



Your Dreams, Our Challenge

THERMAL INSULATION GLAZING

PLANIBEL LOW-E

Energy-saving
Glass Solutions for Façades



Leading Glass Supplier & Manufacturer in Asia

Delivering glass solutions for the cities of tomorrow.

AGC Glass Asia Pacific, part of the global AGC Group, is a recognised Glass Supplier & Manufacturer in Asia, providing unrivalled expertise in glass technologies.

With AGC's unique network of experience and expertise, our customers enjoy a one-stop integrated opportunity to a wide range of world-class products and solutions for all their glass needs, with a wide range of glass solutions for a multitude of applications – Residential, Commercial Buildings, Interior and Appliances.

AGC Glass Asia's Glass Solutions towards Net Zero Building

Green Building rating systems such as LEED, WELL, BCA Green Mark, Green Star etc. are widely used to support building owners, architects and consultants in the design and construction of sustainable buildings. The prioritisation of sustainable building materials has been increasingly amplified over the years.

In commitment of promoting sustainable practices in the green built environment, AGC aims to contribute to the sustainability of the global environment through product optimisation and innovation.

AGC is committed in ensuring our glass products are safe and responsibly made, combining functionality and sustainability. Our energy-saving coated glass range supports green buildings with EPD verifications and green product certifications.

We adopt a holistic approach to support the sustainability efforts of Asia Pacific's building industry.

We are

- A founding partner in the World Green Building Council Asia Pacific Regional Network.
- The fore runner in producing our glass products in Asia Pacific region to obtain Environmental Product Declaration (EPD) verification, and being awarded with green product certifications under the Singapore Green Building Product (SGBP) Certification Scheme and Cradle to Cradle Certified® Product Standard.

GLASS FOR QUALITY LIFE





Planibel G | Shandong University of Arts | China

High Performance Low Emissivity Glass

The Planibel Low-E range features a series of low-emissivity coatings designed for thermal insulation with high light transmission. They are ideal for applications aimed at reducing energy consumption and CO₂ emissions through superior insulation. Its high transparency allows for seamless combination with tinted or solar control glass, enhancing both performance and appearance.

This range is renowned for its durable coatings, making it easy to process. It is suitable for a variety of applications including buildings and appliances.

PRODUCT FEATURES

High light transmission

- > Increases the amount of natural light entering a building and reduce the need for artificial lighting, resulting in a more comfortable environment.

Low Emissivity

- > Delivers thermal insulation properties to keep comfortable temperatures within the building.

