

Thermal Insulation from Clear View Secondary Glazing - the technical lowdown

The Clear View range of secondary glazing is renowned for its thermal insulation efficiency. Varying degrees of improved thermal insulation can be achieved by using such glasses as Pilkington K and Low E. If glass is thermally at risk then care must be taken to specify toughened glass. The harmful effects of ultra violet radiation can also be reduced whilst letting in solar heat. In addition specialist films can be adhered to the glass to further increase thermal insulation whilst adding to the security of the product and the premises. The findings of these tests can be seen by clicking .

Thermal Efficiency Calculations

Due to the diversity in build design and the windows installed, each property will have some degree of uniqueness, building/window age, shape and design, including the glass already installed will have an impact on the thermal efficiency of the property, this is further compounded by the efficiency of the heating system and other insulation systems fitted or not. It is therefore almost impossible to provide specific thermal efficiency data on a specific building, based on a generic format.

However to enable industry/legislation to create thermal efficiency data calculations in a generic form a European standard has been set:

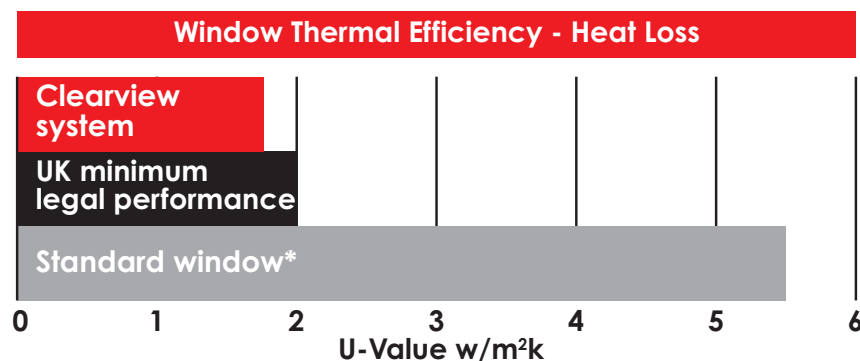
The CEN *standard sized window is 1230mm x 1480mm (1.82m²) timber framed single glazed.

The thermal performance of that window is calculated in accordance with a European standard EN ISO 10077 for the window frame and EN410 for the glass, and is measured in Watts by Metre Squared Kelvin **w/m²K** (Watt is a unit of measure for energy; it is 1 Joule per second. M_ is the area of the window; width x height, and Kelvin is the difference in temperature from the inside to the outside) or the rate of heat loss per meter square of product per 1 degree difference between the external temperature and the internal temperature. This enables the windows thermal performance to be calculated and presented, which is often referred to as the windows "**U-Value**". The lower the U-Value the better the window is performing in terms of preventing heat loss.

- This test criterion suggests the "*standard" window has an average U-value of **5.8 w/m²K**.
- The minimum legal performance at present for the United Kingdom is **2.0 w/m²K**.
- Tests carried out on a Clear View System have given results of **1.87 w/m²K**.

This can provide an approximate thermal efficiency saving of **60% - 70%** per window once our Secondary Glazing is installed without effecting the appearance or enjoyment of your property.

The following graph details the significant impact that both legislation and personal contribution can provide to cost savings and the environment by the introduction of thermal improvement systems.



***Test based on a 'standard' window with an average U-value of 5.8 w/m²K. Once Clear View secondary glazing is installed, a thermal efficiency saving of 60%-70% is achievable.**