

*thermashield<sup>®</sup> energy efficiency*

*trend<sup>®</sup> windows & doors*



## *putting climate control together ...*

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The only thing predictable about the weather is that it can and will exert an impact on your comfort and lifestyle.

When it comes to battling the heat and cold, energy efficient double glazing and low-e glass can offer significant savings by reducing expensive energy bills. When it comes to reducing carbon footprints and helping create a better environment, you cannot go past Trend® Windows & Doors Thermashield®.

Windows and doors which utilise the technologically advanced properties of the Thermashield® system offer a much more precise way to

shield yourself and others from weather extremes.

Thermashield® also makes it easy for you to evaluate the level of protection you require for each specific window and door, and to choose accordingly. In turn, this translates into cost savings by reducing heating and cooling bills.

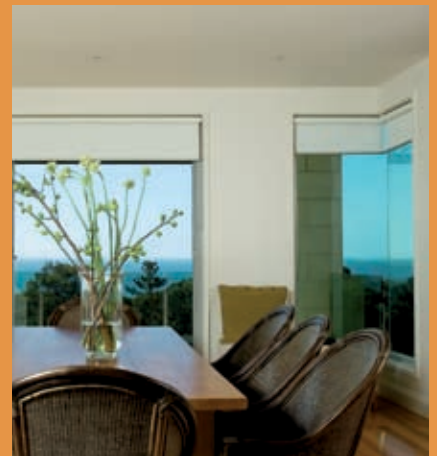
All Trend® Windows & Doors products in the Thermashield® range are rated to WERS (Windows Energy Rating Scheme) which is approved by The AFRC (Australian Fenestration Rating Council) the only recognised body in Australia for energy rating windows and doors.

The NFRC (National Fenestration Rating Council) also recognises the above ratings when determining energy requirements.

Thermashield® means greater control, bigger savings and, most importantly, one less thing to worry about.

Thermashield® putting CLIMATE CONTROL together

Find out more today.



## climate control starts at home

To get the best energy savings and the most comfort, different windows and doors are required for different climates.

For simplicity's sake, these are: **Cold climates**, where the largest energy load is in heating the home. Melbourne, Hobart, Tamworth and Canberra are typical cold climates.

**Hot climates**, where the largest energy load is in cooling the home. Brisbane, Cairns and Darwin are typical hot climates.

**Mixed climates**, where the energy load is similar for heating and cooling. Sydney, Adelaide and Perth are typical mixed climates.

In order to make the best choice of window or door for your home, you also need to weigh up factors like u-Value and SHGC. Air Infiltration is also important to think about when considering windows and doors, as

this is a major source of heat gain and loss. The lower the u-Value, the more effective it is at preventing heat transfer (in or out) of a window. The u-Value is a measure of the rate of non-solar heat loss or gain through any given product.

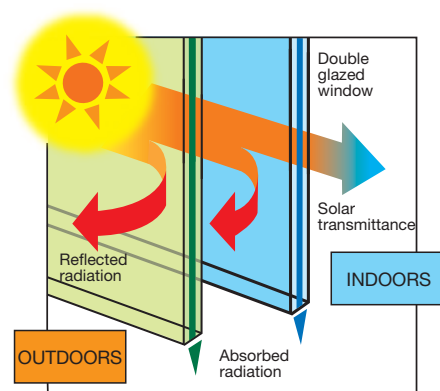
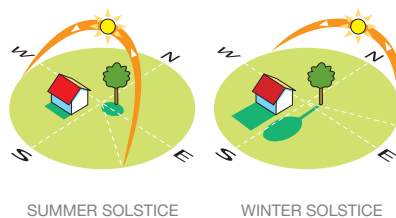
To prevent heat gain, the lower a window's Solar Heat Gain Coefficient (SHGC), the less heat enters a home from solar radiation. The SHGC is a number between 0 and 1 which represents the fraction of solar radiation admitted through a window, including what is absorbed and subsequently released inward.

