



# LiteZone<sup>®</sup> GLASS INC.

LiteZone<sup>®</sup> insulating glass makes possible  
the world's most energy efficient windows.



## LiteZone<sup>®</sup> is an Award Winning Product

The Canada Green Building Council named LiteZone<sup>®</sup> insulating glass the 2016 winner of its prestigious "Green Building Product of the Year Award".

## Ultimate Energy Efficiency

**Windows using LiteZone<sup>®</sup> achieve insulating values up to 2.8 times greater than triple pane windows.**

- Up to R18.9, U=0.0529, for a window including both the glass and frame, and R21.7, U=0.0461, for centre of glass (NFRC method)
- Thicker insulating glass units (IGUs) allow large thermal breaks necessary for high window insulating values
- Customizable to desired thickness, performance and budgets
- Dramatically reduces energy costs for heating and cooling
- Reduces the size and cost of equipment for heating and cooling
- Allows for thinner walls with less insulation while still achieving the required overall wall insulating values
- Makes the use of renewable energy sources more feasible (e.g. solar panels, geothermal, etc.)
- Allows "net zero carbon" and "passive house" construction to be more easily achieved
- Thermal performance has been verified by an independent testing agency

## Extreme Longevity

**The expected life of LiteZone<sup>®</sup> glass units is more than 60 years; about 3 times the average life of triple pane units and similar to the life of a building.**

- Air filled and therefore has no concerns with deteriorating insulating values or with decompression of IGUs due to escaping argon or krypton
- Pressure equalized to reduce IGU stress and ensure a long life
- Edge seal is impermeable to water vapour (conventional IGU edge seals are not)
- Structural connection of the glass to the spacer is more than 3 times stronger than in conventional IGUs
- All materials are durable and have the same or similar coefficients of linear thermal expansion to reduce stress due to changing temperatures

## Lowest Life Cycle Costs

**Because of its extreme longevity and energy efficiency, LiteZone<sup>®</sup> insulating glass is the least expensive choice in the long run.**

- Will have life cycle costs that are 40% to 70% less than triple pane IGUs, depending on the LiteZone<sup>®</sup> glass unit used
- Life cycle costs include the energy savings and the cost to replace IGUs during the estimated 60-year life of a building

## Superior Human Comfort

**The inside surface temperature of windows using LiteZone® will remain near room temperature to help ensure living spaces are always comfortable regardless of how hot or cold it is outside.**

- Helps eliminate chills from radiant exchanges between people and cold windows
- Greatly reduces uncomfortable drafts due to downward air convections near cold windows
- Eliminates problems with condensation on cold glass and cold window frames even when rooms have high relative humidity
- Reduces building overheating problems during warm weather due to both solar gains and conduction from hot outside air

## Excellent Sound Insulation

**Windows using LiteZone® can achieve sound insulation that is comparable to an 8" thick concrete block wall.**

- Most windows using LiteZone® will have a minimum Sound Transmission Class (STC) of 40
- Can be made to achieve sound insulation as good as the best acoustic windows, but at a lower cost because sound insulation is a natural result of the basic LiteZone® construction

