

## SWITCHABLE PRIVACY GLASS





# DREAMGLASS®



Dream Glass Group Headquarters. Madrid, Spain.

### **DREAM GLASS GROUP (DGG)**

#### A WORLDWIDE LEADER FOR PRIVACY GLASS

Welcome to Dream Glass Group (DGG), a global leader in manufacture, supply and installation of privacy glass technology (also known as intelligent glass, smart glass, switchable glass and electric glass). Starting its business as a privacy glass supplier, DGG has grown year on year to expand its product range in intelligent and decorative glass solutions. Having its Headquarters in Madrid, Spain and a selected group of collaborations with glass manufacturing plants abroad, DGG is able to supply efficiently and promptly to all its clients and distributors worldwide.

#### THE COMPANY

#### **ABOUT DGG**

**Dream Glass Group - DGG** (founded in 2004 in Madrid, Spain) is a dedicated and innovative market leader for privacy glass. In addition to privacy glass, DGG is also specialized in the manufacturing and supply of a wide range of decorative glass.

In line with its policy to better serve its clients, DGG currently collaborates with selected glass manufacturing plants in foreign countries. In 2009, DGG established its own R&D facility to further enhance quality, reliability and efficiency, placing itself at the forefront to supply to the commercial, residential, hospitality, healthcare, marine, aviation, rail and security sectors. Parallel to this, during the past years, DGG has cooperated with renowned research facilities.

Throughout the years, we have come to fully understand privacy glass technology as we have invested a great deal of resources in our R&D Department. Our continued development and research in the privacy glass industry has allowed us to meet the fast growing and changing needs of our clients. Ground-breaking investigations and continuous product development have placed **DGG** at the forefront of the industry with great success.





DREAMGLASS® ENABLES YOU
TO HAVE PRIVACY AT
THE FLICK OF A SWITCH.

#### WHY DGG?

Our extensive knowledge and continued investment in research and development permits us to cater the most demanding privacy glass jobs such as the Olympic Museum of Barcelona, Spain, the Moevenpick Ibn Battuta Gate Hotel, Dubai, to private projects in Burj Khalifa (World's tallest tower, in Dubai). We continuously collaborate on prestigious projects with renowned architects and designers all over the world.

#### **Quality Assurance**

In a continued and ongoing effort to offer the highest quality of standards in aesthetics and functionality, DGG set up an R&D Department in the field of PDLC technology to improve product properties. In addition, DGG also has extensive testing equipment from weathering to UV degradation which allows thorough testing of DreamGlass® under the most demanding and extreme weathering scenarios. DreamGlass® panels are tailor made and manufactured under strict quality procedures.

The R&D Department is of fundamental importance to DGG. Apart from its main activity, it provides vital support for all technical matters which may arise from the Sales Department.

#### DreamGlass® Marking / Branding

We set the standards and in order to avoid unreliable and cheap imitations; we mark each privacy glass panel accordingly.

#### Innovation, Design & Flexibility

We continuously work to improve DreamGlass® privacy glass so that its use can be even more common in commercial, residential, hospitality, healthcare, marine, aviation, rail and security sectors. DGG is a leading supplier in various industries, such as home automation solutions to automated sliding door systems. We continually explore new applications and user friendly solutions with our clients using our in-house CAD Team.

As we work to offer all our clients a flexible working relationship, we welcome any customer bespoke applications or requirements as our design team is always ready to find functional & applicable solutions to meet all safety and regulatory compliances, while maintaining the highest level of aesthetic and functional design.

#### Our Team

DGG has grown rapidly through significant investment in leading edge technology and one of the keys to its success is the experienced team of glass specialists from around the world. With an international dedicated sales team, fluent in English, Spanish, Chinese, Korean, Hindi, Arabic, Portuguese and French, we work closely with our partners to offer a complete range of bespoke solutions from planning stage, consultancy to turnkey projects. We look forward to working with you in the near future!

#### **Our Warranty**

At DGG, we work very hard to offer the highest customer service pre and post installation of your privacy glass project. With our 5 year warranty for DreamGlass® functionality, we offer a professional and quick customer care service through our own centers, as well as through our highly trained distributors.

#### **DGG** goes Green

We continue and strive to be a socially responsible company, giving priority to meeting our responsibility of helping the environment. Our production facilities constantly works with glass recycling centers, while we have installed solar panels at our factory in Madrid, Spain to do our part in lowering green house gases.

#### Lead time

DGG offers the quickest turnaround to your project in any region of the world with a general 4 week lead time from receipt of order. In addition, DGG counts on a very reliable delivery service with international outreach. For more information, contact our Sales Office.