Sunlight can fade and degrade many organic materials, like carpet, fabrics, paper, artwork, paints and wood. The main offender is ultraviolet radiation, which is the most energy intensive and thus most likely to break chemical bonds. Window and glass selection can influence the type and intensity of transmitted radiation.

With Trend® Thermashield®, in cold climate areas it is now possible to have lower heat loss, less air leakage, and warmer window surfaces that improve comfort and minimise condensation. u-Values that are lower (around 1.5-2.3) provide excellent performance.

Homes that require significant heating with older style (single-glazed) windows are a major source of unwanted heat loss, discomfort, and condensation problems. They feel colder because more heat is radiated from a person's body to the glass, which is at a much lower temperature. Cold glass also creates uncomfortable drafts, as air next to the window is cooled and drops to the floor.

With Trend® Thermashield®, in hot climate areas you can significantly reduce solar heat gain and improve comfort while retaining clear views and daylight.





When strong direct sunlight strikes interior surfaces, it creates overheating and discomfort. Windows with low solar heat gain low-e glass (spectrally selective) can reduce this effect, while still providing light and view. Shading of windows is also very effective. Trend® Thermashield® window cooling options are recommended here. In these areas the lower the SHGC (Around 0.5 or lower) the better protection from solar radiation heating the home.

In most climates, savings can be improved even further by substituting glass with a near-invisible low emissivity (or 'low-e') coating. However, while a low-e coating on simple single glazing reduces that part of the heat transfer, it does nothing to reduce conductive and convective heat flow. A much better solution is to reduce all three forms of heat transfer. To do this, you need an insulating glass unit (IGU or double-glazing).

The most common filling gas between the panes of an IGU is dry air. The narrowest air gap used is 6mm, but

wider gaps (10-20mm) will improve the performance. For even greater performance, the IGU should have a low-e coating on at least one pane and argon gas fill between the panes. Correct installation around windows and doors will also improve comfort by reducing cold air leakage.

High-performance windows systems like Trend® Thermashield® make homes more comfortable, reduce annual energy bills, and lessen peak heating and cooling loads. This means you can use a smaller heating or cooling system. It's also much easier on the environment. Trend® Thermashield® frames with low thermal conductivity and low air infiltration complemented by energy efficient glass balances the entire window system.

Trend® Thermashield® means greater control, bigger savings and, most importantly, one less thing to worry about.



## protection from extremes

### COLD CLIMATE

In climates where the largest energy load is in heating the home, the following Thermashield® window options are recommended.

We have listed your options broadly from 2 to 7½ stars (the stars to the far left of the table). The more stars, the more protection from the cold.