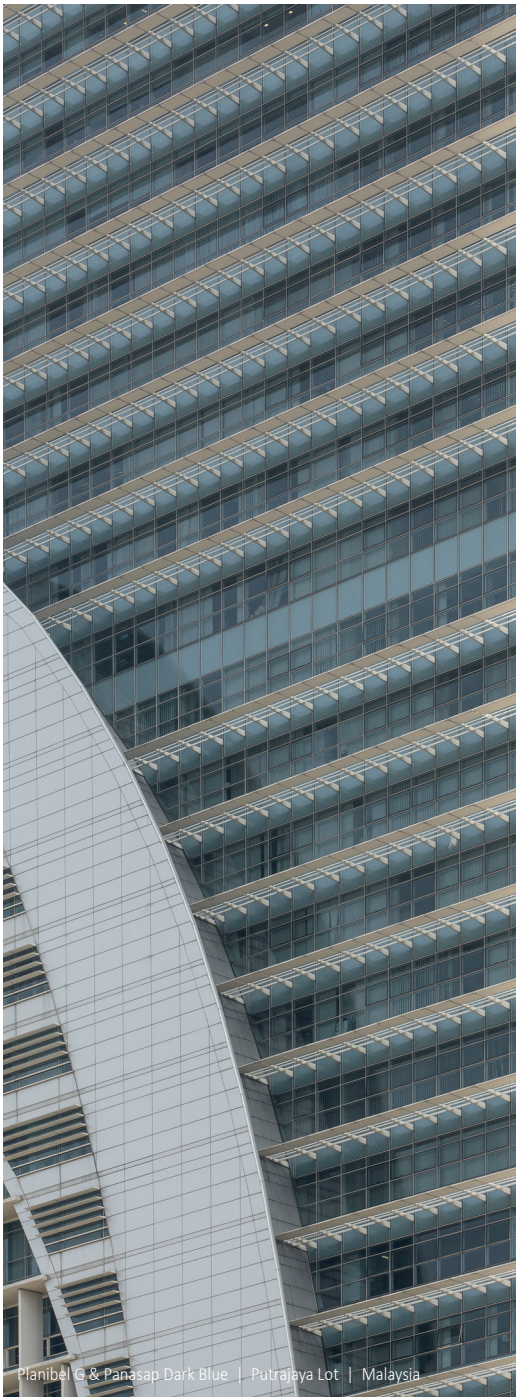
Good Durability

- > Good scratch resistance, reduced maintenance.
- > Withstands harsh environmental conditions such as extreme temperature changes, pollution and corrosion.
- > Infinite shelf life of Planibel G allows for a long-term storage.
- > Provides easy handling and multiple processing options.

PRODUCT RANGE

| | 3.2mm | 4mm | 5mm | 6mm | 8mm | 10mm |
|----------------------|-------|-----|-----|-----|-----|------|
| Planibel G | • | • | • | • | • | • |
| Planibel G Euro Grey | | • | • | • | | |
| Planibel AS 2 | | • | • | • | • | |
| Planibel AS 3 | | • | • | • | • | • |

AGC is committed to help you achieve your sustainability goals.



Planibel G & Panasap Dark Blue | Putrajaya Lot | Malaysia



Planibel Energy N | Kunstenmuseum Stuttgart | Germany

PROCESSING OPTIONS

| | | |
|--------------------------|-------------------------------------|--------------------|
| Safety | Tempering & Heat Strengthening | Yes |
| | Laminating | Yes ⁽¹⁾ |
| Insulation | IGU | Yes |
| Cutting | Straight or Circular ⁽³⁾ | Yes |
| Shaping & Edge Finishing | Edge Grinding ⁽³⁾ | Yes |
| | Hole Drilling ⁽³⁾ | Yes |
| | Notches ⁽³⁾ | Yes |
| | Edge Deletion | Yes |
| Special Treatment | Curving or Bending | Yes |
| | Silkscreen Printing | Yes ⁽²⁾ |

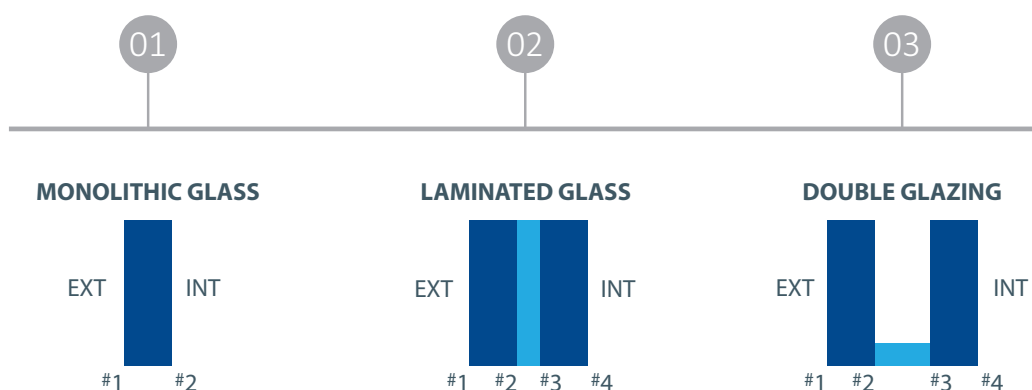
⁽¹⁾ Coating is not low-E if placed next to PVB

⁽²⁾ Certain conditions apply

⁽³⁾ After tempering, all glasses cannot be cut, edge grind, drill and notches

GLASS CONFIGURATION

The numbering of glass surfaces and position of coatings for various glass configurations are given below.