## Maximum Design Flexibility

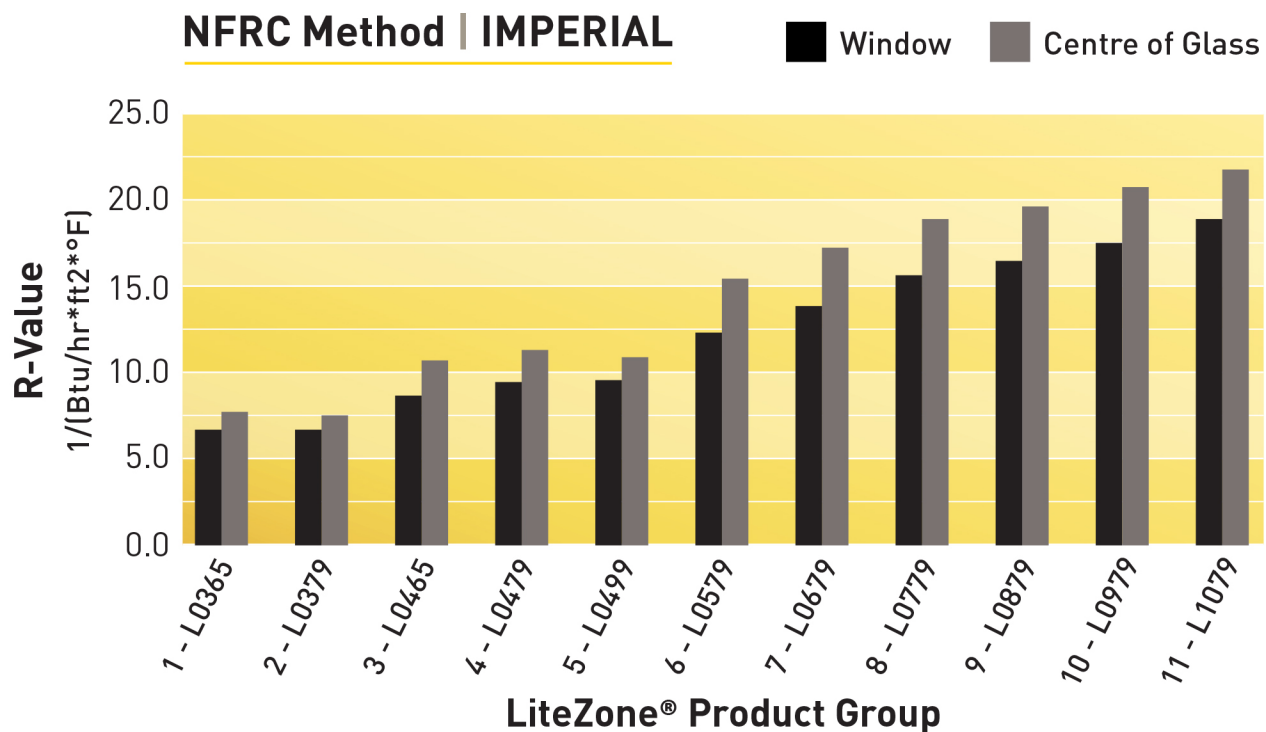
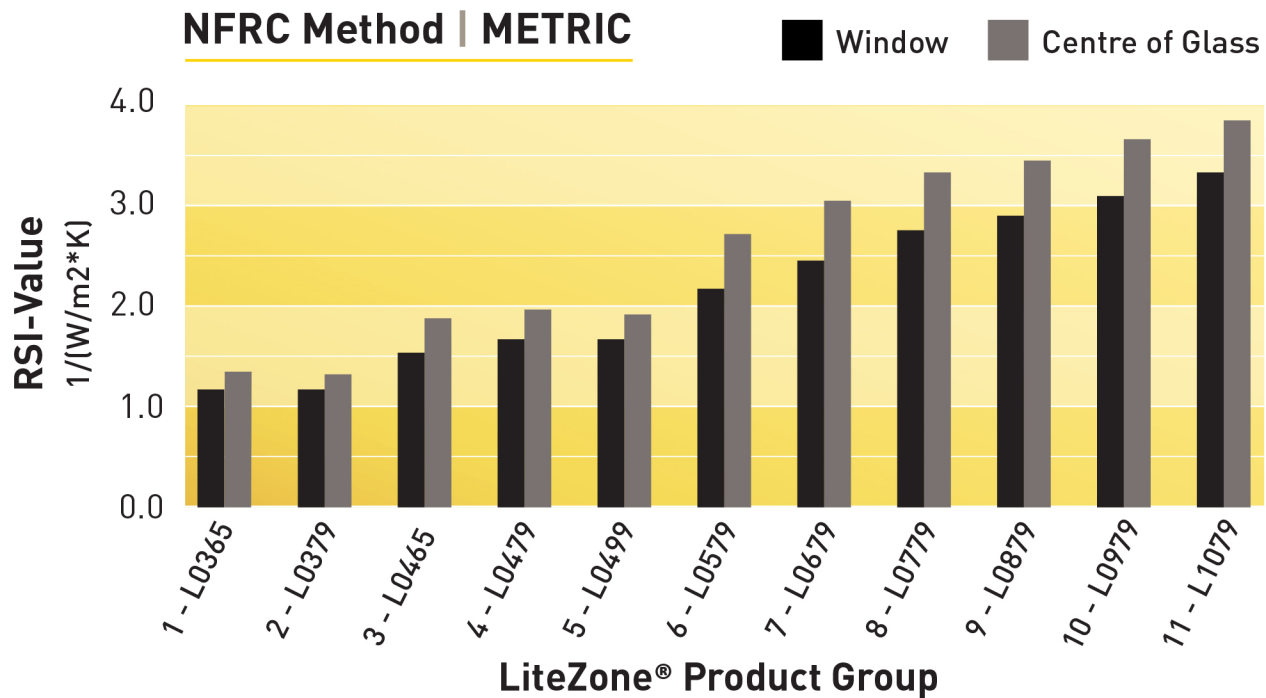
**Provides design flexibility to allow generous glass areas with unimpeded views using windows as large as 6' x 10'.**

