ASG UNDERSTANDING GLASS COMPANY BROCHURE

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Perth Children's Hospital WA Façade Area: 17041m2 Architects: Cox Howlett & Bailey Woodland, Billard Leece Partnership with HKS Builder: John Holland Products: DGU Triple Low-E Visualite 65S-1 Coating on clear; 17.52mm Laminated glass with white ceramic frit pattern

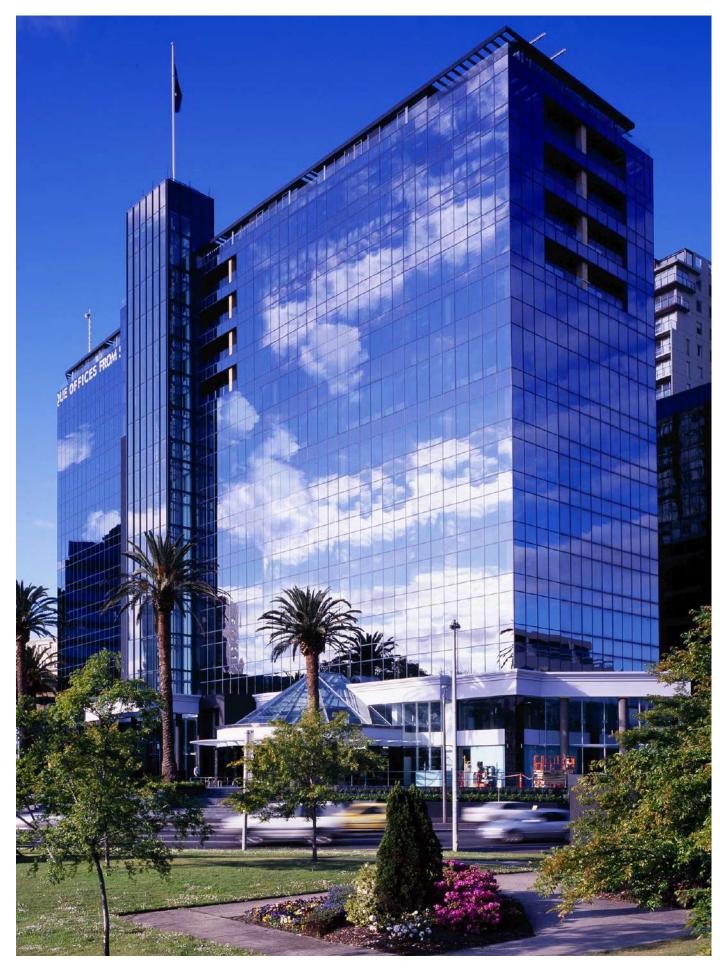


ABOUT US

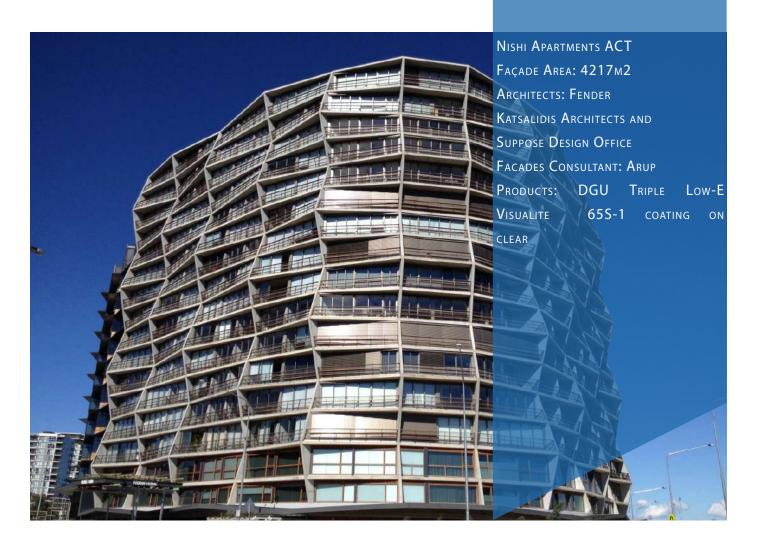
ASG (formerly known as CSG Australia), has been established in Australia for over 20 years, in which we have become one of the largest suppliers of architectural glass by adhering to our philosophy of putting Innovation and customers first.