THERMASHIELD HEATING SYSTEM								
STAR RATING	PRODUCT	ID CODE NUMBER	Glazing	U Value	SHGC	HEATING % IMPROVEMENT	COOLING % IMPROVEMENT	
★★	Trend Aluminium Sliding Door	TND-017-03	5mm Gry	6.4	0.54	8	30	
	Quantum Sliding Door	TND-017-03	5mm Gry	6.4	0.54	8	30	
	Trend Aluminium Sliding Window	TND-001-11	12.38mm Lam	6.3	0.57	10	28	
★★☆	Quantum Sliding Door	TND-017-05	6.38mm Lam	6.3	0.7	17	15	
	Xtreme Bifold Door	TND-022-01	5mm Clr Toughen	6.0	0.59	17	28	
	Trend Aluminium Double Hung Window	TND-020-01	3mm Clr	6.3	0.75	18	10	
★★★	Trend Aluminium Sliding Window	TND-001-08	6.38mm CP	4.7	0.44	25	46	
	Trend Aluminium Hinged Door	TND-021-06	6.38mm CP Gry	4.5	0.36	25	52	
	Trend Aluminium Sliding Door	TND-017-07	6.38mm CP Gry	4.6	0.43	27	47	
★★★★☆	Trend Aluminium Sliding Window	TND-001-16	4mm Gry / 10 Ar / 4mm Clr	4.2	0.46	32	47	
	Trend Aluminium Bifold Door	TND-026-02	4mm Gry / 10 Ar / 4mm Clr	4.0	0.38	32	53	
	Quantum Sliding Window	TND-004-14	4mm Gry / 8 Ar / 4mm	4.1	0.46	35	48	
★★★★★	Trend Aluminium Bifold Door	TND-026-01	4mm Clr / 10 Ar / 4mm Clr	4.0	0.52	39	44	
	Trend Aluminium Sliding Window	TND-001-14	4mm Clr / 10 / 4mm EA	3.7	0.54	41	43	
	Quantum Sliding Window	TND-004-18	3mm Clr / 10 Ar / 3mm Clr	4.1	0.59	41	37	
★★★★★☆	Quantum Sliding Window	TND-004-15	4mm / 8 Ar / 4mm EA	3.5	0.54	45	44	
	Xtreme Sliding Door	TND-006-04	5mm Clr Tgn / 6 / 5mm Low E Tgn	3.6	0.57	45	42	
	Trend Aluminium Sliding Door	TND-017-09	4mm Clr / 10 Ar / 4mm Clr	3.8	0.62	46	36	
★★★★★★	Quantum Sliding Window	TND-004-19	3mm Clr / 10 / 3mm EA	3.4	0.55	47	44	
	Quantum Awning Window	TND-005-14	4mm Clr / 8 Ar / 4mm Clr	4.5	0.51	52	42	
	Trend Aluminium Sliding Door	TND-017-11	4mm Clr / 10 Ar / 4mm EA	3.0	0.59	53	43	
★★★★★★☆	Meranti Awning Window	TND-010-09	6.38mm CP Gry	3.1	0.33	59	61	
	Cedar Casement Window	TND-008-08	6.38mm CP	3.2	0.36	60	59	
	Trend Aluminium Awning Window	TND-002-15	4mm Clr / 10 Ar / 4mm Clr	4.1	0.57	61	39	
★★★★★★★	Cedar Awning Window	TND-007-16	4mm Gry / 6 / 4mm Clr	2.8	0.37	64	60	
	Trend Aluminium Awning Window	TND-002-17	4mm Clr / 10 Ar / 4mm EA	3.5	0.53	66	45	
	Synergy uPVC Casement Window	TND-013-12	6 Caribia / 14 Ar / 4mm EA	1.9	0.23	66	74	
★★★★★★★☆	Synergy Casement Window	TND-013-07	4mm Gry / 17 Ar / 4mm EA	1.9	0.28	69	70	
	Cedar Awning Window	TND-007-10	3mm Clr / 8 / 3mm Clr	2.8	0.51	73	50	
	Meranti Awning Window	TND-010-10	3mm Clr / 8 / 3mm Clr	2.8	0.51	73	50	
★★★★★★★	Meranti Casement Window	TND-011-11	4mm Clr / 12 Ar / 4mm Clr	2.5	0.51	75	51	
	Synergy uPVC Awning Window	TND-013-01	4mm / 16 / 4mm EA	2.0	0.47	78	57	
	Synergy uPVC Casement Window	TND-013-01	4mm / 16 / 4mm EA	2.0	0.47	78	57	
★★★★★★★☆☆	Meranti Awning Window	TND-010-13	4mm Clr / 12 Ar / 4mm EA	1.9	0.47	79	57	
	Cedar Casement Window	TND-008-13	4mm Clr / 12 Ar / 4mm EA	2.0	0.48	80	56	
	Synergy uPVC Casement Window	TND-013-05	4mm / 17 Ar / 4mm EA	1.9	0.47	80	57	

## protection from extremes

### HOT CLIMATE

In climates where the largest energy load is in cooling the home, the following Thermashield® window options are recommended.

We have listed your options broadly from 2 to 6 stars (the stars to the far left of the table). The more stars, the more protection from the heat.