- Uses layers of suspended films to achieve glass units with much higher insulating values but with less weight than triple pane units
- Allows a reduction in cost and improved performance by reducing the number of thermally inefficient and expensive frame members dividing a glass area
- Use more and larger windows facing any direction and still achieve highly energy efficient and exceedingly comfortable living spaces

*LiteZone®—a breakthrough in insulating glass technology*

## LiteZone® Highest R-Values by Product Group

By increasing the number of suspended films, the number of low emissivity coatings, and by increasing the glass unit thickness, LiteZone® can achieve higher, previously unheard of window insulating values.





# LiteZone® Performance Ranges (NFRC Method)

## NFRC Method | METRIC

LiteZone® Insulating Glass Performance Ranges																					
Product Groups		No. of layers		Gap size (mm)		Unit thickness using 6mm glass		Centre of Glass RSI-Value 1/(W/m²*K)		Centre of Glass U-Value W/m²*K		Shading Coefficient		Solar Heat Heat Gain Coefficient		Visible Light Transmission		Window RSI-Value Range 1/(W/m²*K)		Window U-Value Range W/m²*K	
		Glass	Film	A	B	Inches	mm	Min	Max	Max	Min	Min	Max	Min	Max	Min	Max	Min	Max	Max	Min
Available Now	1 L0365	2	1	16.5	n/a	1.75	44.5	0.56	1.35	1.794	0.738	0.24	0.73	0.21	0.63	0.48	0.70	0.57	1.17	1.743	0.852
	2 L0379	2	1	20	n/a	2.02	51.3	0.55	1.31	1.811	0.761	0.24	0.73	0.21	0.63	0.47	0.70	0.58	1.17	1.738	0.852
	3 L0465	2	2	16.5	12	2.22	56.3	0.73	1.89	1.374	0.528	0.20	0.66	0.17	0.57	0.39	0.63	0.72	1.53	1.396	0.653
	4 L0479	2	2	20	20	2.81	71.4	0.74	1.98	1.346	0.505	0.20	0.66	0.17	0.57	0.39	0.63	0.76	1.66	1.323	0.602
	5 L0499	2	2	26.5	20	3.32	84.3	0.73	1.91	1.363	0.522	0.20	0.66	0.18	0.57	0.39	0.63	0.77	1.68	1.306	0.596
	6 L0579	2	3	20	20	3.61	91.7	0.93	2.71	1.073	0.369	0.17	0.60	0.15	0.52	0.32	0.58	0.95	2.17	1.056	0.460
	7 L0679	2	4	20	20	4.38	111.3	1.12	3.04	0.891	0.329	0.18	0.55	0.15	0.48	0.33	0.53	1.13	2.45	0.886	0.409
Available Later*	8 L0779	2	5	20	20	5.19	131.8	1.31	3.32	0.761	0.301	0.17	0.51	0.15	0.44	0.30	0.49	1.31	2.75	0.761	0.363
	9 L0879	2	6	20	20	5.98	151.9	1.51	3.45	0.664	0.290	0.17	0.47	0.15	0.41	0.30	0.45	1.49	2.89	0.670	0.346
	10 L0979	2	7	20	20	6.77	172.0	1.69	3.67	0.591	0.273	0.16	0.44	0.14	0.38	0.28	0.42	1.68	3.09	0.596	0.324
	11 L1079	2	8	20	20	7.56	192.0	1.87	3.83	0.534	0.261	0.15	0.41	0.13	0.36	0.25	0.40	1.87	3.32	0.534	0.301

\* Product group will become available at a future date.

