

# GLASS OPTIONS



## ENERGY STAR®

Most of our high performance glass options meet or exceed specifications laid out by the ENERGY STAR® Initiative in Canada. To ensure your home is efficient year round, look for the ENERGY STAR® symbol on our products.

Inefficient windows are a major source of heat loss in today's homes.



1 (800) 387-2000 [energystar.nrcan.gc.ca](http://energystar.nrcan.gc.ca)\*



Minimum Energy Rating (ER)	or	Maximum U-Factor
34	or	≤ 1.22 (0.21)

\*For a complete list of ENERGY STAR certified windows, check our website at [Kohltech.com](http://Kohltech.com)

Conserving energy is a priority for you, and for us. We provide a wide variety of high performance glass options that will help increase your homes' energy efficiency.

### LoE Argon - *Saves on energy*

Increased thermal performance by combining a LoE coating, argon gas and a warm edge spacer. The LoE coating helps to reflect your home's heat back inside and the argon gas is a great insulator.

### Energlass® - *The standard in glass performance*

Our most popular glazing option dramatically reduces heat loss and infiltration of harmful UV rays. It uses a high performance warm edge spacer, one pane of LoE coated glass and one cavity filled with argon gas.

### Triple Energlass Plus® - *The ultimate in high performance & energy efficiency*

Technology at its best. It is an ultra high performance energy efficient triple glazed system using warm edge Silicone Spacer, two panes of LoE coated glass, and two cavities filled with argon or krypton gas.

**High Solar Gain (HSG) Glass** comes standard with all three options to allow the sun's warmth in your home year round.

**Low Solar Gain (LSG) Glass** is another LoE type that blocks a significant amount of solar heat gain, which helps maintain the internal temperature of your home.

If the outside temperature is -15°C/5°F & the inside temperature is 20°C/68°F the temperature at the center of the glass (inside) will be:

Glass Option	Celsius	Fahrenheit
Clear Glass	7°C	45°F
Energlass®	13°C	55°F
Triple Energlass Plus®	17°C	63°F

	Winter Warmth	Heat Gain	Cool in the Summer	UV Protection	Appearance / Clarity	Overall
Clear Glass	Good	Best	Good	Good	Best	Good
Energlass® (HSG)	Better	Better	Better	Better	Better	Better
Energlass® (LSG)	Best	Good	Best	Best	Good	Best

HSG = High Solar Gain

LSG = Low Solar Gain

# GLASS OPTIONS

## GLASS, GRILLE, & TINT OPTIONS



### Other Glass Options\*

**Tempered** - Tempered glass is a type of safety glass, it undergoes heat treatment to increase its strength. If it does break it shatters into small pieces that are less likely to cause harm.

**Sound Reducing Laminated** - Sound Reducing Laminated glass is another type of safety glass that reduces outdoor noise by up to 50%. The glass is held together by an interlayer to improve its safety.

**Architectural Glass** - We offer a wide variety of glass options to fit projects of any size and makeup. Unique offerings include specialty privacy glass, float glass, solar control glass, and safety glass.

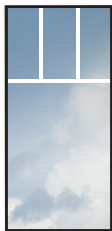
### Grille Options - Beauty without sacrifice.

Our Exclusive Energrill™ allows you to enhance the look of your window with a decorative grille without increasing heat loss.

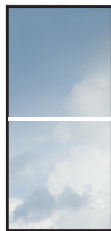
**Grille Patterns** - Choose from our popular grille patterns or customize your own



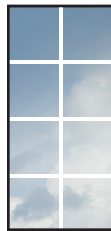
Ladder



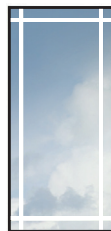
Craftsman



Horizontal



Rectangular



Prairie



Double Prairie

### Grille Style and Colour Choices



\*Black



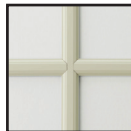
\*Brushed Aluminum



\*White



\*White



\*Tan



\*White

#### 5/16" Slimline Grille

Available in white, tan, black, brass, chrome, dark pewter, and any colour in our full brochure (Split-finish not available).

#### 5/8" Flat Colonial Grille

Available in white, tan, black, brass, brushed aluminum, and any colour in our full brochure.

#### 3/4" Grooved Georgian Grille

Available in white, tan, brushed aluminum, split finish, and any colour in our full brochure.

#### 1" Grooved Georgian Grille

Available in white and any colour in our full brochure.

#### 7/8" Scalloped SDL

Available on windows and non-venting door lite kits only.

Available in white, tan, wood clear pine, wood primed, wood permafinished (white and tan), and any colour in our full brochure.

#### 1 1/8" Scalloped SDL

Available on windows and non-venting door lite kits only.

Available in white, tan, wood clear pine, wood primed, wood permafinished (white and tan), stained, and any colour in our full brochure.

