Light + Air
North America

UniQuad®
Product Data Sheet

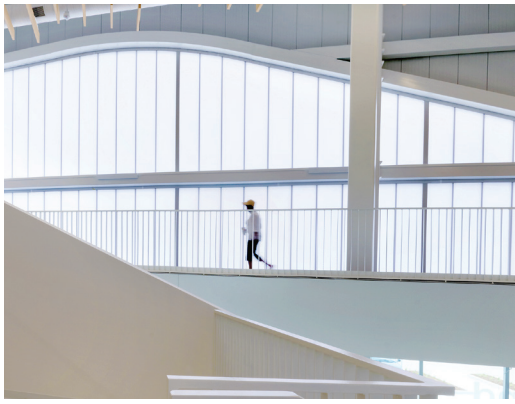
Polycarbonate Wall Systems

UniQuad® translucent wall systems provide soft, diffuse natural light to building interiors while offering the versatility to meet the functional and creative needs of nearly any building design. Systems are available in a variety of configurations and can be customized to meet a wide range of performance and aesthetic needs, including sound control, custom colors and graphics, specialty systems for hurricane and blast protection, and more. Best of all, UniQuad® wall systems are easy to install and maintain.

UniQuad® polycarbonate translucent wall systems feature two polycarbonate multiwall sheets connected with internal aluminum supports to create unitized glazing panels. Glazing options include a variety of standard and custom colors and panels can be configured with insulation options for enhanced performance in more challenging climates. The glazing panels are held in place with aluminum framing, and framing finish options include anodized and painted finishes in standard and custom colors.

Product Specifications	
Panel Thicknesses	4-1/4" (108mm), 3" (76mm), or 2-3/4" (70mm)
Panel Width	23-3/4" (603mm) wide
Panel Weight	1.5 to 2lbs/ft^2
Panel Assembly	Removable Skin Technology - remove exterior panel while the interior remains
	Factory unitized with structural, mechanically interlocking, dry glazed, and sealed joint
Frame Depth	4-1/4" System: 5-3/8" | 3" System: 4" | 2-3/4" Window System: 3.06"
Thermally Broken Frame	Optional
System Height	Typical max of 38' - Contact us to check feasibility for taller applications
Exterior & Interior Skin	3" and 4" UniQuad®: Nano-Cell 10mm (Interior & Exterior) UniQuad® Window: Nano-Cell 8mm (Interior & Exterior)
Glazing Finish	Standard: Matte Non-Standard: Non-Matte
Glazing Colors	Standard: Clear, Ice White, White Non-Standard: Blue, Green, Reflective Gray, Gray, Bronze
Bi-Color Option	Interior and exterior glazing layers can be the same or different colors
Aluminum Finishes	Painted: AAMA 2605 - standard and custom colors (mica available) Anodized: AAMA 611 Class 1 - clear and color options
Material Content	Aluminum: Between 60 and 75% Recycled Content Glazing: All virgin material
Warranty	10 year leak + glazing light transmission %
	1 to 20 year aluminum finish depending on selection
Optional Upgrades	Flush Panel Joint or Exposed Mullion
	Increased Sound or Thermal Insulation
Material Source	Kingspan Light + Air N.A. products are manufactured in the USA and most are designed with consideration for Buy America (BAA) and Build America - Buy America (BABA) requirements. BABA Compliance is project-specific. Please contact us to verify the compliance of your configuration.