Our success is built upon understanding our customers' needs and maintaining stringent manufacturing standards, while ensuring the optimisation of energy efficiency in contemporary Australian building innovations.

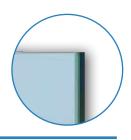
From float glass, laminated glass, solar reflective coatings, Low-E DGUs, ceramic frit application, and customised innovations, ASG's diverse product range gives architects the flexibility to bring their big ideas into life. We are passionate about helping to shape our cities, and to supply quality products and excellent service to all our clients.



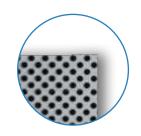
St Kilda Road Tower, Melbourne VIC Total Façade Area: 4000m2 | Products DGU Glass with Solarpro Solar Reflective Coating



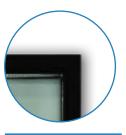
PRODUCTS WE OFFER



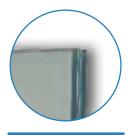
FLOAT GLASS



CERAMIC FRIT GLASS



INSULATING GLASS



LAMINATED GLASS



Solar Reflective Glass



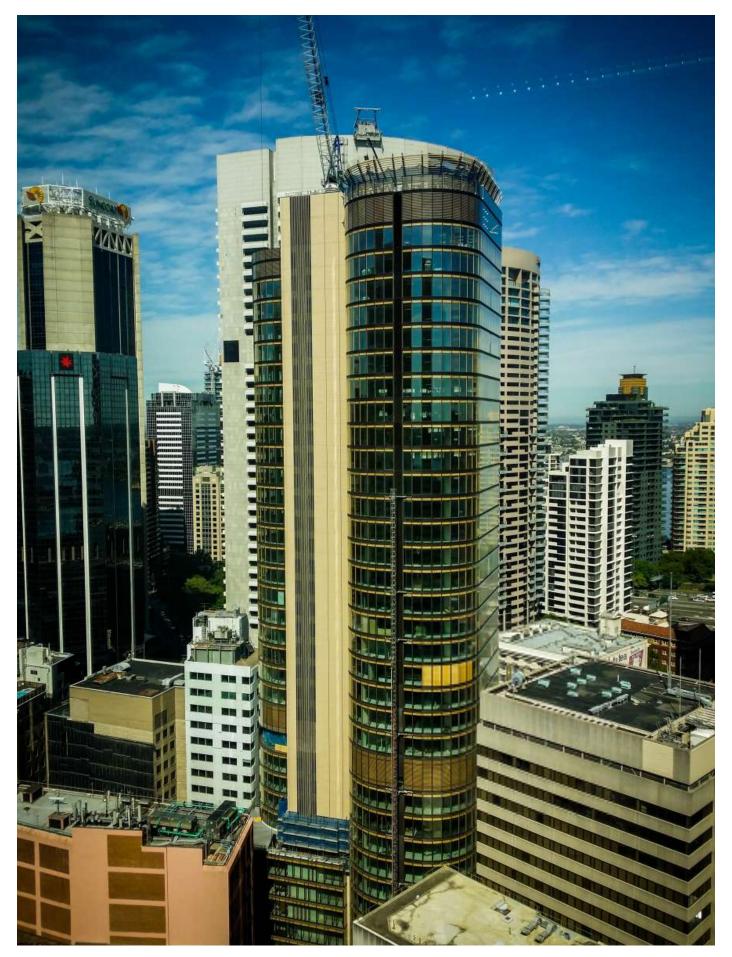
PATTERN GLASS



CUSTOMISED PRODUCTS

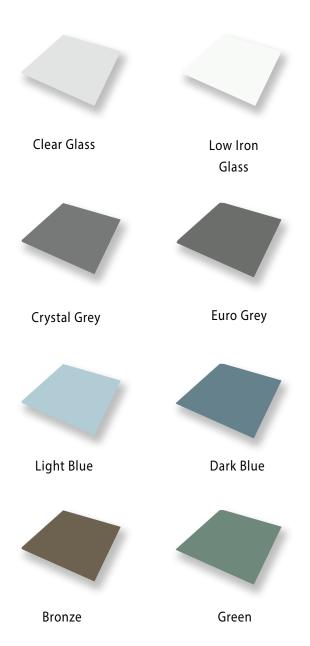


 $Solar \ Panels$



200 GEORGE STREET, SYDNEY NSW Total Façade Area: 26113m2 | Architect: Francis-Jones Morehen Thorp (FJMT) | Builder: Mirvac | Façade contractor: Permasteelisa | Products: DGU Triple Low-E Visualite 65S-0 Coating on Low Iron; DGU Double Low-E Champagne 46-7 Coating on Crystal Grey; Low Iron Glass

