

TwinGlaze ULTRA^{ETHERM}

Insulated Glass Units
with High Performance
Low-E Glass for superior
light transmission

Defining
Spaces.



G.JAMES

FEATURES

- Extreme light transmittance – suits moderate climates
- Neutral appearance – both in transmittance and reflectance
- Low external and internal reflectance
- Improved visible light and solar control
- Excellent thermal performance



GJ TwinGlaze ULTRA^{ETHERM}

The ultimate window solution for year-round comfort starts with TwinGlaze Ultra – ETherm

G.James' range of TwinGlaze Ultra – ETherm features Low-E technology providing a range of superior performance benefits ideal for year-round comfort in Australia's southern regions where the sun is less harsh with less daylight hours.

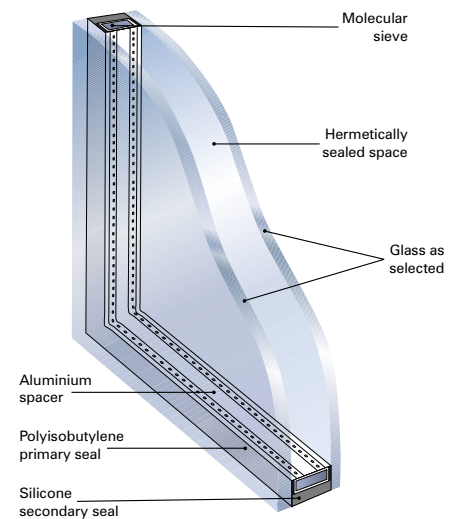
The outstanding performance of TwinGlaze Ultra – ETherm allows even higher levels of natural daylight entering the inside space and lets you maximise views to the world outside during the extremes of summer and winter. This is achieved by combining clear glass with a post-temperable Low-E coating produced by Magnetron Sputter Vacuum Deposition (MSVD). This state of the art coating can be stored and further processed – cut, edge worked and heat treated (heat strengthened or toughened) prior to being incorporated into an Insulated Glass Unit (IGU). This allows for the finished IGU to be supplied sooner than alternative products sourced from overseas.

PROCESS

Insulated glass units are produced on a vertical production line where cut-to-size glass is thoroughly washed and dried prior to being inspected to ensure the glass is clean and free from defects.

A hollow length of aluminium spacer bar is made to size by bending it at the corners into a rectangular shape and joined along one edge. The spacer is then filled with a desiccant (molecular sieve) to prevent condensation occurring within the sealed unit.

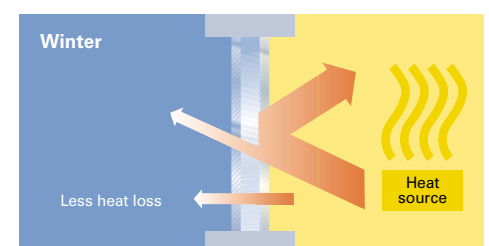
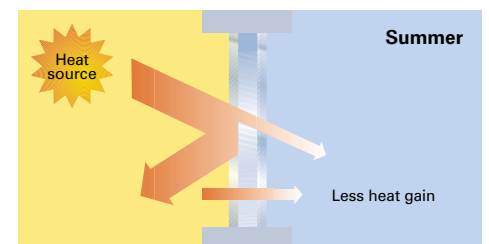
Polyisobutylene (PIB) is then applied to both sides of the aluminium spacer providing the primary seal and is an excellent moisture and vapour barrier.



PERFORMANCE OPTIONS

Low-E coatings work by reflecting long wave infrared heat back to the source. Heat always flows towards cold, a Low-E coating reduces this transfer of heat (loss or gain) in winter or summer. The transfer of heat is measured in U-Value (W/m^2K) with the lower the number, the better the performance. Some Low-E coatings also reflect a significant amount of short wave infrared energy which results in a lower solar heat gain coefficient (SHGC).

