



# Super High-Performance R5-Plus Windows ENERGY GUARD



## Nothing can match the beauty and performance of the Energy Guard Triple Pane Window.



Energy Guard Super High-Performance R5-Plus Windows from Thermo-Tech are the new standard for maximum energy savings, superior performance and beauty. High-quality materials, superb construction and triple-pane, argon filled glass combine to make these some of the most energy efficient windows available today.

With R-values from 5.3 to 6.3, Energy Guard Windows far exceed most commercially available R3.33 windows. That's great for the pocketbook *and* the environment—reducing greenhouse gas emissions substantially through optimal insulation and less energy use.

But energy savings are only part of the story. Energy Guard Windows also provide maximum comfort all year long – in any climate. In the colder seasons the triple-pane windows create a barrier to cold air while allowing the warmth of the sun into your home. During the air-conditioning season,

the sun's rays are reflected and the cool air is contained in your home – not to mention the comfort of quiet. Energy Guard Windows provide excellent sound proofing from outside noise.

Energy Guard Windows are also helping to pave the path to Zero Energy Buildings and the Passive House Design standard that is popular in Europe and gaining popularity in the United States. The goal of these house designs is to decrease energy needs from 60% to 90%. Energy Guard Windows lead the way for performance, function and beauty.

### Add beauty and value to your home.

Energy Guard windows are available in three exterior colors and five interior colors to match virtually any home style or color. Or combine standard options to create a truly custom window or patio door solution.

Available in Thermo-Tech's standard and custom size casement, awning, fixed casement and direct-set picture windows and shapes.

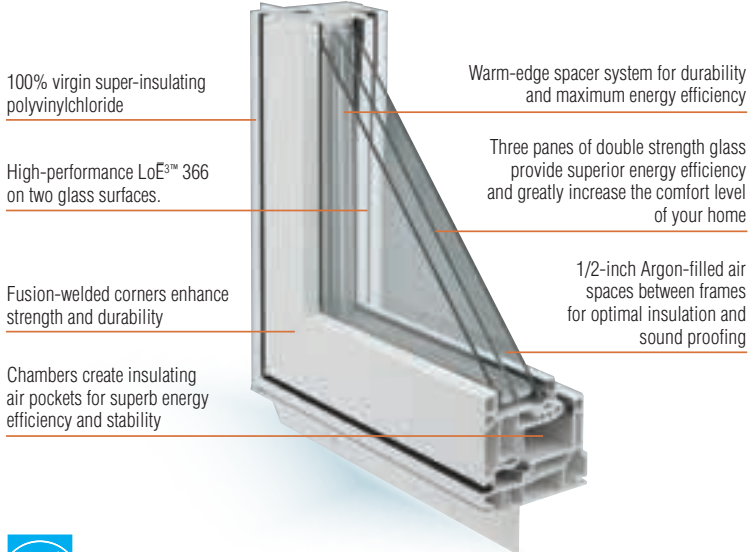
White	Light Oak
Tan	Dark Oak
Sandlewood	<i>Interior wood laminate colors available with white or sandlewood exteriors.</i>

# ENERGY GUARD SUPER HIGH-PERFORMANCE R5-PLUS WINDOWS

## Unmatched Performance. Maximum Energy Efficiency.

### Incredible R-Values of 5.3 or greater!

Solid construction and superior design is just where we start. Energy Guard Windows incorporate 3-layers of double-strength glass and two half-inch Argon filled insulating airspaces for an overall window thickness of 1-3/8 inches – that's nearly twice as thick as standard insulated glass. Add in the PVC vinyl multi-layered insulated frames and you've got energy efficiency and durability that simply can't be matched by standard insulated windows.



100% virgin super-insulating polyvinylchloride

High-performance LoE<sup>3</sup>™ 366 on two glass surfaces.

Fusion-welded corners enhance strength and durability

Chambers create insulating air pockets for superb energy efficiency and stability

Warm-edge spacer system for durability and maximum energy efficiency

Three panes of double strength glass provide superior energy efficiency and greatly increase the comfort level of your home

1/2-inch Argon-filled air spaces between frames for optimal insulation and sound proofing

 All Thermo-Tech windows and doors, meet or exceed the requirements of Energy Star rating

The lower the U-Value and the higher the R-Value, the better the window is at reducing heat loss.

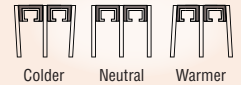
### Thermo-Tech® WARM-EDGE ADVANTAGE

For the longest-lasting comfort and energy savings all Thermo-Tech insulated glass incorporates warm-edge spacer systems.