FLOAT GLASS



Invented by A. Pilkington in 1952, float glass is the process of manufacturing glass by 'floating' on molten tin. Initially, raw materials are transported into a large furnace to be melted at approximately 1500 °C. Once physically transformed, the molten glass is then transported through the delivery canal and floats onto an enclosed molten tin around 1100°C, where the glass is gradually uniformed and smoothed, before being cooled and ready to be cut.

From clear, low iron and our diverse range of tinted float glass options, we ensure great visual light transmittance, outstanding flatness and uniformity, and high precision control. This also ensures that consistency is maximised for DGU, laminated, and other curtain wall glass configurations.

Our float glass selection conforms to a multitude of international standards. These include the Australian

Standard AS/NZS 4667, American Standard ASTMC1036-5, British Standard BS952, Japanese Standard JISR3202, and Chinese standard GB11614. Our international compliance ensures the monolithic glass you are receiving are of the highest quality, which can be used wherever that is required.

Standard sizes and dimensions Thickness(mm): 3.0, 4.0, 5.0, 6.0, 8.0, 10.0, 12.0, 15.0, 19.0 Dimensions(mm): 2440x3660

CERAMIC FRIT GLASS



University of Sydney Nanoscience Institute, Sydney NSW

Total Façade Area: 3000m2 | Architect: Architectus | Builder: Lendlease | Products: DGU Double Low-E Aqua SHade 60-0 Coating on Low Iron with White Stripped Ceramic Frit Pattern; Low Iron Glass with White Stripped Ceramic Frit Pattern

INSULATING GLASS



863 HAY ST PERTH WA FAÇADE AREA: 4000M2 ARCHITECTS: BUCHAN Тне GROUP BUILDER: PROBUILD PRODUCTS: DGU DOUBLE LOW-E VISUALITE 67-3 COATING ON EURO GREY; DGU DOUBLE LOW-E PLATI SHADE COATING 39-1 CLEAR; ON EURO GREY GLASS WITH GREY DOTTED CERAMIC FRIT PATTERN; CLEAR WITH GLASS CERAMIC DOTTED GREY FRIT PATTERN

Insulating glass comprises of two or more plies of glass that are separated with aluminium spacer fully filled with desiccant, and sides sealed with high strength sealant. This allows Insulating Glass Units (IGUs) to increase thermal performance by reducing heat gain or loss.

Annealed clear glass, tinted glass, solar reflective glass, Low-E glass, laminated glass, tempered glass, heat-strengthened glass and curved glass can all be used to form insulating glass according to demands.

At ASG, we seek to build a dynamic range of insulating glazing that offers you the highest ratio of visual light transmittance against heat gain/ loss. From high transmittance products to our specialised aesthetic coatings, we deliver effective solutions tailored to satisfying contemporary architectural designs and ESD requirements.

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Sky Blue 45-1 On Clear

Visualite 67-1 On Clear

Plati SHade 39-1 On Clear

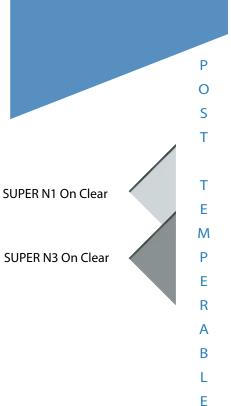
Visualite 78-1 On Clear

Plati SHade 61-1 On Clear

Aqua SHade 69-1 On Clear

Disclaimer: All pictures of glass samples are for reference only. Glass colour may vary subject to different lighting conditions

Standard sizes and Dimensions Width of aluminium spacer (mm): 6, 9, 12, 16, 20 Dimensions (mm): 300 x 300 to 2440 x 6000



Super SHade 52S-1 On Clear Visualite 65S-1 On Clear Aqua SHade 52S-1 On Clear Super SHade 50S-1 On Clear

Visualite 72S-1 On Clear



LAMINATED GLASS

Laminated glass is a form of high performing safety glass, comprised of two or more plies of glass held together with a polyvinyl butyral interlayer (PVB) in between. The infusion of PVB and glass results in the glass being stuck onto the PVB interlayer even when damaged or broken.