For improved thermal performance normal air within the unit can be replaced with a gas such as argon that is inserted into the unit automatically online or manually offline. For greater acoustic performance, GJ AcousTek laminated glass can also be incorporated for superior noise reduction. The inclusion of laminated glass also provides the added benefit of eliminating 99.9% of UV light transmission which significantly reduces fading of interior furnishings.





RANGE

TwinGlaze Ultra ETherm 60

TwinGlaze Ultra ETherm 60 insulated glass units incorporate a post-temperable double stack silver Low-E coatings into the unit that's ideally suited to residential application.

Features

- Available in 4, 5 and 6mm glass thickness that readily cater to building code requirements while achieving cost effectiveness
- Exceptional visible light transmittance with strong solar and insulating performance
- Neutral appearance that exhibits low reflectivity
- Combines with body tinted glass for themed aesthetics while retaining solar and insulating performance
- Strong solar and insulating performance contributes to lower capital cost and decreased operating costs for air con systems
- Helps manage awkward site orientation to allow larger panoramic windows accommodating views and lifestyle
- Increased levels of comfort all year round
- Strong eco credentials that lends itself to sustainable design
- Can be fabricated in short lead times

TwinGlaze Ultra ETherm 70

TwinGlaze Ultra ETherm 70 insulated glass units incorporate a post-temperable triple stack silver based Low-E coatings on 6mm glass that retains the benefits of ETherm 60 while delivering superior solar and insulating properties.

Features

- Very low UV transmittance
- Exceptional visible light transmittance with strong solar and insulating performance
- Neutral appearance that exhibits low reflectivity
- Combines with body tinted glass for themed aesthetics while retaining solar and insulating performance
- Strong solar and insulating performance contributes to lower capital cost and decreased operating costs for air con systems
- Helps manage awkward site orientation to allow larger panoramic windows accommodating views and lifestyle
- Increased levels of comfort all year round
- Strong eco credentials that lends itself to sustainable design
- Well suited to high end homes and commercial applications
- Can be fabricated in short lead times

TwinGlaze Ultra ETherm 72

TwinGlaze Ultra ETherm 72 insulated glass units provide the ultimate thermal performance with significant improvements and higher specification compared to other products in the TwinGlaze Ultra ETherm range.

Developed with triple stack silver based Low-E coatings on 6mm ultra clear glass, TwinGlaze Ultra ETherm 72 delivers the very best in solar and insulating properties when only the best will do.

Features

- Delivers a premium combination of visible light transmission, solar control and insulating properties in the one package
- Exceptional visible light transmittance with the superior solar and insulating performance
- Neutral appearance that exhibits low reflectivity
- The ultimate solar and insulating performance contributes to lower capital cost and decreased operating costs for air con systems
- Helps manage awkward site orientation to allow larger panoramic windows accommodating views and lifestyle
- Increased levels of comfort all year round
- Very strong green credentials supporting sustainable design and eco friendly outcomes
- Ideally suited to high end commercial projects or the premium home where only the best will do

GJ TwinGlaze ULTRA^{ETHERM}

G.James' range of high performance Low-E glass products has now been expanded to include TwinGlaze Ultra - ETherm.

The outstanding performance of the TwinGlaze Ultra - ETherm range is designed to benefit expansive views and deliver maximum comfort with a combination of visible light transmission, solar control and premium insulating properties suitable for the seasonal demands of Australia's southern regions. The range provides solutions for the most demanding project specifications and is available in a range of budgets.

