency requirements. The new ENERGY STAR Version 6.0 values bring even greater energy efficiency to all four zones of the U.S. There are Marvin® window and door products in most operating styles that meet the 2015 Version 6.0 ENERGY STAR specifications.

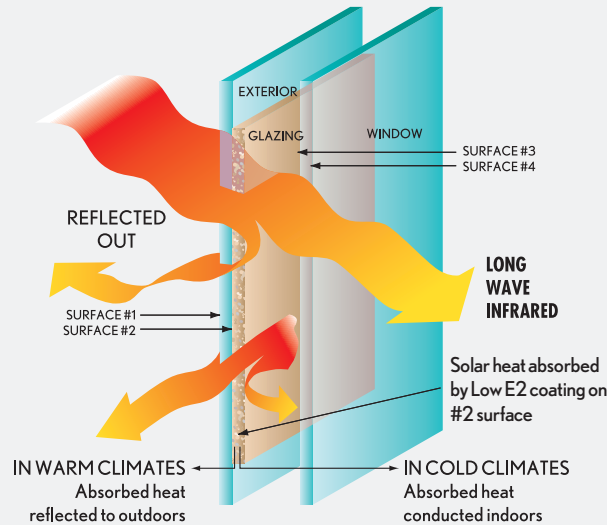


ENERGY STAR CRITERIA				
ZONE	WINDOWS		DOORS	
	U-FACTOR	SHGC	U-FACTOR	SHGC
NORTHERN ZONE	≤ 0.27	any	≤ 0.30	≤ 0.40
	= 0.28	≥ 0.32		
	= 0.29	≥ 0.37		
	= 0.30	≥ 0.42		
NORTH CENTRAL ZONE	≤ 0.30	≤ 0.40	≤ 0.30	≤ 0.40
SOUTH CENTRAL ZONE	≤ 0.30	≤ 0.25	≤ 0.30	≤ 0.25
SOUTHERN ZONE	≤ 0.40	≤ 0.25	≤ 0.30	≤ 0.25

LOW E COATINGS

HOW IT WORKS

Extremely thin coatings of special metallic material are applied to glass panes used in windows and doors to boost their energy efficiency. The industry standard for energy-efficient glass coatings has become Low-Emissivity (Low E) glazing. Coating a glass surface with Low E material can block a significant amount of heat transfer, reducing your home's need for energy-consuming climate control systems.



LOW E COATINGS MANAGE VISIBLE LIGHT AND HEAT

GLAZING OPTIONS - LOW E INSULATING GLASS COATINGS

GLAZING	DESCRIPTION	CLIMATE	ENERGY PERFORMANCE
LOW E1	Features a single layer of metallic coating, which blocks heat loss to the outside while reflecting heat back into a room.	NORTHERN	low U-Factor high solar heat gain
LOW E2	Features a double layer of silver on an inside surface of IG glass. It provides year round performance and comfort. This coating option provides better protection against radiant heat transfer than single layer metallic Low E coatings.	NORTHERN NORTH-CENTRAL SOUTH-CENTRAL	low U-Factor medium solar heat gain
LOW E3	Features three layers of metallic silver and provides the lowest solar heat gain performance in climates where sun exposure is intense and cooling costs are high.	NORTHERN NORTH-CENTRAL SOUTH-CENTRAL SOUTHERN	lowest U-Factor lowest solar heat gain

ENERGY STAR

MOST EFFICIENT

The ENERGY STAR® Most Efficient classification recognizes products that meet high energy-efficiency guidelines. All windows in this category have a maximum U-factor of 0.20. Marvin® offers the industry's widest selection of wood and clad wood products that meet the rigorous Most Efficient criteria. Units are available in the following operating styles:

OPERATING STYLES



CASEMENT

Casement windows are hinged at the side and open outward, providing ventilation that can be easily controlled. Marvin Casement Windows that meet Most Efficient criteria are available in a variety of operating styles: the standard Ultimate Casement with crank opening; with pushout opening, inswing operation, as a non-operating picture window, or as a round top window.



AWNING

Awning windows are hinged at the top; the bottom opens outward. Available with either crank or pushout hardware, awnings are often stacked and mulled with other awnings, casements, or picture windows in various configurations.



VENTING PICTURE

Exclusive to Marvin, the Venting Picture Window is designed to open evenly on all sides, allowing for passive air exchange. When open, the innovative patented screen system provides ventilation while its limited sash travel may enhance security by reducing an "open window" appearance from the exterior.



DOUBLE HUNG

Both sashes slide vertically in double hung units. Ventilation options can vary by opening the window from top or bottom as little as a crack or as fully as half the window area. Marvin's wide array of double hung windows include the innovative Next Generation Ultimate Double Hung, which combines state-of-the-art technology and performance with legendary Marvin craftsmanship.



TILT TURN

Tilt Turn windows are dual functioning, swinging in like a door or tilting in at the top like a hopper. One handle operation gives you control of the venting options.





MOUNTAIN CABIN - WOODLAND, UT

ARCHITECT: Shubin+Donaldson

FEATURES: CLT construction

As one of the first Cross Laminated Timber construction projects to be built in the U.S., this residence is truly a modern-day log home. The epitome of recycle and reuse, lumber was harvested on the property, cleaned and cut by a local timber mill, shop assembled, and shipped to the site ready for install. Marvin's energy-efficient clad products complement the conservation and sustainability already designed into the solid wood thermal mass structure.



