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"The Leader in Glass Fabrication"™

NFRC Performance

The Solar / Optical Properties and U-Values Viracon provides are derived from measurements of the individual glass components using procedures prescribed by the National Fenestration Rating Council (NFRC). These include the following:

ASTM E932	Standard Practice for Describing and Measuring Performance of Dispersive Infrared Spectrometers
ASTM E971	Standard Practice for Calculation of Photometric Transmittance and Reflectance of Materials to Solar Radiation
NFRC 100	Procedure for Determining Fenestration Product U-factors
NFRC 101	Procedure for Determining Thermophysical Properties of Materials
NFRC 200	Procedure for Determining Fenestration Product Solar Heat Gain Coefficient and Visible Transmittance at Normal Incidence
NFRC 300	Test Method for Determining the Solar Optical Properties of Glazing Materials and Systems

Currently, standard industry practice involves measuring the individual glass panes and deriving the performance from this data. Viracon measures the transmittance and reflectance of individual glass panes over the full spectrum; from 300 nanometers to 2500 nm, using the procedures stipulated by the National Fenestration Rating Council (NFRC). Hemispherical emittance is derived by measuring reflectance in the 5 micron to 40 micron region.

The Window 5.2 computer program, developed by the Windows and Daylighting Group at Lawrence Berkeley National Laboratory, provides performance values consistent with the updated rating procedure developed by the National Fenestration Rating Council (NFRC). The spectral data files Viracon provides for use in the program are NFRC approved. NFRC 200 relates to solar heat gain coefficient (SHGC) and NFRC 300 stipulates the solar / optical value calculations. For more information regarding Window 5.2 please visit the LBNL website: <http://windows.lbl.gov/software/window/window.html>

Since Viracon is a glass fabricator and does not provide framing systems, the data we provide is center-of-glass based on the NFRC measurement standards and does not include the edge of glass or frame.