ADVANTAGES

- Superior performance
 - Shorter supply time
 - Available in a range of tones & super tones
- Clear
Grey
Green
Bronze
Blue
Dark Green

Other tones may be available (contact G.James Glass Operations)

APPLICATIONS

- Facades
- Windows & Doors
- Shopfronts

HOW TO SPECIFY

- Select glass name
GJ TwinGlaze Ultra – ETherm
- Product configuration
Refer to performance characteristics chart

BASE LINE COMPARATORS

PRODUCT	PERFORMANCE CHARACTERISTICS								
	Visible Properties (%)			Solar Properties (%)		SHGC	U- Value (Air)	U Value (Argon)	Shading Coeff.
	Trans.	Ext. Refl.	Int. Refl.	Direct Trans.	Ext. Refl.				
3mm Monolithic Clear	89	9	8	83	8	0.86	5.91	NA	0.98
4mm Clear /12AS/ 4mm Clear	80	15	15	69	13	0.75	2.73	2.58	0.86

TWINGLAZE ULTRA ETHERM 60

PRODUCT	PERFORMANCE CHARACTERISTICS								
	Visible Properties (%)			Solar Properties (%)		SHGC	U- Value (Air)	U Value (Argon)	Shading Coeff.
	Trans.	Ext. Refl.	Int. Refl.	Direct Trans.	Ext. Refl.				
4mm ⁽²⁾ /8AS/4mm Clear	72	11	12	36	32	0.4	2.01	1.62	0.47
4mm ⁽²⁾ /12AS/4mm Clear	72	11	12	36	32	0.4	1.67	1.39	0.46
4mm ⁽²⁾ /12AS/4mm Tone*	45-65	8-11	10-11	23-29	8-22	0.34-0.4	1.67	1.39	0.39-0.46
6mm ⁽²⁾ /12AS/6mm Clear	70	11	12	34	28	0.39	1.66	1.38	0.45
6mm ⁽²⁾ /12AS/6.38 Clear Lam	70	10	11	33	28	0.39	1.65	1.37	0.45
6mm ⁽²⁾ /12AS/6mm Tone*	35-61	7-10	9-10	18-25	11-16	0.29-0.37	1.66	1.38	0.33-0.42
6mm ⁽²⁾ /12AS/6mm Super Tone*	7-54	4-9	8-10	3-21	4-7	0.13-0.32	1.66	1.38	0.14-0.36

TWINGLAZE ULTRA ETHERM 70

PRODUCT	PERFORMANCE CHARACTERISTICS								
	Visible Properties (%)			Solar Properties (%)		SHGC	U- Value (Air)	U Value (Argon)	Shading Coeff.
	Trans.	Ext. Refl.	Int. Refl.	Direct Trans.	Ext. Refl.				
6mm ⁽²⁾ /12AS/6mm Clear	64	12	13	25	52	0.28	1.62	1.34	0.32
6mm ⁽²⁾ /12AS/6.38 Clear Lam	64	12	12	24	52	0.28	1.61	1.33	0.32
6mm ⁽²⁾ /12AS/6mm Tone*	32-56	7-11	11-12	13-20	13-20	0.24-0.32	1.62	1.34	0.27-0.37
6mm ⁽²⁾ /12AS/6mm Super Tone*	6-49	4-10	10-11	2-17	4-9	0.11-0.29	1.62	1.34	0.13-0.33

TWINGLAZE ULTRA ETHERM 72

PRODUCT	PERFORMANCE CHARACTERISTICS								
	Visible Properties (%)			Solar Properties (%)		SHGC	U- Value (Air)	U Value (Argon)	Shading Coeff.
	Trans.	Ext. Refl.	Int. Refl.	Direct Trans.	Ext. Refl.				
6mm ⁽²⁾ /12AS/6mm Ultra clear	71	13	13	28	53	0.3	1.63	1.35	0.34

*Available in a range of tones and super tones. Range of values indicated – actual performance dependant on specific toned glass use. These figures are based on NFRC methodology using LBNL Window 6.3 software. This performance data is centre of glass only and therefore cannot be used for BCA Section J calculations. To the best of our knowledge, the data presented in this table is accurate and true. However, the G.James Group of Companies disclaim any liability for loss or damage arising from the use of such data.

G.James are members of the Insulated Glass Manufacturers Affiliation (IGMA) and are committed to producing high quality insulated glass units for the Australian market.



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