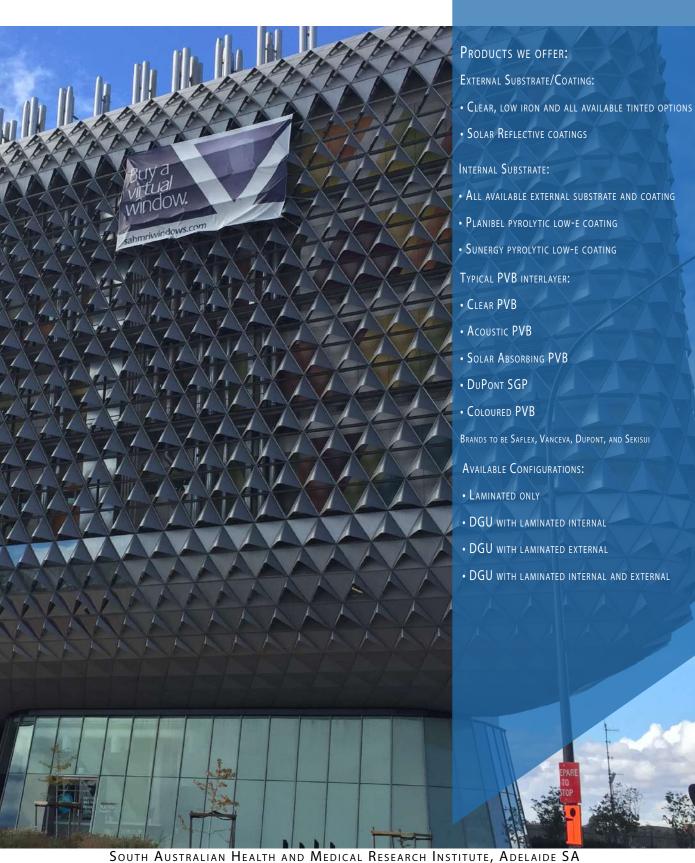
Safety, high visual light transmittance, great thermal properties, excellent acoustic attributes and ultra-violet protection are some of the features that results in laminated glass being prominently used on shop fronts, high end residential and commercial buildings, motor vehicles, ships, and airplanes.

Standard sizes and dimensions Thickness of PVB interlayer (mm): 0.38- 3.04 Dimensions (mm): 300 x 300 to 2440 x 6000



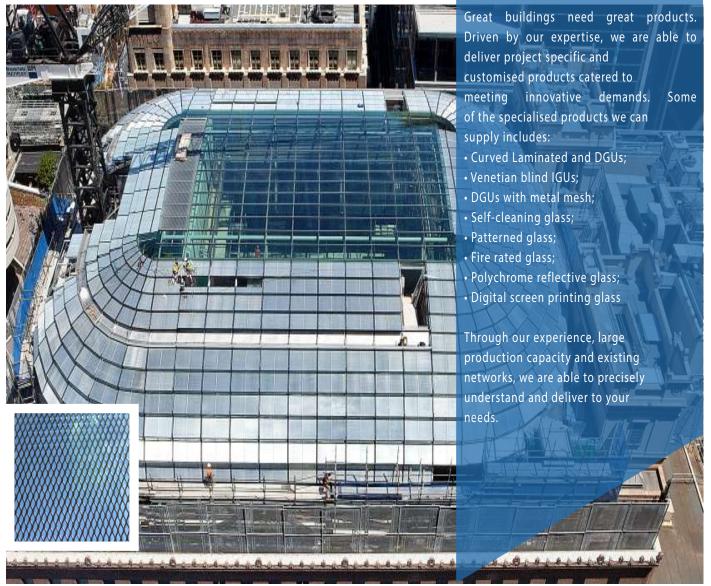


1 BLIGH STREET, SYDNEY NSW PRODUCT: 18.28mm Low iron Laminated Glass with SGP INTERLAYER



Facade Area: 4500m2 | Architect: Woods Bagot | Facade Contractor: Yuanda | Product: Laminated DGU Double Low-E Cool SHade 57-0 Coating on Low Iron

