

- UP TO 80 % OF ENERGY LOSS THROUGH A WINDOW OCCURS AT ITS EDGE
- WARM EDGE GLAZING IS UP TO 65 % WARMER AT THE EDGE THAN TRADITIONAL WINDOWS
- UP TO 70 % REDUCED CONDENSATION WITH WARM EDGE GLAZING
- UP TO 94 % REDUCTION IN HEAT LOSS WITH THERMALLY EFFICIENT WINDOWS

For further information, contact your local supplier:

A superior technology designed to minimise energy loss through your windows

**phA**  
advanced  
component



Superior Quality Warm Edge Glazing  
To Achieve Lowest Overall Window U-Values



**Thermobar**™  
Warm Edge Spacer Tube

For more information you can find us at:  
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## What is Warm Edge Technology?

The term 'Warm Edge' within double or triple glazing refers to the spacer used to separate the panes of glass. If the spacer material is less conductive than traditional aluminium spacer ( $\leq 0.007\text{W/K}$ ), it is termed warm edge. Non-metal spacers generally have a lower thermal conductivity value.



Thermal photograph showing standard cold edge windows - red signifies area of heat loss.



Warm Edge Windows showing virtually no heat loss.

# A SUPERIOR DOUBLE GLAZED UNIT

**Low-emissivity (Low-E) coated glass** forms the inner pane of a double glazing unit. The energy-saving coating lets the sun's rays through but reflects internal heating back into the property.

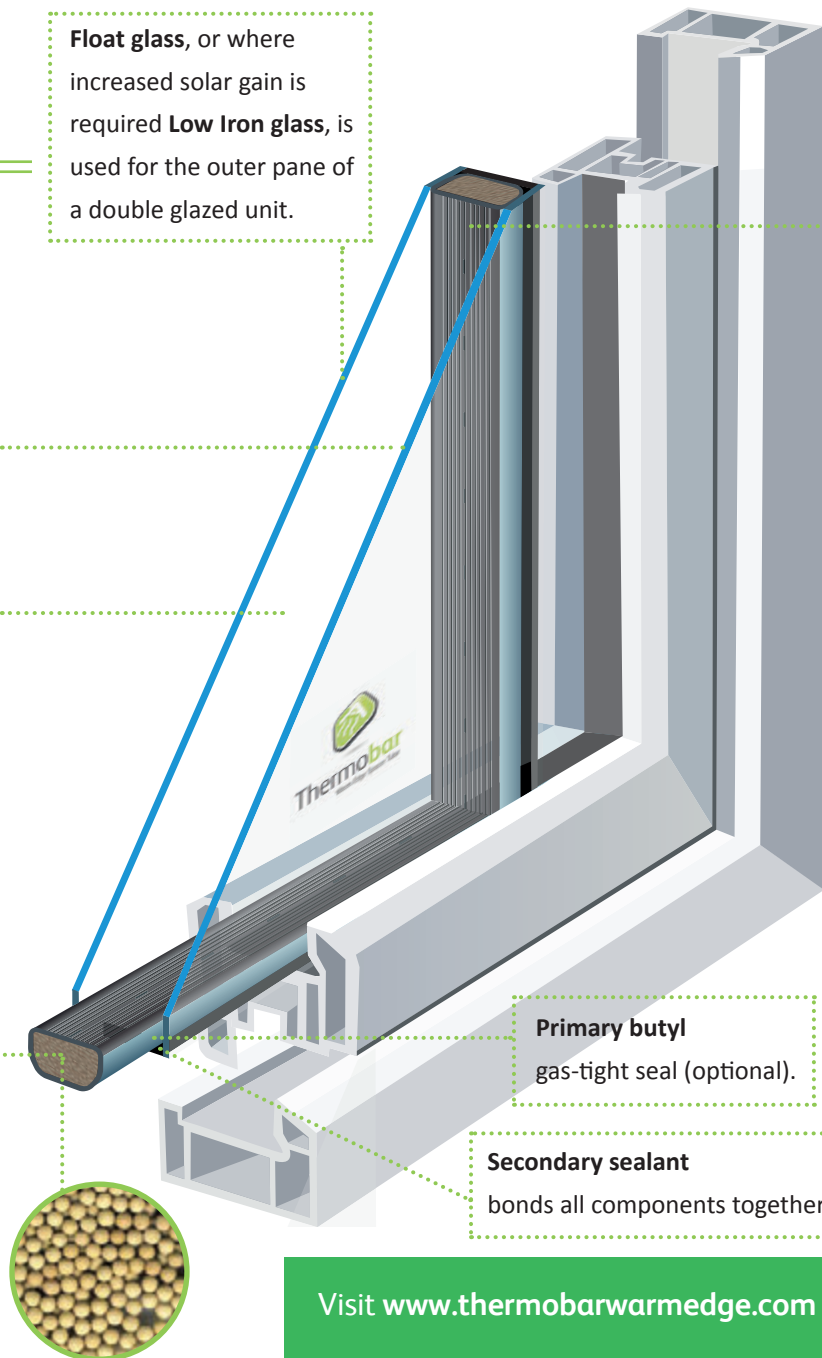
**Air space filled with at least 90% inert gas** such as Argon, Krypton or Xenon. These gases provide better insulation properties than air which contributes towards improving the window's energy efficiency.

**A 3A molecular sieve or 'desiccant'** is an essential component of a superior double-glazed unit.

The primary role of a desiccant is to adsorb moisture that is unavoidably trapped within the unit during manufacture to stop internal condensation.

However, it must also serve to selectively adsorb the moisture which passes into the unit throughout its lifetime without affecting the balance of inert gas within the unit.

**Float glass**, or where increased solar gain is required **Low Iron glass**, is used for the outer pane of a double glazed unit.



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Used to create an airspace within the sealed unit, **Thermobar warm edge spacer tube** is made from high performance engineering plastic with a gas diffusion barrier to minimise gas loss from the edge of the unit. The composition of Thermobar ensures that the unit is structurally sound while helping to reduce the heat loss at the edge of the glazing unit.

**Primary butyl** gas-tight seal (optional).

**Secondary sealant** bonds all components together.

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