



## Terminology

**AAMA:** American Architectural Manufacturers Association. A national trade association that establishes voluntary standards for the window, door, storefront, curtain wall, and skylight industries.

**Air Infiltration:** The amount of air leaking in and out of a building through cracks in walls, windows, and doors.

**Anchor Brackets:** Brackets that are attached to the window and are screwed into the rough opening. Typically used for masonry installations.

**Annealed Glass:** Standard sheet of float glass which has not been heat-treated.

**Architectural shapes:** Custom shapes such as half rounds and polygons.

**Argon:** An inert, nontoxic gas used in insulating glass units to reduce heat transfer because it is denser than standard atmospheric air.

**Awning:** A window sash that swings open on side hinges.

**Bay and Bow Windows:** A composite of three or more windows, usually made up of a large center unit and two flanking units at 30°, 45° or 90° angles to the wall.

**Brick Mould:** Outside casing around window to cover jambs and through which nails are driven to install the window.

**BTU:** An abbreviation for British Thermal Unit-the heat required to increase the temperature of one pound of water one degree Fahrenheit.

**Casement:** A window sash that swings open on side hinges.

**Casing:** Exposed molding or framing around a window or door, on either the inside or outside, to cover the space between the window frame or jamb and the wall.

**Caulking:** A mastic compound for filling joints and sealing cracks to prevent leakage of water and air, commonly made of silicone, bituminous, acrylic, or rubber-based material.

**CFM:** Cubic feet per minute. Used to evaluate air leakage of windows.

**Composite Plus:** A strong, durable, energy efficient, environmentally friendly bio-based composite extrusion. It offers the strength of aluminum windows, the energy efficiency of fiberglass windows, the aesthetics of wood windows, at a price similar to vinyl windows.

**Condensation Resistance (CR)** – A window's ability to avoid forming condensation on the glass. Condensation is the deposit of water vapor from the air on any cold surface whose temperature is below the dew point, such as cold window glass or frame that is exposed to humid indoor air.

**Conduction:** Heat transfer through a solid material by contact of one molecule to the next. Heat flows from a higher-temperature area to a lower-temperature one.

**Convection:** A heat transfer process involving motion in a fluid (such as air) caused by the difference in density of the fluid and the action of gravity. Convection affects heat transfer from the glass surface to room air, and between two panes of glass.

**Corner Key:** Innovative right angle corners to keep windows square and strong.

**Design Pressure:** A numerical value that defines the structural wind loading requirements (in pounds per square foot) for a building and the components and cladding of a building.

**Double Pane:** Two panes of glass or plastic with one argon filled air space between.

**Drywall Return:** A drywall alternative for jamb extensions.

**Dynamic Glazing:** Glass that changes color based off of external factors such as external temperature and visible light.

**Egress Window:** A window large enough, as defined by local building codes, for exit or entry in case of an emergency. Typically required in bedrooms.

**Flashing:** A metal or plastic strip attached to the outside of the head or side jambs to provide a weather barrier, preventing leakage between the frame and the wall.

**Frame:** The fixed frame of a window which holds the sash or casement as well as hardware.

**Fiberglass Windows:** A composite material made by embedding glass fibers in a polymer matrix.

**Gas fill:** A gas other than air, usually argon or krypton, placed between window or skylight glazing panes to reduce the U-factor by suppressing conduction and convection.

**Glazing Bead:** A molding or stop around the inside of a window frame to hold the glass in place.

**Grids Between the Glass:** Decorative metal pieces between the two panes of glass to create traditional looks such as Colonial and Prairie.

**Heat Mirror:** A nearly invisible, spectrally selective PET film suspended between two panes of glass to create the effect of a triple pane or quadruple pane window, without putting additional weight on the sash.

**Hinge:** The part of the casement hardware that carries the sash weight.

**Insulating Glass (IG):** Two or more pieces of glass spaced apart and hermetically sealed to form a single glazed unit with one or more air spaces in between. Also called double glazing.

**Jamb Extension:** A flat finishing piece of finishing wood that extends from the frame of the window to the outer edge of the drywall.

**Krypton:** An inert, nontoxic gas used in insulating glass units to reduce heat transfer that adds additional energy efficiency versus argon.

**Keeper:** The protruding, hook-shaped part of a casement window lock, which is mounted on the inside surface of the sash stile.

