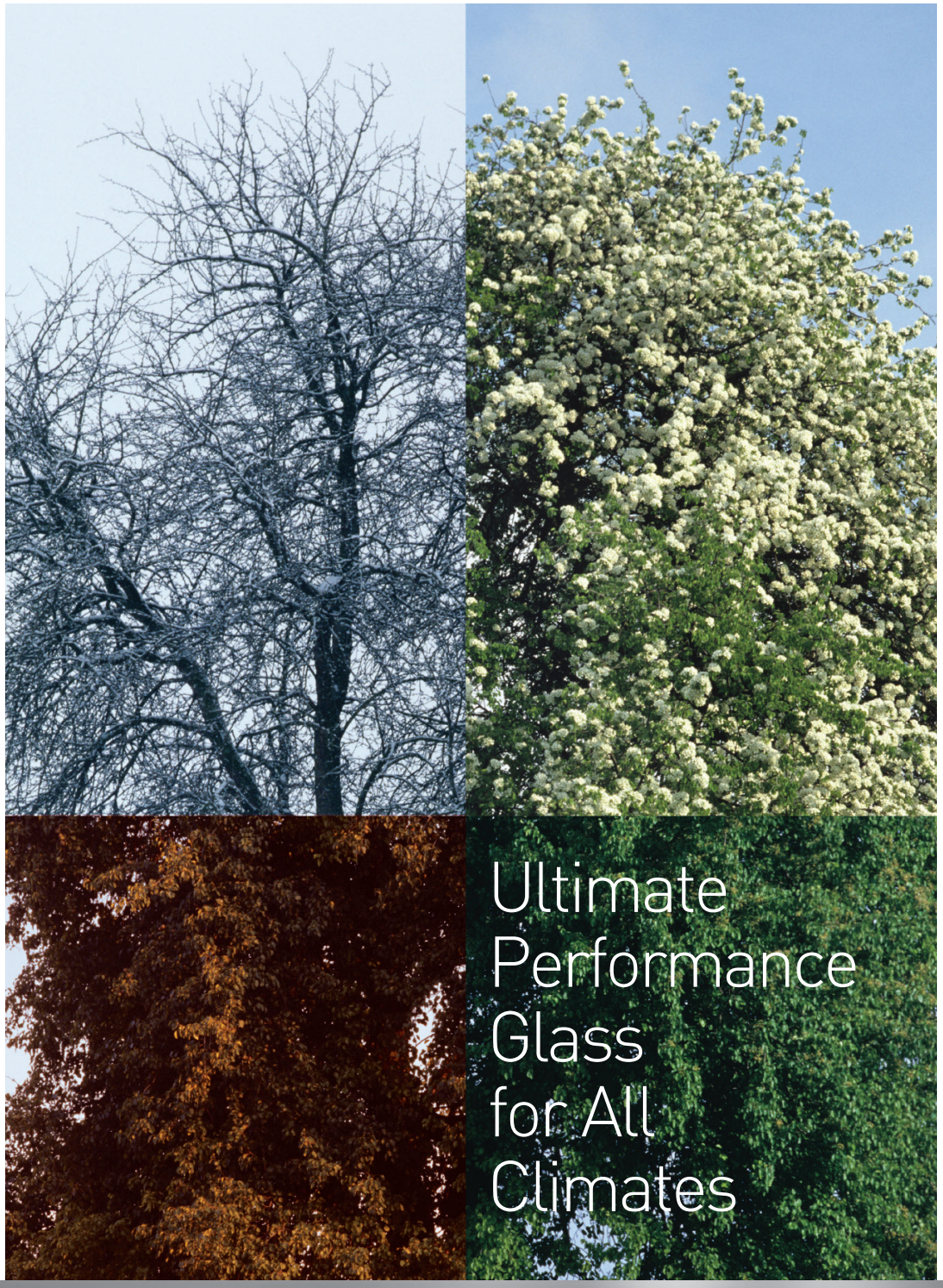
Please note that all testing data contained in this document applies to Cardinal Glass units only, not the whole window. Please refer to the NFRC Cerified Products Directory for window testing data.



