



## ENERGY RATINGS DEFINITIONS

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### **CONDENSATION RESISTANCE (CR)**

CR measures how well a product resists the formation of condensation. CR is reported on a scale of 1 to 100. The higher the number, the better a product is at resisting condensation.

### **ENERGY RATING SYSTEM (ER)**

A window's ER rating is a measure of its overall performance, based on three factors: 1) solar heat gains; 2) heat loss through frames, spacer and glass; and 3) air leakage heat loss. All window Energy Ratings (ER) are evaluated in the same way.

### **LOW-E GLASS**

Low-E stands for low-emissivity. Emissivity is a measure of how much a glass surface transfers radiant heat.

#### **LoE 366 (Cardinal)**

LoE 366 – Is recommended when cooling costs outweigh heating costs in your energy usage, or where summer discomfort from heat build-up should be an important concern. This is the best glass for most applications in a southern climate. It has a very high reflection rate of the radiant outside heat to prevent heat gain in summer and in winter it still retains radiant once you turn on your furnace! LoE 366 has a lower Solar Heat Gain Coefficient (SHGC) in order to minimize Solar Heat Gain that results in extra work for your air conditioning unit.

#### **LOF (Libby Owens Ford) / Pilkington Energy Advantage**

LOF – Pilkington Energy Advantage Low-E is the best glass for most applications in a northern climate. It has a very high retention rate of the heat in your home in winter and prevents heat gain in summer. Energy Advantage Glass has a higher Solar Heat Gain Coefficient (SHGC) than Low-E glass designed for southern climates. It provides free winter heat for your home. Since as much as 95% of your energy expense for heating and cooling combined is for heating, this glass is more cost effective than other glass without a high SHGC.

### **R-VALUE**

The R-value represents the resistance a material has to heat flow. It measures the effectiveness of insulation in stopping heat flow. The higher the Rvalue, the greater the heat resistance.

### **SOLAR HEAT GAIN COEFFICIENT (SHGC)**

When cooling is needed, the key rating parameter is the SHGC. SHGC measures how well a product blocks heat from the sun. SHGC is expressed as a number between 0 and 1. The lower the SHGC, the better a product is at blocking unwanted heat gain. Blocking solar heat gain is particularly important during the summer.

### **U-VALUE**

When heating is needed, the key rating parameter is the U-value. The U-value describes how well a product prevents heat from escaping a home or building. U-Value ratings generally fall between 0.2 and 1.2. The lower the U Value, the better a product is at keeping heat in. U-Factor is particularly important during the winter heating season.

### **VISIBLE TRANSMITTANCE (VT)**

The VT is the relative amount of visible light transmitted through a pane of glass. The VT ranges from 0 to 1.0. The smaller the VT, the less visible light is transmitted through the product. The higher the VT, the greater the potential for daylighting to offset the need for electric lighting.

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