CUSTOMISED PRODUCTS



48-50 MARTIN PLACE, SYDNEY NSW Facade Area: 2900m2| Architect: Johnson Pilton Walker Architects | Façade Contractor: Sharvain Projects | Products: Laminated Triple Glazed Unit Triple Low-E Visualite

65S-0 COATING ON LOW IRON WITH CUSTOMISED SILVER METAL MESH; WHITE TRANSLUCENT LAMINATED TRIPLE GLAZED UNIT WITH CUSTOMISED SILVER METAL MESH; TRIPLE CLEAR SUNERGY LAMINATED GLASS

OTHER PRODUCTS



DGU With Copper Mesh

Disclaimer: All pictures of glass samples are for reference only. Glass colour may vary subject to different lighting conditio

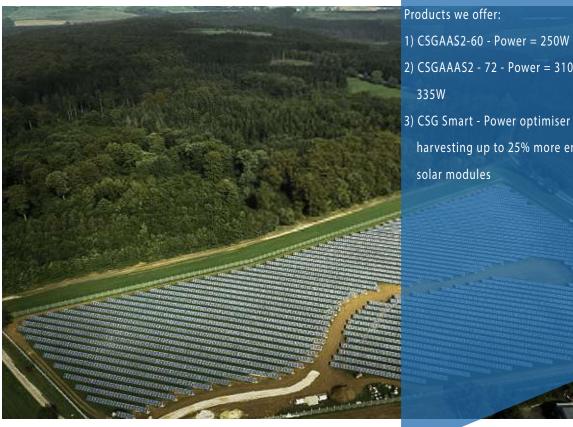


DGU With Venetian Blinds



DGU With 50MM Airspacer

SOLAR PANEL



1) CSGAAS2-60 - Power = 250W - 280W 2) CSGAAAS2 - 72 - Power = 310W -

harvesting up to 25% more energy to

PROJECT: XM-5 SOLAR PARK | LOCATION: ARZFELD GERMANY PRODUCT: 1.5 MW



With several decades of experience in solar manufacturing, our ability to supply the entire PV chain including silicon materials, ingot, wafer, solar glass, solar cell and modules ensures excellent raw materials and production control and also adheres to ISO9001 & ISO14001 standards



Modules certified by TUV Rheinland and compliance to IEC612215, IEC 61730 standards. This includes salt mist corrosion test, fire test, ammonia resistance test, PID test, sand abrasion test and carbon footprint assessment in TUV.



Great performance capabilities even under cloudy conditions, bad weather and night time.



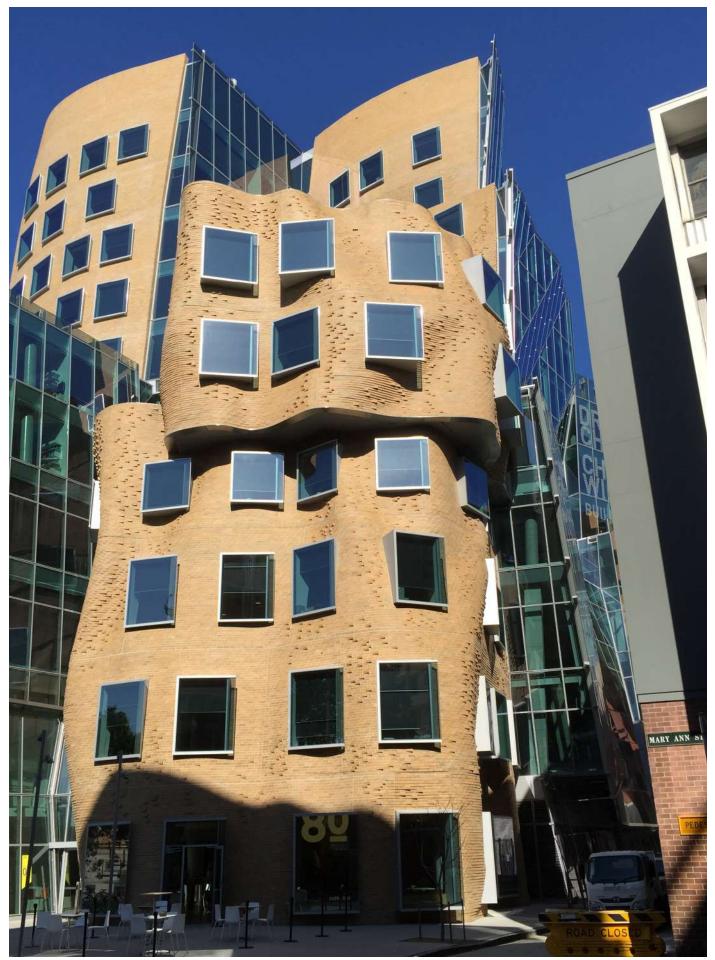
From power tolerance of 0 to +6w, we ensure up to 5.8% more power than conventional outputs.



