

High Performance Thin Glass Insulated Glazing

U-factors as good as or better than equivalent suspended coated film options (*6-Series, 7-Series, etc.*)

Increased **visible light transmission** (VT) and **condensation resistance** (CR)

Same **pricing structure** as our traditional suspended coated film, high performance glazing options

Multiple **glazing options** to fit your specific needs

Custom crafted in the U.S. for superior **lead times and support**

Most high performance windows are thick and heavy. Alpen High Performance Products is changing that by using 'thin' glass (similar to the glass in your phone or flat-screen TV) as the center panes, along with krypton and argon gas, to provide some of the most thermally efficient windows available.

Example of NFRC Tested ThinGlass Performance

Window	Glass Package	NFRC Full-Frame Performance				
		U-factor	R-value	SHGC	VT	CR
Zenith Series ZR-6 Fixed Low Profile <i>Balanced-6</i>	Suspended Film	0.16	6.3	0.30	0.49	62
	<i>ThinGlass</i>	0.14	7.1	0.32	0.51	78



Alpen ThinGlass Triple and Alpen
ThinGlass Quad



"Super Window Could
Save Billions"

Alpen Quad-Pane Windows Demonstrate an Average Simple Payback of **Under Two Years** in GSA Green Proving Ground Testing

The U.S. General Services Administration (GSA) finalized and published the results of its nearly year-long testing and evaluation of quad-pane windows manufactured by Alpen High Performance Products. The windows were tested and evaluated by the U.S. Department of Energy's National Renewable Energy Laboratory as part of GSA's Green Proving Ground (GPG) program.



The report measured the incremental cost difference between Alpen's high performance quad-pane solutions—half with suspended film center panes, half with ThinGlass center panes—and a high performance dual-paned, aluminum-framed window. **The quad-pane windows reported an average simple payback of only 1.8 years.** For new construction and window replacements, the quad-pane windows have payback between one and six years, depending on climate zone and utility rates.



25% AVERAGE HVAC ENERGY SAVINGS



REDUCED HVAC CAPACITY REQUIREMENTS



SAME THICKNESS AND WEIGHT AS DOUBLE-PANE WINDOWS



RETURN ON INVESTMENT ACROSS CLIMATE ZONES AND UTILITY RATES



RECOMMENDED FOR NEW CONSTRUCTION AND END-OF-LIFE REPLACEMENT

"These quad-pane windows provided better thermal insulation and because they have the same weight and thickness as a double-pane window they were easy to install. By improving the building envelope, they can help contribute to our net-zero goals."

- Tyler Cooper
Mechanical Engineer at Denver
Federal Center, U.S. General
Services Administration

View the full report at www.gsa.gov/. Icons courtesy of U.S. General Services Administration.