### Tint Options



Grey



Bronze

### Obscure Glass Options



Rain



Pinhead



Satin Deco

For more glass and grille options, please contact a Customer Service Representative

# GLASS OPTIONS

## SOLAR HEAT GAIN & INSULATION



Kohltech Energy Ratings									
Glass Option	Grilles	Energy Rating	R-Value Center of Glass	R-Value of Entire Window	U-Value		SHGC	CR	Visible Transmittance
					Metric	Imperial			
Triple Energlas® Plus LSG	No	35	8.2	6.7	0.85	0.15	0.24	72	0.40
	Yes	34	8.2	6.7	0.85	0.15	0.22	72	0.36
Triple Energlas® Plus HSG	No	46	7.4	6.3	0.91	0.16	0.45	74	0.52
	Yes	43	7.4	6.3	0.91	0.16	0.41	74	0.47
Triple LoE Argon x1 LSG	No	30	5.3	5.0	1.14	0.20	0.26	68	0.46
	Yes	29	5.3	5.0	1.14	0.20	0.24	68	0.42
Triple LoE Argon x1 HSG	No	41	5.2	5.0	1.14	0.20	0.46	68	0.53
	Yes	39	5.2	5.0	1.14	0.20	0.42	68	0.48
Energlas® LSG	No	25	4.1	4.0	1.42	0.25	0.28	61	0.51
	Yes	24	4.1	4.0	1.42	0.25	0.26	61	0.46
Energlas® HSG	No	37	3.8	3.8	1.48	0.26	0.52	60	0.58
	Yes	34	3.8	3.8	1.48	0.26	0.47	60	0.53
LoE Argon LSG	No	23	4.1	3.8	1.48	0.26	0.28	59	0.51
	Yes	22	4.1	3.8	1.48	0.26	0.26	59	0.46
LoE Argon HSG	No	36	3.8	3.7	1.53	0.27	0.52	58	0.58
	Yes	33	3.8	3.7	1.53	0.27	0.47	58	0.53
Clear	No	20	2.1	2.4	2.38	0.42	0.57	43	0.59
	Yes	18	2.1	2.4	2.38	0.42	0.52	43	0.54

Note: All data is for Supreme Casement (2020) except for Center of Glass R-value which applies specifically to the glass option.

### Low Solar Gain (LSG) Glass

*Climate control for hot summers and cold winters.*

If you get a lot of sun in the summer, you may want to consider using Low Solar Gain (LSG) glass. LSG significantly reduces heat transfer, preventing overheating in the summer and providing insulation in the winter to provide year round comfort.

### High Solar Gain (HSG) Glass

*Heating homes in colder climates.*

High Solar Gain glass has High Solar Heat Gain, great ER numbers and a great R-Value. HSG glass excels at allowing heat from the sun in, helping heat homes in colder climates.

### High R-Value

*Maintain your home's warmth.*

A high R-Value shows that a product is effective at preventing heat loss, and will help to maintain the temperature of your home in winter months. Energlas Plus® and Energlas Plus® LSG are your best options to keep your home comfortable and energy efficient.



# GLASS OPTIONS

## PERFORMANCE RATINGS & ENERGY FEATURES

### Energy Features

#### Insulated Glass Unit (IGU)

Made up of two or three glass panes separated by chambers of air or an inert gas. This results in decreased heat transfer compared to single pane units.

#### Glazing

A pane of glass set or made to be set in frames (Triple glazed is three panes of glass to improve energy rating).

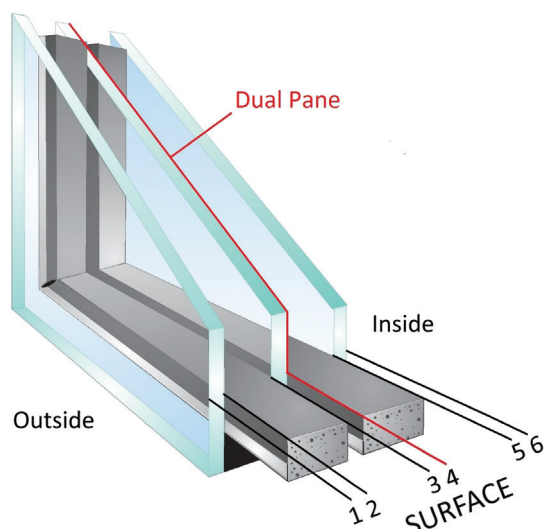
#### Low Emissivity (LoE) Coating

A thin, virtually invisible metallic layer that reflects heat back to the same side of the glass it originated from. This increases a structure's ability to retain heat.

#### Warm Edge Spacer System

Raises the temperature of the glass near the frame, decreasing heat loss. Also functions to remove any moisture between the panes of glass. We offer three types of spacers: Intercept® Tin-Plated Steel, Intercept® Ultra Stainless Steel, and Cellular Silicone.

Insulated Glass Unit (IGU)



### Glass Performance Ratings

#### Energy Rating (ER) - *The higher the better*

A measure of energy efficiency for a window or door. This number is calculated by combining heat loss and air leakage loss with gains from solar heat.

#### U-Factor - *The lower the better*

Indicates the rate of heat loss through a window or door. The lower the U-Factor, the slower heat transfers from a warm area to a cold area, and the better the unit insulates. U-Factor is the inverse of the R value.

#### R-Value - *The higher the better*

Indicates the thermal resistance of a window or door and is the inverse of U-Factor. There are two R-Values referenced in the industry; Center of Glass R-Value and whole Window R-Value.

#### Solar Heat Gain Coefficient (SHGC)

A measure of the amount of solar radiation that enters a building through a window as heat gain. It is important to remember that an LSG unit will block unwanted sun (in summer months), but it will also block wanted sun (in winter months).

#### Condensation Resistance

Measure of how well a product resists the formation of interior condensation. The higher the number the more effective the product is at preventing condensation.