## NFRC Method | IMPERIAL

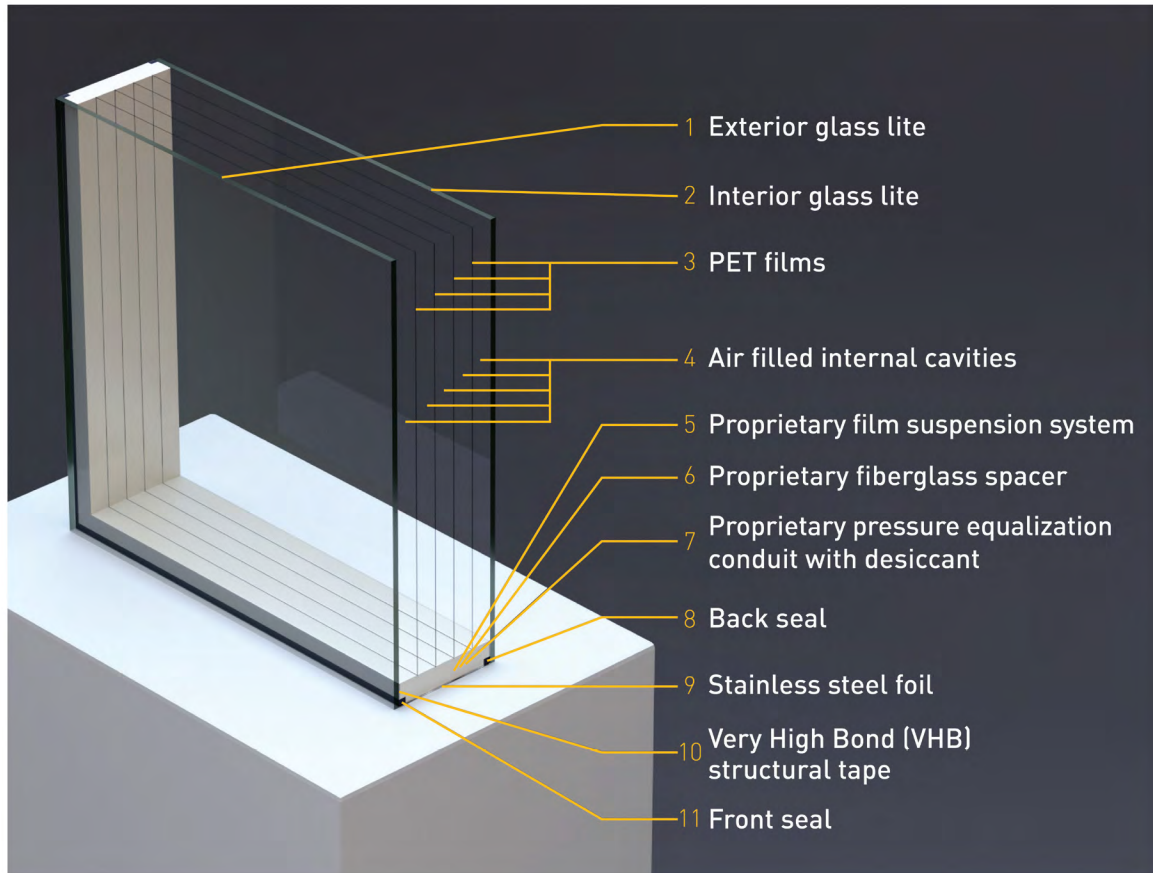
LiteZone® Insulating Glass Performance Ranges																					
Product Groups		No. of layers		Gap size (Inches)		Unit thickness using 6mm glass		Centre of Glass R-Value 1/(Btu/hr*ft²*°F)		Centre of Glass U-Value Btu/hr*ft²*°F		Shading Coefficient		Solar Heat Heat Gain Coefficient		Visible Light Transmission		Window R-Value Range 1/(Btu/hr*ft²*°F)		Window U-Value Range Btu/hr*ft²*°F	
		Glass	Film	A	B	Inches	mm	Min	Max	Max	Min	Min	Max	Min	Max	Min	Max	Min	Max	Max	Min
Available Now	1 L0365	2	1	0.65	n/a	1.75	44.5	3.2	7.7	0.316	0.130	0.24	0.73	0.21	0.63	0.48	0.70	3.3	6.7	0.307	0.150
	2 L0379	2	1	0.79	n/a	2.02	51.3	3.1	7.5	0.319	0.134	0.24	0.73	0.21	0.63	0.47	0.70	3.3	6.7	0.306	0.150
	3 L0465	2	2	0.65	0.47	2.22	56.3	4.1	10.8	0.242	0.093	0.20	0.66	0.17	0.57	0.39	0.63	4.1	8.7	0.246	0.115
	4 L0479	2	2	0.79	0.79	2.81	71.4	4.2	11.2	0.237	0.089	0.20	0.66	0.17	0.57	0.39	0.63	4.3	9.4	0.233	0.106
	5 L0499	2	2	1.04	0.79	3.32	84.3	4.2	10.9	0.240	0.092	0.20	0.66	0.18	0.57	0.39	0.63	4.3	9.5	0.230	0.105
	6 L0579	2	3	0.79	0.79	3.61	91.7	5.3	15.4	0.189	0.065	0.17	0.60	0.15	0.52	0.32	0.58	5.4	12.3	0.186	0.081
	7 L0679	2	4	0.79	0.79	4.38	111.3	6.4	17.2	0.157	0.058	0.18	0.55	0.15	0.48	0.33	0.53	6.4	13.9	0.156	0.072
Available Later*	8 L0779	2	5	0.79	0.79	5.19	131.8	7.5	18.9	0.134	0.053	0.17	0.51	0.15	0.44	0.30	0.49	7.5	15.6	0.134	0.064
	9 L0879	2	6	0.79	0.79	5.98	151.9	8.5	19.6	0.117	0.051	0.17	0.47	0.15	0.41	0.30	0.45	8.5	16.4	0.118	0.061
	10 L0979	2	7	0.79	0.79	6.77	172.0	9.6	20.8	0.104	0.048	0.16	0.44	0.14	0.38	0.28	0.42	9.5	17.5	0.105	0.057
	11 L1079	2	8	0.79	0.79	7.56	192.0	10.6	21.7	0.094	0.046	0.15	0.41	0.13	0.36	0.25	0.40	10.6	18.9	0.094	0.053