THERMASHIELD COOLING SYSTEM							
STAR RATING	PRODUCT	ID CODE NUMBER	Glazing	U Value	SHGC	COOLING % IMPROVEMENT	HEATING % IMPROVEMENT
★★	Quantum Awning Window	TND-005-04	5mm Gry	6.4	0.44	37	23
	Trend Aluminium Sliding Window	TND-001-20	5mm Clr / 10 / 4mm Clr	4.3	0.57	38	36
	Trend Aluminium Double Hung Window	TND-029-01	4mm Clr / 10 / 4mm Clr	4.1	0.58	38	38
★★★	Quantum Awning Window	TND-005-02	4mm EA	5.4	0.43	43	37
	Trend Aluminium Awning Window	TND-002-14	4mm Clr / 10 / 4mm EA	3.7	0.53	44	64
	Trend Aluminium Bifold Door	TND-026-01	4mm Clr / 10 Ar / 4mm Clr	4.0	0.52	44	39
★★★★	Quantum Sliding Door	TND-017-10	4mm Gry / 10 Ar / 4mm Clr	3.8	0.46	49	38
	Trend Aluminium Awning Window	TND-002-13	4mm Gry / 10 / 4mm Clr	4.2	0.42	50	52
	Quantum Sliding Window	TND-004-10	6.38mm CP Gry	4.7	0.39	50	24
★★★★★	Trend Aluminium Sliding Window	TND-001-18	4mm Gry / 10 Ar / 4mm EA	3.5	0.42	53	38
	Quantum Casement Window	TND-023-06	6.38mm CP Gry	5.9	0.25	53	20
	Trend Aluminium Awning Window	TND-002-18	4mm Gry / 10 Ar / 4mm EA	3.5	0.41	54	60
★★★★★★	Trend Aluminium Sliding Door	TND-017-12	4mm Gry / 10 Ar / 4mm EA	3.0	0.41	56	44
	Quantum Sliding Door	TND-017-12	4mm Gry / 10 Ar / 4mm EA	3.0	0.41	56	44
	Trend Aluminium Bifold Door	TND-026-04	4mm Gry / 10 Ar / 4mm EA	3.4	0.34	59	36
★★★★★★★	Synergy uPVC Awning Window	TND-013-09	5mm Gry / 14 Ar / 5mm	2.4	0.33	64	67
	Synergy uPVC Casement Window	TND-013-09	5mm Gry / 14 Ar / 5mm	2.4	0.33	64	67
	Synergy uPVC Sliding Door	TND-014-11	6 Caribia / 14 Ar / 4mm	2.6	0.33	64	45
★★★★★★★★	Cedar Double Hung Window	TND-025-07	5mm Gry / 6 Ar / 5mm EA	2.2	0.34	65	49
	Synergy uPVC Sliding Door	TND-014-04	4mm Gry / 17 Ar / 4mm EA	1.9	0.35	66	53
	Synergy uPVC Casement Window	TND-013-11	6 Caribia / 14 Ar / 4mm	2.4	0.26	69	63
★★★★★★★★★	Synergy uPVC Awning Window	TND-013-07	4mm Gry / 17 Ar / 4mm EA	1.9	0.28	70	69
	Synergy uPVC Casement Window	TND-013-07	4mm Gry / 17 Ar / 4mm EA	1.9	0.28	70	69
	Synergy uPVC Sliding Door	TND-014-12	6 Caribia / 14 Ar / 4 EA	1.9	0.28	70	49
★★★★★★★★★★	Synergy uPVC Awning Window	TND-013-12	6 Caribia / 14 Ar / 4mm EA	1.9	0.23	74	66
	Synergy uPVC Casement Window	TND-013-12	6 Caribia / 14 Ar / 4mm EA	1.9	0.23	74	66
	Synergy uPVC Casement Window	TND-013-14	6 Solarcool Gry / 14 Ar / 4mm	2.4	0.19	74	57



## MIXED CLIMATE

In climates where the energy load for both heating and cooling the home are similar, the following Thermashield® window options are recommended.