We perform Electroluminescence testing before and after lamination in addition to finished products. This process guarantees the assurance of stringent quality standards assurance.

PRODUCT DIMENSIONS SUMMARY

	Thickness (mm)	4 10	5 12	6 15	8 19			
Float Glass	Dimension (mm)							
		4	5	6	8			
Low-E Glass	Thickness (mm)	10	12	15	19			
	Dimension (mm)	300*300 to	2440*6000					
Solar Reflective	Thickness (mm)	4 10	5 12	6 15	8 19			
Glass	Dimension(mm)	300*300 to		15	19			
		4	5	6	8			
Ceramic Frit Glass	Thickness (mm)	10	12	15	19			
	Dimension (mm)	300*300 to	2250*4500					
	Thickness (mm)	0.38 - 3.04						
Laminated Glass	Dimension (mm)	300*300 to 2440*6000						
		1						
	Thickness of	6	9	12	16	20		
Insulating Glass	Airspacer (mm) Dimension (mm)	300*300 to	2440*6000					
	Dimension (mm)	500 500 10	2110 0000					
Towns and Class	Thickness (mm)	4 10	5 12	6 15	8 19			
Tempered Glass	Dimension (mm)	300*800 to	2440*6000					
		ł						
Heat	Thickness (mm)	4	5	6	8			
Strengthened Glass	Dimension (mm)	300*800 to 2440*6000						
	,							
	F	4	5	6	8			
Heat Soak Test	Thickness (mm)	4 10	5 12	6 15	8 19			
. Tour boun rest	Dimension (mm)	300*300 to	2440*6000					
Curved Tempered Glass	Thickness (mm)	5 12	6 15	8 19	10			
	Dimension (mm)	600*400 to						
	Minimum Radius (mm)	1000						
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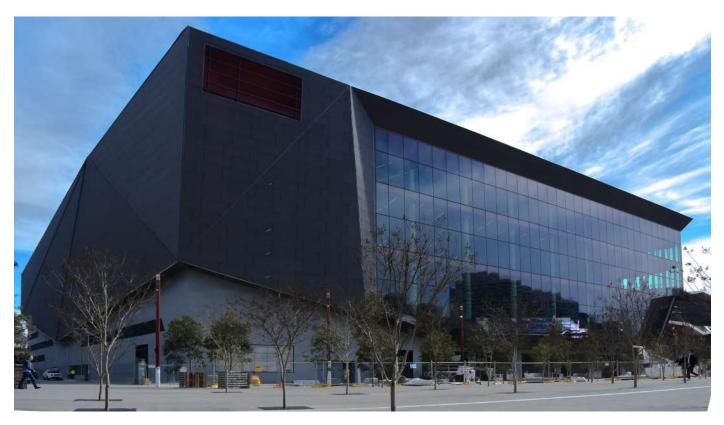


UTS CHAU CHAK WING BUILDING, SYDNEY NSW Facade Area: 6000m2| Architect: Gehry Partners | Builder: Lendlease Façade Contractor: Sharvain Projects | Products: DGU Double Low-e Plati SHade 39-1Coating On Clear; White Ceramic Dotted Frit Application