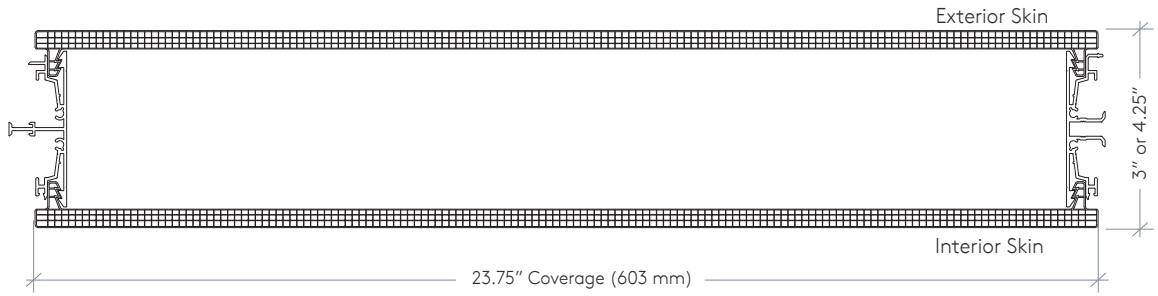
Kingspan® Light + Air

Test Data

Performance Metric	Standard	UniQuad® Window	3" UniQuad®	4" UniQuad®
Air Permeability	ASTM E 283	0.02 CFM/sf @ 1.57psf	0.04 CFM/sf @ 1.57psf	0.02 CFM/sf @ 1.57 & 6.24psf
Water Permeability	ASTM E 331	Pass @ 15psf	Pass @ 6.24psf	Pass @ 6.24psf & 15psf
Ultraviolet Transmission	EN 410	< 0.05%		
Hail Impact	ASTM E 822	Warrantied to resist breakage up to 1-3/16" @ 55mph Tested to remain intact up to 3" @ 90mph		
Acoustic Insulation	ASTM E 90	STC: 22, 24, or 25 OITC: 16 or 17	STC: 24 OITC: 17	STC: 27, 28, 29, or 35 OITC: 19, 21, 22, or 27
Florida Product Approval (FPA)	TAS 201	Pass Large Missile Level D	Pass Large Missile Level D	Pass Large Missile Level D
	TAS 202 + 203	N/A	Up to +40/-60psf	Up to +/-95psf
	Listing Number		FPA#: FL30048 HVHZ Approved	FPA#: FL17695 HVHZ Approved
TX Dept of Insurance	TDI	N/A	Listed	Listed
ICC Evaluation	N/A	ICC-ESR 4745		
Environmental Product Declaration	ISO 14025 / ISO 21930	N/A	Available	Available

Fire Testing Performance Metric	Standard	Code Requirement	Result**	Classification
Ignition Temp	ASTM D 1929	Min 650° F	950° F	Pass
Smoke Development	ASTM D 2843	Max 75	62.7	Pass
Flame Spread & Smoke Developed	ASTM E 84	Max Flame Spread: 25 Max Smoke Developed: 450	Flame Spread: 0 Smoke Developed: 40	A
Burning Rate	ASTM D 635	Max 2-1/2" (CC2)	0"	CC1

**Note: Panel types have varying results, however all panels used in UniQuad® systems meet or exceed these values.

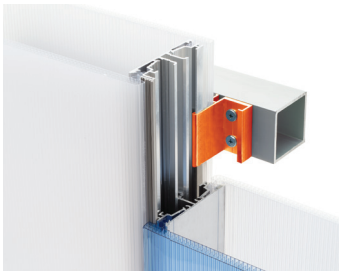




The two-piece frame system consists of a sill and sub-sill. It is designed so that the necessary fasteners don't penetrate the sill frame.



Our concealed UniClip™ is capable of withstanding heavy loads. The specialized design enables the panels to be installed quickly and removes the need for structural frame caps.



The panel clip prevents the glazing from breaking under extreme loads. The metal-to-metal connection enables the glazing to freely expand and contract and increases the system's ability to withstand high loads and span floor-to-slab.

Thermal Performance Data

UniQuad® 3" + UniQuad® Window - NFRC Certified System Values (KLA-M-15)							Center of Glazing*		
Exterior Color	Interior Color	Insulation	U-factor	SHGC	VT	CR	U-Factor	SHGC	VT
Clear (Matte)	Clear (Matte)	Air	0.30	0.35	0.33	46	0.27	0.38	0.37
Clear (Matte)	White (Matte)	Air	0.30	0.30	0.18	46	0.27	0.33	0.20
Clear (Matte)	Ice White (Matte)	Air	0.30	0.35	0.27	46	0.27	0.38	0.31
White (Matte)	Clear (Matte)	Air	0.30	0.28	0.17	46	0.27	0.31	0.19
White (Matte)	White (Matte)	Air	0.30	0.22	0.10	46	0.27	0.24	0.11
White (Matte)	Ice White (Matte)	Air	0.30	0.29	0.14	46	0.27	0.30	0.16
Ice White (Matte)	Ice White (Matte)	Air	0.30	0.34	0.33	46	0.27	0.36	0.27

IECC, ASHRAE, and COMCheck energy compliance methods always refer to NFRC Certified System Values. Center of Glazing Values are included here only for comparison purposes