**LoE Glass:** Microscopically thin, virtually invisible, metal or metallic oxide layers deposited on a window or skylight glazing surface primarily to reduce the U-factor by suppressing radiative heat flow. A typical type of low-E coating is transparent to the solar spectrum (visible light and short-wave infrared radiation) and reflective of long-wave infrared radiation.

**Multi-Point Hardware:** Lockbars that lock at multiple points instead of one. This provides a better and more secure seal.

**Mullion:** The vertical or horizontal divisions or joints between single windows in a multiple window unit.

**Nailing Fin:** An integral extension of a window or patio door frame which generally laps over the conventional stud construction and through which nails are driven to secure the frame in place.

**New Construction Window:** A window that features a nailing fin.

**NFRC:** National Fenestration Rating Council.

**Obscure Glass:** The process of producing vinyl or aluminum shapes by forcing heated material through an orifice in a die. Also, any item made by this process.

**Operator:** Crank-operated device for opening and closing casement and awning windows.

**Passive solar:** A design principle that utilizes a building's southern exposure to heat the building in the winter with the sun's energy and shades the building in the summer time to prevent heat gain.

**Picture Window:** A large, fixed window framed so that it is usually, but not always, longer horizontally than vertically to provide a panoramic view.

**R-Value:** A measure of the resistance of a glazing material or fenestration assembly to heat flow. It is the inverse of the U-factor ( $R=1/U$ ) and is expressed in units of hr-sq ft-F/Btu. A high R-value window has a greater resistance of heat flow and a higher insulating value than one with a low R-value.

**Radiation:** The transfer of heat in the form of electromagnetic waves from one separate surface to another. Energy from the sun reaches the earth by radiation, and a person's body can lose heat to a cold window or skylight surface in a similar way.

**Replacement Window:** A window without a nailing fin.

**RESFEN:** A computer program used to calculate energy use based on window selection in residential buildings.

**Rough Opening:** The opening left in a frame wall to receive a window or door unit.

**Sash:** The portion of a window that includes the glass and framing sections directly attached to the glass, not to be confused with the complete frame into which the sash sections are fitted.

**Shims:** A thin, waterproof piece of material used between the window/door unit and the rough opening to support the unit, center it within the rough opening, and adjust it to a plumb, level and square position.

**Simulated Divided Light:** A window that has the appearance of a number of smaller panes of glass separated by muntins, but actually is a larger glazing unit with the muntins placed between or on the surfaces of the glass layers.

**Solar Heat Gain Coefficient:** The fraction of solar radiation admitted through a window or skylight, both directly transmitted, and absorbed and subsequently released inward. The solar heat gain coefficient indicator of a window's shading ability. It is expressed as a number between 0 and 1. The lower a window's solar heat gain coefficient, the less solar heat it transmits, and the greater its shading ability.

**Spacer:** Placed between the panes of glass in a double-or triple-glazed window.

**Spectrally Selective:** A coated or tinted glazing with optical properties that are transparent to some wavelengths of energy and reflective to others. Typical spectrally selective coatings are transparent to visible light and reflect short-wave and long-wave infrared radiation.

**Tempered Glass:** Treated glass that is strengthened by reheating it to just below the melting point and then suddenly cooling it. When shattered, it breaks into small pieces. Approximately five times stronger than standard annealed glass; is required as safety glazing in patio doors, entrance doors, side lights, and other hazardous locations.

**Thermal Expansion:** Change in dimension of a material as a result of temperature change.

**Thermal Mass:** Mass in a building (furnishings or structure) that is used to absorb solar gain during the day and release the heat as the space cools in the evening.

**Triple Pane:** Three panes of glass or plastic with two air spaces between.

**U-Value:** A measure of the rate of non-solar heat loss or gain through a material or assembly. It is expressed in units of Btu/hr-sq ft-F (W/sq m-C). The lower the U-factor, the greater a window's resistance to heat flow and the better its insulating value.

**United Inches:** Total United Inches (U.I.) is the calculated amount of the window's Width added to its Height. For example, if you have a window measuring 32"w X 56"h the U.I. would add up to 88 (32 + 56 = 88).

**Vinyl Windows:** An extruded or molded plastic material used for window frames.

**Visual Transmittance (VT):** The percentage or fraction of the visible spectrum (380 to 720 nanometers) weighted by the sensitivity of the eye, that is transmitted through the glazing.

**Weatherstrip:** A strip of resilient material for covering the joint between the window sash and frame in order to reduce air leaks and prevent water from entering the structure.

**Weep Hole:** A small opening in a wall or window sill member through which water may drain to the building exterior.