PROJECTS GALLERY - NEW SOUTH WALES



INTERNATIONAL TOWERS SYDNEY, BARANGAROO Product: DGU Triple Low-E Neutral Coating On Clear Glass



DARLING HARBOUR LIVE THEATRE, SYDNEY Product: DGU Double Low-E High Transmittance Coating On Clear Glass

PROJECTS GALLERY - NEW SOUTH WALES



INTERNATIONAL CONVENTION CENTRE, SYDNEY Product: DGU Double Low-E High Transmittance Coating On Clear Glass



Westfield CBD, Sydney

Product: Clear Sunergy Laminated Glass;

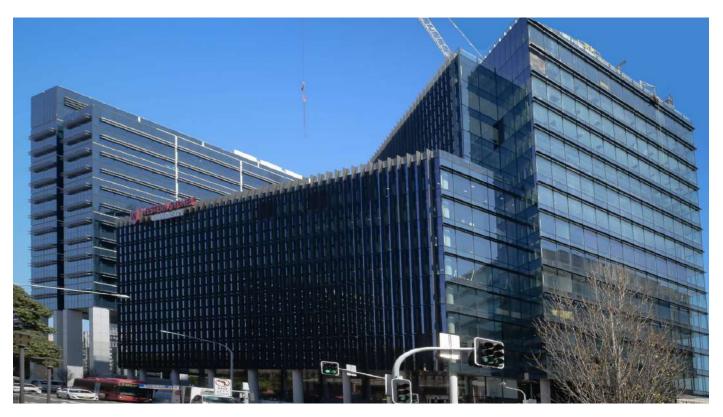
DGU Triple Low-E Neutral Coating On Dark Blue Glass

PROJECTS GALLERY - NEW SOUTH WALES



177 Pacific Highway, North Sydney

Product: DGU Triple Low-E Neutral Coating On Crystal Grey Glass



ONE PARRAMATTA SQUARE, PARRAMATTA Product: DGU Triple Low-E Coating On Neutral Coating Clear Glass

PROJECTS GALLERY - VICTORIA

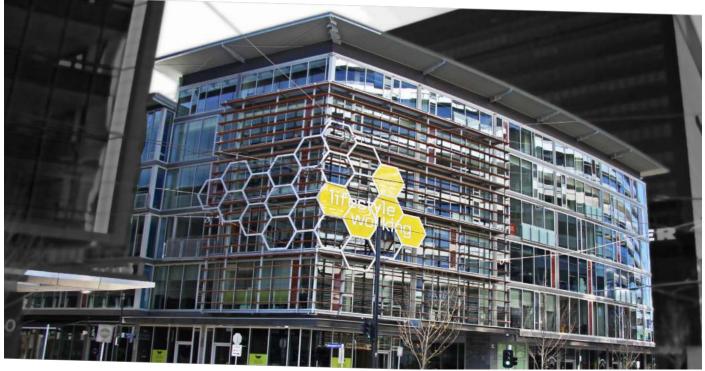


717 BOURKE STREET, MELBOURNE Product: DGU Double Silver Low-E Coating on Clear Glass; Laminated Glass; Clear Glass with Colourback coverage



699 BOURKE STREET, MELBOURNE Product: DGU Triple Low-E Neutral Coating with Clear Glass

PROJECTS GALLERY - VICTORIA



838 COLLIN STREET, MELBOURNE Product: DGU Triple Low-E Coating On Low Iron Glass



737 BOURKE STREET, MELBOURNE Product: Grey glass with Ceramic Frit; DGU with Low-E Coating and Solar Reflective Coating on Clear Glass

PROJECTS GALLERY - VICTORIA



800 COLLINS STREET, MELBOURNE Product: DGU Double Low-E Neutral Coating With Clear Glass



ROYAL CHILDREN'S HOSPITAL, MELBOURNE Product: DGU Double Low-E Coating On Green Tinted Glass; Laminated Glass Pink, White, Green Colourback With Performance Glass