Performance Table

PLANIBEL LOW-E

| | Light Performances | | | Energy Performances | | | | | | | U Value (W/m ² ·K) | |
|--|--------------------|----------------|----------------|---------------------|------------|-----------|-----------|----|------|------|----------------------------------|------------------|
| | VLT (%) | VLR Ext (%) | VLR Int (%) | ER (%) | DET (%) | EA (%) | SF (%) | | SC | | EN 673 | NFRC (Summer) |
| | | | | | | | ISO | EN | ISO | EN | | |
| Single Glass 4mm, Coating Position #2 | | | | | | | | | | | | |
| Planibel G | 82 | 11 | 11 | 10 | 70 | 20 | 74 | 73 | 0.85 | 0.84 | 3.8 | 2.9 |
| Planibel G Euro Grey | 52 | 7 | 9 | 7 | 47 | 45 | 55 | 54 | 0.63 | 0.62 | 3.7 | 2.9 |
| Single Glass 5mm, Coating Position #2 | | | | | | | | | | | | |
| Planibel G | 81 | 10 | 11 | 10 | 68 | 22 | 72 | 71 | 0.82 | 0.82 | 3.7 | 2.9 |
| Planibel G Euro Grey | 46 | 6 | 9 | 7 | 42 | 51 | 50 | 50 | 0.58 | 0.57 | 3.7 | 2.9 |
| Single Glass 6mm, Coating Position #2 | | | | | | | | | | | | |
| Planibel G | 81 | 10 | 11 | 9 | 67 | 24 | 71 | 70 | 0.81 | 0.81 | 3.7 | 2.9 |
| Planibel G Euro Grey | 46 | 6 | 8 | 6 | 37 | 56 | 47 | 46 | 0.54 | 0.53 | 3.7 | 2.9 |
| Double Glazing Unit 4-16-4, 4mm Planibel AS #2 + 16mm 100% Air + 4mm Clear | | | | | | | | | | | | |
| Planibel AS 2 | 78 | 13 | 13 | 25 | 52 | 23 | 56 | 56 | 0.65 | 0.65 | 1.4 | 1.4 |
| Planibel AS 3 | 79 | 15 | 14 | 29 | 52 | 18 | 56 | 56 | 0.65 | 0.65 | 1.4 | 1.4 |
| Double Glazing Unit 5-14-5, 5mm Planibel AS #2 + 14mm 100% Air + 5mm Clear | | | | | | | | | | | | |
| Planibel AS 2 | 78 | 13 | 13 | 23 | 51 | 26 | 55 | 56 | 0.64 | 0.64 | 1.5 | 1.5 |
| Planibel AS 3 | 78 | 15 | 14 | 28 | 50 | 22 | 55 | 56 | 0.63 | 0.64 | 1.5 | 1.5 |
| Double Glazing Unit 6-12-6, 6mm Planibel AS #2 + 12mm 100% Air + 6mm Clear | | | | | | | | | | | | |
| Planibel AS 2 | 77 | 13 | 13 | 22 | 49 | 28 | 55 | 55 | 0.63 | 0.63 | 1.6 | 1.7 |
| Planibel AS 3 | 77 | 15 | 14 | 27 | 49 | 25 | 54 | 55 | 0.62 | 0.63 | 1.6 | 1.6 |

All data are calculated using spectral measurements that conform to standards ISO 9050 (2003) (light & energy performances), EN 673 and NFRC 100-2010/200-2010 (U-values) and are subjected to change without prior notice. AGC cannot be held responsible for any deviation between the data introduced and the conditions on site. AGC strongly recommends to apply heat soak test to reduce the risk of spontaneous breakage. AGC cannot guarantee against spontaneous breakage due to characteristics of glass. For additional glass configurations, please contact our sales person.



TAS: Technical Advisory Service

The AGC Technical Advisory Service is a team of glass experts offering technical support to AGC Certified Processors, who are well-qualified and experienced independent glass fabricators, certified to handle and process AGC's high-performance glass products. This technical support covers topics such as: technical data sheets, thermal analysis including evaluation of the risk of thermal stress, acoustic advice, installation guidelines, engineering support for special glass applications and more.

If you would like to find out more about the AGC TAS Team or are interested to be an AGC Certified Processor, please contact your local AGC representative for assistance.



Your Dreams Our Challenge

With our Asia headquarters located in Singapore, AGC Asia Pacific is dedicated to provide solutions in the Architectural, Automotive, Industrial and Solar industry in the region. As part of the global AGC group, we take pride in offering our customers a unique global network of experience & expertise with a one-stop integrated access to our wide range of world-class products and solutions that contributes to the global sustainable environment.

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