UniQuad® 4" Systems - NFRC Certified System Values (KLA-M-13)							Center of Glazing*		
Exterior Color	Interior Color	Insulation	U-factor	SHGC	VT	CR	U-Factor	SHGC	VT
Clear (Matte)	Clear (Matte)	Air	0.25	0.35	0.35	58	0.23	0.38	0.38
Clear (Matte)	White (Matte)	Air	0.25	0.33	0.19	59	0.23	0.35	0.21
Clear (Matte)	Ice White (Matte)	Air	0.25	0.36	0.30	59	0.23	0.38	0.32
White (Matte)	Clear (Matte)	Air	0.25	0.31	0.17	59	0.23	0.33	0.18
White (Matte)	White (Matte)	Air	0.25	0.23	0.10	59	0.23	0.25	0.11
White (Matte)	Ice White (Matte)	Air	0.25	0.28	0.14	59	0.23	0.30	0.15
Ice White (Matte)	Clear (Matte)	Air	0.25	0.35	0.30	59	0.23	0.37	0.33
Ice White (Matte)	White (Matte)	Air	0.25	0.30	0.16	59	0.23	0.32	0.18
Ice White (Matte)	Ice White (Matte)	Air	0.25	0.33	0.25	59	0.23	0.36	0.27
Green (Matte)	Ice White (Matte)	Air	0.25	0.32	0.14	59	0.23	0.34	0.15
Clear (Matte)	Clear (Matte)	8mm MW	0.18	0.30	0.27	66	0.16	0.33	0.29
Clear (Matte)	Clear (Matte)	8mm MW + 8mm MW	0.14	0.26	0.20	71	0.12	0.28	0.22
Clear (Matte)	Clear (Matte)	STC 6mm	0.20	0.37	0.29	63	0.18	0.40	0.32
Clear (Matte)	Clear (Matte)	STC 6mm + 4mm	0.19	0.34	0.26	64	0.17	0.37	0.29
Clear (Matte)	Clear (Matte)	STC 12mm + 4mm	0.18	0.31	0.25	65	0.17	0.33	0.28

IECC, ASHRAE, and COMCheck energy compliance methods always refer to NFRC Certified System Values. Center of Glazing Values are included here only for comparison purposes

UniQuad® Span Chart*					
PSF	Single Span			Multi-Span	
	4" UQ	3" UQ	UQ Window	4" UQ	3" UQ
20	12.5′	8′	7′	12.5′	8′
30	11′	7′	6′	11′	7′
40	10′	6.33′	5.5′	10′	6.33′
50	9.25′	5.83′	5.17′	8′	5.83′
60	8.67′	5.5′	4.75′	6.75′	5.5′
70	8′	5′	4.42′	5.75′	5′
80	7.5′	4.82′	4′	5′	4.82′
90	7′	4.5′	3.82′	4.5′	4.5′

*Guidelines only - contact us to confirm project-specific spans.



Color + Finish Options

Multiwall Polycarbonate Sheet Color Options:

Polycarbonate sheet colors are available in three standard colors as well as non-standard and custom options (see examples at right). Please contact us for additional information.



(Left to Right: Clear, Ice White, White, Green, Blue. *NOTE: Colors shown above are for illustrative purposes only. Actual color may vary.)

Multi-Color Panel Options

While glazing color combinations offer an opportunity for creativity, they also servea practical purpose when tailoring the performance of the system. Each glazing color has an inherent solar performance. By varying the combination of the glazing colors for the interior and exterior, you can create unique visual elements while also customizing the solar performance of the system. The glazing's matte finish will increase its ability to diffuse light and eliminate glare as well.



*Custom colors shown above.

Aluminum Finish Color Options

Painted finishes meet AAMA 2605 and are available in a wide range of colors. They offer excellent color retention, salt-spray resistance, simple field touch-up and repainting capabilities, and are applied in facilities that use air capture systems to destroy VOCs with a regenerative thermal oxidizer. Anodized options are also available. Please review our Finish Color Options brochure for additional details.

Specialty Configurations

Whether you need a system that can handle extreme climates, the unique demands of military facilities, or anything in between, we can help you achieve your performance goals.





Insulation Options

Configurations are available that provide enhanced thermal performance values.

Sound Reduction (STC)

Panels can be configured for improved sound transmission performance.

Graphics + LED Backlighting*

Graphics and LED lighting can be useful in creating an iconic look or to reinforce a brand on the system's interior or exterior panels, making your building stand out as a beacon of creativity, day or night.

*Graphics and LED lighting provided by third party vendors. Contact KLA for details.

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