

Window Options

The placement and choice of windows can have a significant effect on not just the cost, but also the level of natural light and the comfort of your home. Well-planned and protected windows improve comfort year-round and reduce the need for heating in winter and cooling in summer.

Did you know that you can reduce your heating requirements by up to 25% by designing north facing windows to gain maximum solar access during winter? Providing thermally efficient curtains/blinds with pelmets and double glazing can reduce winter heat losses by around 40%. In summer, if you provide external shading to windows you can block up to 80% of summer heat gain which makes your home significantly cooler.

Design

The main principles of smart window design are listed below

1. Maximise winter heat gain by placing windows to the north and sizing windows to suit the amount of thermal mass
 2. Minimise winter heat loss through use of window sizing and placement (see below), together with double glazing and/or close-fitting internal coverings.
 3. Minimise summer heat gain by protecting windows with external shading devices and through appropriate sizing and positioning of windows.
- **North-facing windows** receive winter sun allowing light and warmth into the home. They can be easily shaded in summer to help keep the home cool.
 - **East and west-facing windows** receive little winter, autumn and spring sunlight, but excessive summer sunlight. They should be kept small and be well shaded.
 - **South-facing windows** receive no direct sunlight in winter and only receive early morning and late afternoon sunlight in summer. They should also be kept small, however with cooling breezes in summer predominantly coming from the south they are useful for cross-ventilation.

Your designer should be able to calculate the optimum window positioning and size to maximise year-round comfort and minimise heating and cooling requirements.

Energy Efficiency

There are many types of windows and glazing ranging from single glazed to triple glazed Low E coated window units. Your designer and energy rater will be able to provide you with appropriate window types and glazing for your situation. Generally speaking, timber or PVC frames with clear or low E double glazing are approximately 50% more efficient than standard aluminium single glazed windows. You can improve the energy efficiency of your windows by installing close fitting heavy backed curtains or roman blinds with pelmets.

What to look for

When looking to install new windows, timber frames are the most energy efficient and sustainable option although they do require maintenance (painting). PVC is also an energy efficient option but the process of making it is not very 'eco-friendly'. Some aluminium windows now have a thermal break, these are *almost* as efficient as timber and PVC. The least efficient is aluminium or steel (with no thermal break).

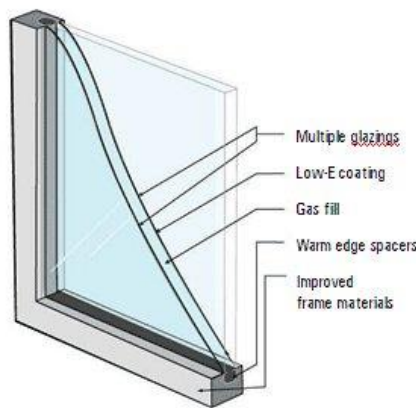
Always check the WERS (Window Energy Rating Scheme) information.

- **U values** – the lower the U value, the better the job the window does at keeping out heat and cold. So **go for the lowest rating**.
- **SHGC values** – is the Solar Heat Gain Co-efficient and is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar heat it transmits. So **look for the lower rating**.

For further information on windows and ratings see www.wers.net



Insulating blinds



Curtains and pelmets

Always Check the Labels

	<p>This manufacturer certifies that this product was designed to conform with AS2047. The design performance has been verified by a NATA accredited test laboratory. This manufacturer is a member of the AWA Accreditation Program.</p>	<p>XYZ COMPANY ACCREDITED MEMBER No. AWA XXX</p>	<p>DESIGN PERFORMANCE 700 Structural Pa Water Resistance 150</p>
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For any queries or additional information on this tip sheet please contact Green Moves Australia on (03) 9024 5515