CARDINAL CG
A CARDINAL GLASS INDUSTRIES COMPANY

ENGINEERING THE FUTURE OF COATED GLASS

THE COEUR D'ALENE WINDOW CO.

Cardinal LoĒ³-366® glass is the ultimate performance glass. It just might make all other low-e glass obsolete. LoĒ³-366 delivers the ideal balance of solar control and high visibility. And it provides the highest levels of year-round comfort and energy savings. It's also the one glass you can use to be compliant in every ENERGY STAR zone – in a double-pane window. Couple it with LoĒ-i89®, and you're compliant in the North. Its low SHGC makes it compliant throughout the rest of the country as well. It's the perfect glass wherever you live.

When the temperature soars, ordinary window glass just can't handle the heat. And tinted glass spoils the view. Cardinal LoĒ³-366, however, has been specially formulated to reject the sun's heat without affecting the view. It lets more light in and keeps more heat out. So your home stays cool and comfortable. Our patented LoĒ³-366 coating provides the ultimate in performance of all our LoĒ products.

What's more, LoĒ³-366 provides exceptional fading protection as well. It blocks 95% of the sun's damaging ultraviolet rays (a leading cause of fading), so it will help your furniture, carpets, curtains and wall coverings stay beautiful for years to come.

During cold weather, the insulating effect of your windows has a direct impact on how your rooms feel. Typically, 75% of the exposed surface of a window is glass, and the temperature of the room-side of the glass directly affects the air temperature in the room. The better insulated the window glass, the warmer your room will be.

In fact, the Efficient Windows Collaborative (www.efficientwindows.org) suggests that when glass surface temperatures fall below 52°F, there is a risk of thermal discomfort. To maintain the best comfort during the winter, select a glass product that produces surface temperatures that will stay above this point during the coldest outdoor conditions.

INSIDE GLASS AND OUTSIDE TEMPERATURES

The table below compares the room-side center of glass temperatures of different glass types against two different winter conditions.

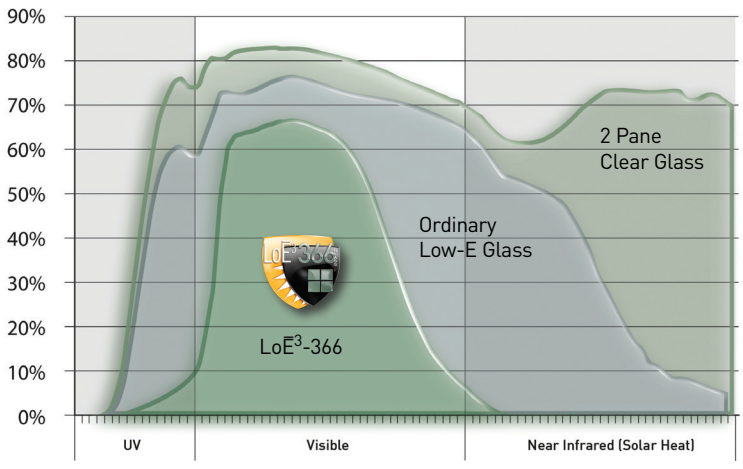
IG TYPE AND COATING	OUTSIDE TEMPERATURES	
	VERY COLD OUTSIDE -20°F (-30°C)	COLD OUTSIDE 20°F (-10°C)
	INSIDE TEMPERATURES	
Single-pane, Clear	0°F (-19°C)	31°F (-3°C)
Double-pane, Clear	37°F (2°C)	51°F (9°C)
Ordinary low-e (air fill)	46°F (7°C)	57°F (13°C)
LoE³-366 (air fill)	**49°F (9°C)**	**58°F (14°C)**
LoE³-366 (argon fill)	**52°F (11°C)**	**60°F (15°C)**

The superior insulating capability of Cardinal LoE³-366 is a key factor in the construction of comfortable windows for cold climates. The dramatic comfort improvement from windows with warm glass surfaces also means the relative humidity of the indoor air can be controlled and maintained properly. Proper humidity levels (not too much, not too little) will improve comfort and promote a healthier living environment.