THERMASHIELD MIXED SYSTEM								
STAR RATING	PRODUCT	ID CODE NUMBER	Glazing	U Value	SHGC	COOLING % IMPROVEMENT	HEATING % IMPROVEMENT	
★★	Trend Aluminium Double Hung Window	TND-029-01	4mm Clr / 10 / 4mm Clr	4.1	0.58	38	38	
	Quantum Sliding Window	TND-004-18	3mm Clr / 10 Ar / 3mm Clr	4.1	0.59	37	41	
	Quantum Sliding Door	TND-017-06	6.38mm CP	4.6	0.63	31	37	
★★★☆☆	Trend Aluminium Sliding Window	TND-001-17	4mm Clr / 10 Ar / 4mm EA	3.5	0.55	43	44	
	Trend Aluminium Double Hung Window	TND-029-03	4mm Clr / 10 / 4mm EA	3.6	0.54	44	43	
	Trend Aluminium Awning Window	TND-002-14	4mm Clr / 10 / 4mm EA	3.7	0.53	44	64	
★★★★	Trend Aluminium Bifold Door	TND-026-03	4mm / 10 Ar / 4mm EA	3.4	0.49	49	44	
	Quantum Sliding Window	TND-004-15	4mm / 8 Ar / 4mm EA	3.5	0.54	44	45	
	Trend Aluminium Awning Window	TND-002-13	4mm Gry / 10 / 4mm Clr	4.2	0.42	50	52	
★★★★★☆☆	Quantum Sliding Window	TND-004-16	4mm Gry / 8 Ar / 4mm EA	3.5	0.42	53	39	
	Quantum Awning Window	TND-005-17	4mm Gry / 8 Ar / 4mm EA	4.0	0.38	54	51	
	Trend Aluminium Awning Window	TND-002-18	4mm Gry / 10 Ar / 4mm EA	3.5	0.41	54	60	
★★★★★★	Trend Aluminium Sliding Door	TND-017-12	4mm Gry / 10 Ar / 4mm EA	3.0	0.41	56	44	
	Quantum Sliding Door	TND-017-12	4mm Gry / 10 Ar / 4mm EA	3.0	0.41	56	44	
	Meranti Awning Window	TND-010-12	4mm Gry / 12 Ar / 4mm Clr	2.5	0.39	60	69	
★★★★★★★☆☆	Synergy uPVC Casement Window	TND-013-09	5mm Gry / 14 Ar / 5mm	2.4	0.33	64	67	
	Cedar Casement Window	TND-008-14	4mm Gry / 12 Ar / 4mm EA	2.0	0.37	64	74	
	Meranti Casement Window	TND-011-14	4mm Gry / 12 Ar / 4mm EA	2.0	0.37	64	74	
★★★★★★★★	Synergy uPVC Sliding Door	TND-014-04	4mm Gry / 17 Ar / 4mm EA	1.9	0.35	66	53	
	Synergy uPVC Awning Window	TND-013-11	6 Caribia / 14 Ar / 4mm	2.4	0.26	69	63	
	Cedar Awning Window	TND-007-14	4mm Gry / 12 Ar / 4mm EA	1.9	0.36	65	73	
★★★★★★★★★☆☆	Synergy uPVC Sliding Door	TND-014-12	6 Caribia / 14 Ar / 4mm EA	1.9	0.28	70	49	
	Synergy uPVC Awning Window	TND-013-07	4mm Gry / 17 Ar / 4mm EA	1.9	0.28	70	69	
	Synergy uPVC Casement Window	TND-013-07	4mm Gry / 17 Ar / 4mm EA	1.9	0.28	70	69	
★★★★★★★★★★	Synergy uPVC Casement Window	TND-013-14	6 Solarcool Gry / 14 Ar / 4mm	2.4	0.19	74	57	
	Synergy uPVC Awning Window	TND-013-12	6 Caribia / 14 Ar / 4mm EA	1.9	0.23	74	66	
	Synergy uPVC Casement Window	TND-013-12	6 Caribia / 14 Ar / 4mm EA	1.9	0.23	74	66	

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Trend® National Customer Assistance Centre

**13 72 74**

(between 8:30am - 4:30pm EST, M-F) Product not available in WA

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**& DOORS**

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