\* Product group will become available at a future date.

- Data is derived using Window 7.8 and Therm 7.8 software from Lawrence Berkeley National Laboratory, Berkeley, CA, and are based on NFRC 100-2010 weather conditions for a 1.2 m x 1.5 m (~4 ft. x ~5 ft.) generic wood fixed window.
- Each of the 11 LiteZone® product groups are distinguished by the number of suspended PET films layers (1 to 8 films), the size of the gaps between each layer and the overall glass unit thickness.
- Performance within each product group then varies depending on the number and type of low-e coats used.
- The glass unit thicknesses shown are based on using 6 mm glass lites. If thinner glass lites are appropriate for the intended application, then the glass unit thickness can be reduced accordingly.

## Construction of a LiteZone<sup>®</sup> Insulating Glass Unit

The illustration below shows the construction of a LiteZone<sup>®</sup> L0679 glass unit that achieves R17.2, U=0.0581, centre of glass using four suspended PET films.



## Buy Windows That Use LiteZone<sup>®</sup> Insulating Glass

LiteZone Glass Inc. manufactures LiteZone<sup>®</sup> insulating glass units (IGUs) in Canada for sale to anyone wishing to purchase truly high performance and long-lasting insulating glass. A growing number of window manufacturers offer their customers an option to use thicker, higher performing LiteZone<sup>®</sup> glass units in their window systems. Contact us for a list of manufacturers that use LiteZone<sup>®</sup> glass units in fiberglass, wood, thermally broken aluminum, or vinyl window framing systems.

## Buy Four-Season Sunrooms Using LiteZone<sup>®</sup> Insulating Glass

True four-season sunrooms are now available with LiteZone<sup>®</sup> insulating glass. Enjoy a beautiful sunroom that's always comfortable without high energy costs, even in winter. Contact us for a list of sunroom manufacturers that use LiteZone<sup>®</sup> glass units.

## Upgrade or Replace Your Existing Windows

Dramatically increase the insulating value of your existing windows (e.g. from R2 to greater than R8) by upgrading to higher performing LiteZone<sup>®</sup> insulating glass. Use LiteZone<sup>®</sup> in your existing window frames or replace your windows entirely. Contact us for an estimate and assistance finding the optimal LiteZone<sup>®</sup> solution for your project.

## Use PACE Financing to Buy LiteZone<sup>®</sup>

Property Assessed Clean Energy (PACE) financing may be available in your area to pay for your purchase of LiteZone<sup>®</sup> insulating glass. Visit [www.paceab.ca](http://www.paceab.ca) to learn more.

## Warranty

All LiteZone<sup>®</sup> insulating glass units have a 25 year manufacturer's warranty against seal failure and deterioration of thermal performance.

## Contact Us

Let us work with you on your next window project. We can recommend a window manufacturer and help you select the ideal LiteZone<sup>®</sup> insulating glass units to meet your needs.