PROJECTS GALLERY - AUSTRALIAN CAPITAL TERRITORY



18 MARCUS CLARKE, CANBERRA Product: DGU Double Low-E Neutral Coating on Clear Glass; Clear Laminated Glass

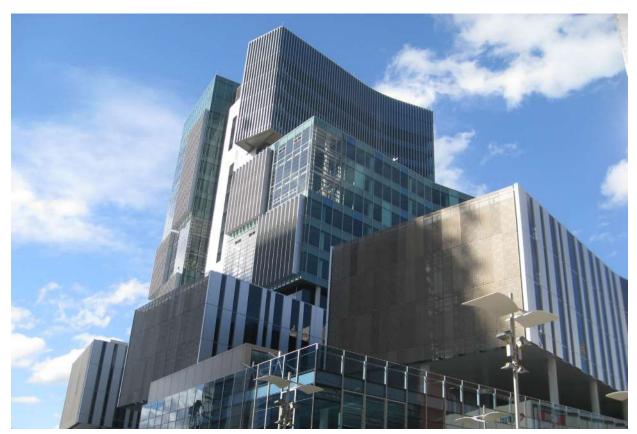


28 SYDNEY AVENUE, CANBERRA Product: DGU Double Low-E Neutral Coating With Grey Tinted Glass

PROJECTS GALLERY - WESTERN AUSTRALIA



CENTURY CITY, PERTH Product: DGU Double Low-E Coating On Dark Blue Tinted Glass



140 WILLIAM STREET, PERTH Product: Laminated Glass Green, Grey, Blue Tinted Glass

PROJECTS GALLERY - SOUTH AUSTRALIA



CITY CENTRAL TOWER, ADELAIDE Product: DGU Double Low-E Coating With Green Tinted Glass



FLINDERS UNIVERSITY, TONSLEY PARK, ADELAIDE Product: DGU Triple Low-E Neutral Coating On Laminated Exterior With Ceramic Frit On Low Iron Glass

PROJECTS GALLERY - QUEENSLAND



180 ANN STREET, BRISBANE

Product: DGU Double Silver Low-E coating with Grey, Green, Clear Glass; Ceramic Frit Glass; Laminated Glass



480 QUEEN STREET, BRISBANE Product: DGU Triple Low-E Neutral Coating On Clear Glass; DGU Double Low-E Silver Coating On Clear Glass

Our Certificates

CSG Tianjin Factory Architectural Glass



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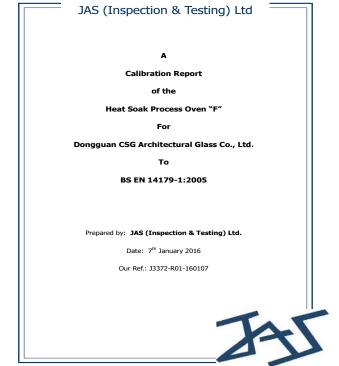
INSULATING GLASS IGCCC CERTIFICATION COUNCIL	Administrative Management Systems, In 205 West Main Street, PO Box 730 Sackets Hator, NY 13665 Phone: (315) 646-2237 Fax: (315) 646-2297 E-mai: staff@amscert.com	IGMA	
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Our Certificates

CSG Dongguan Factory Architectural Glass

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THIS IS TO ACKNOWLEDGE THAT AS OF THIS DATE								
Dongguan CSG Architectural Glass Co., Ltd. Dongguan, Guangdong, China								
IS A CURRENT LICENSEE AND HAS MET ALL GUIDELINES AND REQUIREMENTS FOR THE SGCC® CERTIFICATION PROGRAM AND AS SUCH IS ELIGIBLE TO LABEL THE BELOW INDICATED PRODUCT(S) AS SGCOG CERTIFIED. THE FOLLOWING ARE IN COMPLAINCE WITH ANSI 527.12015, CPS 16 CFR 1201 STANDARDS, OR BOTH STANDARDS, KNOWN AS COMPOSITE CERTIFICATION, OR BOTH STANDARDS WITH CANCESS 12.1 KNOWN AS COMPOSITE CERTIFICATION, OR BOTH STANDARDS								
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Our Certificates

CSG Dongguan Factory Architectural Glass











UNDERSTANDING GLASS

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Email: info@asginternational.com.au www.asginternational.com.au