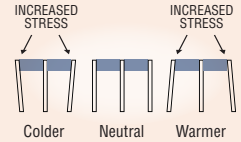
- For added insulating value and condensation resistance no other type of insulating (thermal) design brings you these combined advantages
- Patented U-shape construction extends window life
- Best Argon retention keeps insulating gas in windows
- Energy Guard exceeds the Energy Star® criteria
- Recessed below the sightline so all you ever see are beautiful windows

### DURABILITY ADVANTAGE

#### OURS



#### OTHERS



### ENERGY GUARD GLASS OPTIONS

- LoE<sup>2</sup>™ 272/Argon (standard)
- LoE<sup>3</sup>™ 366/Argon
- Tempered safety glass
- Grey and bronze tint
- Obscure

### WHY LoE<sup>2</sup>™ 272 or LoE<sup>3</sup>™ 366 GLASS?

- Lowers energy costs = saving on heating bill
- Blocks 95% of harmful UV rays = reduced fading on carpet, furniture, etc
- Year round comfort = cooler in summer, warmer in winter
- Reduced condensation
- Average heat loss reduction compared to standard double-pane glass is 50%



### Energy Guard PLUS Triple Insulated Glass (ENERGY STAR Most Efficient) Triple insulated glass with high-performance LoE<sup>2</sup>™ 272/Argon on two glass surfaces

TYPE	EnergyGuard by Thermo-Tech		ENERGY STAR Most Efficient 2017				ENERGY STAR Most Efficient 2017				
	U-VALUE	R-VALUE	SOLAR HEAT GAIN NO/GRIDS	SOLAR HEAT GAIN W/GRIDS	VISIBLE LIGHT NO/GRIDS	VISIBLE LIGHT W/GRIDS	CONDENSATION RESISTANCE	U.S. ENERGY STAR ZONES NO/GRIDS	U.S. ENERGY STAR ZONES W/GRIDS	U.S. ZONES ENERGY STAR MOST EFFICIENT NO/GRIDS	U.S. ZONES ENERGY STAR MOST EFFICIENT W/GRIDS
CASEMENT	.18	5.56	.24	.22	.38	.35	71	All	All	All	All
AWNING WINDOW	.18	5.56	.24	.22	.38	.35	71	All	All	All	All
DIRECT-SET PICTURE WINDOW	.16	6.25	.31	.28	.51	.46	71	N, NC	N, NC	N, NC	N, NC
FIXED CASEMENT PICTURE WINDOW	.17	5.88	.28	.25	.45	.40	70	N, NC	All	N, NC	All

### Energy Guard Triple Insulated Glass (ENERGY STAR Most Efficient) Triple insulated glass with high-performance LoE<sup>3</sup>™ 366/Argon on two glass surfaces

TYPE	EnergyGuard by Thermo-Tech		ENERGY STAR Most Efficient 2017				ENERGY STAR Most Efficient 2017				
	U-VALUE	R-VALUE	SOLAR HEAT GAIN NO/GRIDS	SOLAR HEAT GAIN W/GRIDS	VISIBLE LIGHT NO/GRIDS	VISIBLE LIGHT W/GRIDS	CONDENSATION RESISTANCE	U.S. ENERGY STAR ZONES NO/GRIDS	U.S. ENERGY STAR ZONES W/GRIDS	U.S. ZONES ENERGY STAR MOST EFFICIENT NO/GRIDS	U.S. ZONES ENERGY STAR MOST EFFICIENT W/GRIDS
CASEMENT	.18	5.56	.16	.15	.31	.28	72	All	All	NC, SC, S	NC, SC, S
AWNING WINDOW	.18	5.56	.16	.15	.31	.28	71	All	All	NC, SC, S	NC, SC, S
DIRECT-SET PICTURE WINDOW	.16	6.25	.21	.19	.41	.37	71	All	All	All	NC, SC, S
FIXED CASEMENT PICTURE WINDOW	.16	6.25	.19	.17	.36	.33	71	All	All	NC, SC, S	NC, SC, S

### Energy Guard STRUCTURAL PERFORMANCE DATA

TYPE	SIZE TESTED	CLASS/PERFORMANCE GRADE	AIR INFILTRATION	WATER INFILTRATION	FORCED ENTRY
CASEMENT	30 x 72	LC - 50	.03cfm/ft2	12.12 psf	Grade 10
AWNING	48 x 39	LC - 40	.03cfm/ft2	12.12 psf	Grade 10
DIRECT-SET PICTURE WINDOW	72 x 72	LC - 50	.01cfm/ft2	12.12 psf	Grade 10
FIXED CASEMENT PICTURE WINDOW	72 x 72	LC - 40	.01cfm/ft2	12.12 psf	Grade 10

The windows and doors described herein meets or exceeds the AAMA/WDMA/CSA101/I.S.2/A440-08.



For samples of our quality American-made products, please visit your local Thermo-Tech dealer or call 1-877-565-0159 to find the dealer nearest you. Visit us at [www.ttwindows.com](http://www.ttwindows.com) for more information.

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