A unique triple-layer coating.

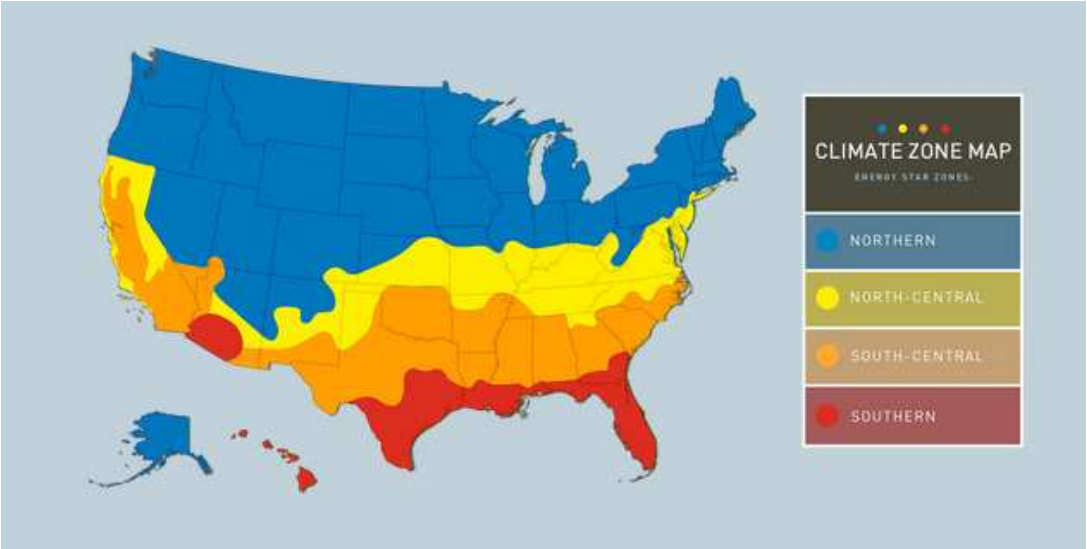
For years, Cardinal has been setting the standard for energy efficient glass. Top-of-the-line residential window and door manufacturers all rely on our high quality. Our patented state-of-the-art sputter coating processes are unmatched by any other glass manufacturer.

Now we've raised the bar. LoE³-366 adds a third layer of silver coating. Result: a clear coating that blocks even more solar gain, reflects heat, and lets the light stream in. LoE³-366 actually outperforms the tinted glass often used in warm climates.



ENERGY STAR, everywhere.

The goal of the ENERGY STAR Windows program is to be better than code. LoE³-366 is the one low-E product that can qualify in all four climate zones: superior insulating value in the North, and clear solar control for everywhere else in the country.



GLASS PERFORMANCE

IG TYPE AND COATING	VISIBLE LIGHT			FADE TRANSMISSION		SOLAR	U-FACTOR	
	TRANSMIT-TANCE	EXTERNAL REFLECTANCE	INTERNAL REFLECTANCE	UV	ISO	HEAT GAIN COEFFICIENT	AIR FILL IP / SI	ARGON FILL IP / SI
Single-pane, Clear	90%	8%	8%	0.71	0.84	0.86	1.04 / 5.91	—
Double-pane, Clear	82%	15%	15%	0.58	0.75	0.78	0.48 / 2.73	—
Ordinary low-e	76%	17%	17%	0.50	0.68	0.72	0.34 / 1.93	0.30 / 1.70
LoE³-366	**65%**	**11%**	**12%**	**0.05**	**0.43**	**0.27**	**0.29 / 1.65**	**0.24 / 1.36**

LoE³-366 - Your choice for all seasons.

LoE³-366 is the ultimate performance glass, with energy savings throughout the year, in every part of the country. All with exceptional visibility. It's the perfect glass wherever you live.

LoE³-366 can be purchased in hurricane-resistant laminated glass, as well as in a variety of shapes and sizes.

To learn more about LoE³-366 and other Cardinal glass products, ask your window manufacturer, contractor or architect.

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