LAKE LUZERNE RESIDENCE - ADIRONDACKS, NY

ARCHITECT: Phinney Design Group

FEATURES: Tripane windows

Designed with a wall of floor-to-ceiling windows, the Lake Luzerne residence offers a breathtaking view of the waterfront from every room of the house. Because of the amount of glass used in this residence, Marvin® high-efficiency Tripane windows were instrumental in meeting energy code requirements.

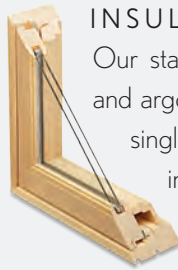




HIGH PERFORMANCE

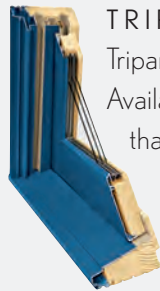
GLAZING OPTIONS

Marvin® offers thousands of window and door options with two or three panes of glass and a range of glazing options to meet the performance challenges of any climate. The correct glazing selection can meet code requirements and provide optimal and cost-saving energy efficiency.



INSULATING GLASS

Our standard glazing is Insulating Glass (IG) with Low E2 and argon gas. IG glass is double glazed and, compared to a single glass pane, cuts heat loss significantly because of the insulating air space between the glass layers.



TRIPANE GLAZING

Tripane glazing provides enhanced energy performance. Available in products where glazing thickness can be wider than $\frac{3}{4}$ ", Tripane features two coated panes of glass with a third pane between them. Marvin offers Tripane in a variety of Low E configurations for a range of solar heat gain control.

INSULATING GASES*

Insulating gases are pumped into the spaces between panes of glass to slow the transfer of heat, increasing the insulating power of a window or door. Marvin products contain argon gas as our standard insulator, but we also offer a krypton/argon/air blend for even greater energy efficiency. The addition of krypton to this gas blend lowers the U-factor and increases the insulating capabilities in narrow airspaces.

22,612 CERTIFIED WINDOW AND
DOOR PRODUCT/GLASS OPTIONS
MEET A .20 U-FACTOR OR LOWER.

* Damage, defects, or problems resulting from causes outside Marvin's control are excluded from coverage under the Limited Warranty for units with insulating glass installed above 5000 feet without capillary tubes. Contact your Marvin representative for further information.



ZUMBRO ZEN - ROCHESTER, MN

ARCHITECT: SALA Architects, Inc.

FEATURES: Sustainable design

Designed as a series of three linked pods on a steep slope overlooking a river, this energy-efficient home features a variety of sustainable components along with Marvin® windows and doors: passive solar heating and daylighting, natural ventilation, geothermal heating, cooling and domestic hot water, photovoltaic-ready system, recycled and other sustainable materials.



SIGNATURE SERVICES

CUSTOM CAPABILITIES IN ENERGY EFFICIENCY

Marvin® Signature Services engineers custom design solutions to meet unique structural, aesthetic and/or performance requirements. Signature offers innovative possibilities, from modifying and customizing Marvin standard products to designing entirely new solutions to optimize energy conservation and meet project goals.

Combining the craftsmanship of a small millwork shop with the research and technology capabilities of an industry leader, Signature Services will bring unparalleled service and personalization to even the most challenging, complicated home design.



MARVIN SIGNATURE

THE MARK OF AN ORIGINAL



MAXIMUM BEAUTY WITH
MAXIMUM ENERGY EFFICIENCY

SUSTAINABLE DESIGN

BUILDING FOR THE FUTURE

Sustainable building manages the environmental impact of a home over its lifetime. It begins with design, and is carried out through the entire life-cycle of a project: construction, operation, maintenance, renovation and demolition. While most building is guided by short-term economic considerations, sustainable building emphasizes long-term affordability, efficiency and quality.

As market leaders in energy-efficient windows and doors, Marvin® offers countless products for your sustainable building project. Through many sustainable building practices, including Passive Building, LEED® (Leadership in Energy and Environmental Design) Certification and Net Zero building, Marvin will work with you to ensure your home or building minimizes its environmental impact.

NET ZERO

Marvin offers various window types that contribute to net zero design, and also offers the flexibility and customization of made-to-order products that is often necessary to capitalize on the other variables involved in net zero building.

PASSIVE HOUSE

Marvin Windows and Doors leads the U.S. market in Passive solutions that meet Passive House Institute U.S. criteria. Our innovative Passive window options combine the beauty of warm wood interiors with exceptional performance and unmatched design flexibility. Marvin's Passive House Institute U.S. (PHIUS) certified Ultimate Casement and Direct Glaze window products offer a 10-year warranty on parts and workmanship and a 20-year warranty on glass.

LEED® CERTIFIED

While individual windows and doors are not LEED certified, our products contribute significantly to the credits required for whole-project certification. We've developed a database of Marvin products that generates project-specific reports for customers seeking LEED certification data.





STOWE RESIDENCE - STOWE, VT

ARCHITECT: Cushman Design Group

FEATURES: Tripane windows

Set on a slope to make the most of inspirational views, expansive Marvin® windows and doors let in ample daylight. Triple pane glazing and operating windows placed for ventilation, in addition to state-of-the-art lighting and building systems, provide comfort, energy-efficiency, and spectacular views.



As a privately held, family-owned company, Marvin® is used to taking a long-term view. We recognize that a serious commitment to sustainable operations is just good business. We are committed to sustainable business practices for the environment and for the communities in which we serve. Sustainability is much more than “green” business practices. It includes implementing environmentally friendly manufacturing processes and building sustainable communities in the USA where Marvin products are manufactured.

Visit MarvinWindows.com for more information.



ASK ABOUT
ENERGY
STAR

