OPTIQ™ AA™5450 SERIES ULTRA THERMAL WINDOWS



The Industry's Smartest Window Raises the Bar for Design Flexibility and Thermal Performance



With best-in-class thermal performance, OptiQ[™] Ultra Thermal Windows continue to set the standard for thermal intelligence. The result of a continuing partnership with the U.S. Department of Energy, the AA[™]5450 Series Window with fixed, single hung, double hung and sliding configurations reaches new levels of thermal performance, thanks to multiple unique features integrated into the design. This thermal intelligence allows the complete family of OptiQ[™] Ultra Thermal Windows to maintain thermal continuity, reduce thermal transmission and help retain interior comfort.

Energy codes are becoming increasingly stringent, making highperforming building products a necessity, not a luxury. The AATM5450 Series Window meets or exceeds the minimum requirements for architectural window performance class*, delivers best-in-class thermal performance and offers more aesthetic choices for new and retrofit construction. Made from aluminum, this ultra thermal window will never rot, warp or buckle due to moisture and weather exposure. Leveraging the ground-breaking design features and multiple customization options found in all the OptiQTM Ultra Thermal Windows, the AATM5450 Series Window slides into place and raises the bar for design flexibility and thermal performance.

PERFORMANCE

OptiQ[™] Ultra Thermal Windows have been the industry's thermal intelligence standard for years. That tradition continues with the complete range of AA[™]5450 Series Windows – from sliding to fixed, single hung and double hung. The AW rated AA[™]5450

CLASS & GRADE* – FUNCTION AW-PG50-FW – FIXED AW-PG50-H – SINGLE HUNG AW-PG50-H – DOUBLE HUNG AW-PG50-HS – XX DOUBLE SLIDE AW-PG40-HS – OX SINGLE SLIDE

Series Windows deliver the highest levels of thermal performance in the industry. Superior thermal efficiency also makes the window ideal for buildings seeking Leadership in Energy and Environmental Design certification with the U.S. Green Building Council.

Thermal simulations showing temperature variations from exterior/ cold side to interior/warm side



The versatile AA^{™5450} Series Window leverages innovative OptiQ[™] Ultra Thermal Window features, including a polyamide thermal break that allows it to achieve higher thermal performance than traditional thermally broken products. Performance is further enhanced by accommodating 1" (25.4 mm) double pane or 1-1/2" (38.1 mm) triple pane insulating glass, while the alignment of the insulating glass unit with the

thermal break allows the window to maintain thermal continuity. Reduced sightlines also decrease thermal conductivity and transfer, while wider thermal break profiles allow for increased space between interior and exterior metal.

Insulating foam strips and interior gaskets further reduce thermal transmission. Additionally, the AA™5450 Series Window provides outstanding condensation resistance – an important performance feature in applications such as hospitals and schools where condensation and mold are significant concerns.

PERFORMANCE TEST STANDARDS

Air Infiltration	ASTM E283
Water	ASTM E331, E547
Structural – Uniform Wind Load	ASTM E330
Thermal Cycling	AAMA 501.5
Thermal Transmittance – U-Factor	AAMA 1503, 507; NFRC 100
Condensation Resistance (CRF, I, CR)	AAMA 1503; CSA A440.2; NFRC 500
Overall Solar Heat Gain Coefficient (SHGC, VT)	AAMA 507; NFRC 200
Sound Transmission (STC, OITC)	ASTM E90, E1425; AAMA 1801

AESTHETICS AND FLEXIBILITY

The AA[™]5450 Series Window combines intelligence and good looks to deliver inspired aesthetics. The 4-5/8" (117.48 mm) frame depth provides high thermal performance, while its minimal sightlines provide a sleek appearance. A dual color option offers the flexibility to vary interior and exterior finishes, which enables designers to coordinate and accent multiple environments while also controlling costs.

This versatile window is available in several configurations, including fixed, single hung, double hung and sliding, which provide various ventilation levels to meet a wide range of building conditions. To satisfy thermal requirements across many geographic regions, the AA™5450 Series Window has the ability to add or remove thermal options based on performance and cost requirements.

A variety of removable interior stops accommodates multiple infill thicknesses with no disassembly required for reglazing. Additionally, the factory-fabricated and glazed window is built with durable hardware. Hung windows include white bronze sweep locks and keepers, and continuous sash lifts are standard along with Class 5 spiral balances for simple operation. Sliding windows incorporate composite adjustable tandem rollers for easy opening.

A beveled face design option for single hung and double hung configurations make the AA™5450 Series window an ideal solution for renovation or replication projects seeking a historic look.



*AAMA/WDMA/CSA 101.IS2.A440 (NAFS) and AAMA 910

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