#### **PRODUCTS**

#### PRIVACY GLASS

DreamGlass® privacy glass enables you to have instant privacy at the flick of a switch. DreamGlass® is a laminated glass panel composed of polymer dispersed liquid crystal film (PDLC). By applying a small electrical current, users can change its state from opaque to transparent and vice versa. In addition to supplying DreamGlass® in ultra clear glass, other configurations can be supplied such as; fire rated, color tinted, curved, shaped and double glazed. The use of DreamGlass® privacy glass in installations provides our clients added value as it grants flexibility in building designs.

Various DreamGlass® panels can be joined together forming one large panel controlled by a single switch, ultimately creating a privacy glass wall. Thanks to multiple configurations DreamGlass® technology offers, a great variety of glass applications are possible.

DreamGlass® can also be converted into a highly demanded rear projection screen with incredible image quality due to its liquid crystal properties which give high contrast features.





THANKS TO MULTIPLE CONFIGURATIONS DREAMGLASS® TECHNOLOGY OFFERS, A GREAT VARIETY OF GLASS APPLICATIONS ARE POSSIBLE.

#### **Operation**

DreamGlass<sup>®</sup> privacy glass operates by applying electric current through a specifically programmed transformer designed by DGG. Depending on the surface area, many panels can be powered at the same time.

When DreamGlass® privacy glass is activated with electrical current, it immediately turns transparent as the liquid crystal molecules line up, allowing incident light to pass through. Upon removal of electrical current, the panel returns to its natural state; opaque, granting instant privacy as the liquid crystal molecules are randomly oriented causing incident light to be scattered.

#### **Advantages**

- Immediate Control of Privacy
- Improvement in users comfort with greater security
- Efficient use of space in building environments
- Aesthetically attractive
- Energy savings through reduced A/C cooling
- Low operating voltage; granted IPX7 Certificate
- UV protection and stability (blocks over 99% of UV rays)
- Excellent contrast for rear projection purposes
- Protection from people viewing valuable items
- Exceptional optical qualities and reliable technology;
   5 year warranty
- Easy maintenance

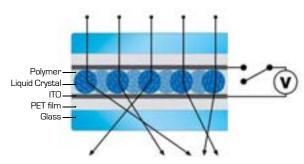
#### DreamGlass® can be controlled by

- A simple ON/OFF wall switch
- Remote control
- Sensors
- Home Automation (Integrated PDA control)
- Intensity regulator to control transparency levels
- Timer
- Door locks
- And much more

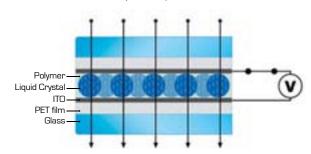
#### **Specifications**

- **Maximum Size:** 1,500mm x 3,000mm.
- **Minimum Size**: Generally 200mm x 300mm (consult Sales Office for smaller sizes).
- **Thickness:** 3+3mm, 4+4mm, 5+5mm, 6+6mm, 8+8mm, triple laminate and more.
- Glass types: Clear Float, Ultra Clear (Standard), color tinted, fire rated, bullet resistant glass, security glass and mirror.
- Processing: Tempering, polishing, grinding, radius corners, drilling, sandblasting, printed design, notches, cutouts, heat soaking, double glazed, triple glazed, curved, etc.

#### Power Off / Opaque



#### Power On / Transparent



#### DreamGlass® Composition



#### **Manufacturing**

DreamGlass® is manufactured by our **experienced production team** with state of the art machinery, under strict supervisions throughout all stages of production. Each DreamGlass® panel is handmade & bespoke as per client's requirements.

DGG is equipped with a climate controlled clean room where panels are assembled. Once panels are laminated and wired, they are thoroughly tested before being packed and shipped.

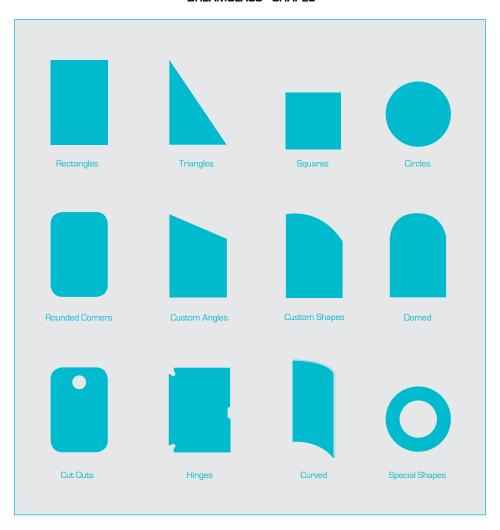
#### Possible Shapes for DreamGlass®

**DreamGlass®** is available in custom sizes and shapes, making it an ideal choice. See the diagram below for typical shapes:

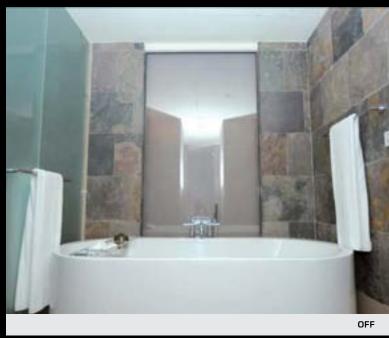
#### **Technical Data**

Environment	Storage Operation	-20°C to 50°C -10°C to 50°C
Electrical Properties	Operating Voltage Operating Frequency Power Consumption Switching Time	70 - 80V AC 50 - 60 Hz < 8 W/m2 < 0.1 seconds
Optical Properties	Total Transmittance OFF state Direct Transmittance OFF state Total Transmittance ON state Haze ON state	60% +/- 3% 0.3% > 77% < 8%

#### **DREAMGLASS® SHAPES**











## EACH PANEL IS BESPOKE MADE AND THOROUGHLY TESTED BEFORE BEING PACKED AND SHIPPED.







ON

#### **SECTORS**

#### **APPLICATIONS**

We continuously work to improve **DreamGlass® privacy glass** so that its use can be even more common in commercial, residential, hospitality, healthcare, marine, aviation, rail and security sectors. **DGG is a leading supplier in various industries**, such as home automation solutions to automated sliding door systems. As we work to offer all our clients a flexible working relationship, we welcome any customer bespoke applications or requirements as our design team is always ready to find functional & applicable solutions to meet all safety and regulatory compliances, while maintaining the highest quality of aesthetic and functional design. General applications and sectors include:

#### Commercial

Office partitions, conference rooms, executive offices, automatic/manual sliding doors, rear projection screens, television studios, entertainment halls, museums etc.

#### Residential

Windows, roof-lights, bathrooms, shower screens, sliding doors, folding doors, kitchen partitions etc.

#### Healthcare

Intensive care units, high dependency units, emergency rooms, moveable privacy screens, neonatal wards and ICUs, fire rated doors etc.

#### Hospitality

Bedroom/bathroom privacy partition screens, external windows, conference rooms, restaurant projection screens, toilet partitions, balconies etc.

#### Retail & Showroom

High end rear projection screens, feature screens, displays etc.

#### Security

Entrance foyers, bank and teller counters, cell doors/partitions, vision panels, etc.

#### Marine, Aviation & Rail

Driver privacy screens, business class partitions, security screens, sliding doors, etc.





DGG IS A **LEADING SUPPLIER** IN VARIOUS **INDUSTRIES**.

#### MEDICAL APPLICATIONS

DreamGlass<sup>®</sup> allows hospital staff **to monitor patients in an efficient and quick manner**; with a simple glance through the units when the glass panels are ON. In addition to allowing an efficient control over patients, it is known to improve the patients recovery after operations and intensive care. How so? As patients are able to see activities which go on outside their unit, this encourages their will to recover faster.

Our privacy glass is a revolutionary solution to the Medical Field as traditional hospital designs have a great lack of natural lighting. Architects and designers are now actively seeking and encouraging the use of our privacy glass which enables daylight harvesting and instantaneous control of privacy to improve their working space, which in turn also improves the productivity of the Hospital's staff.

Maintenance costs are reduced as there is no need to install blinds or curtains to the windows. Moreover, hygiene is greatly improved. Bacteria and viruses are known to be easily transmitted from hospital staff to patients, as these are constantly drawing curtains, etc. With our privacy glass, care takers are able to treat patients with the flick of a switch, reducing possible infections a great deal.

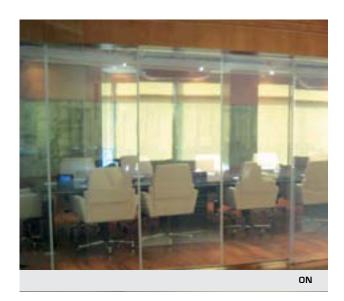




#### **BUSINESS APPLICATIONS**

DreamGlass<sup>®</sup> privacy glass provides efficient space utilization for your business, offering privacy wherever you may need. The quality and simplicity of DreamGlass<sup>®</sup> provides an environment of privacy for your office and conference rooms at an instant. DreamGlass<sup>®</sup> privacy glass can create small segments of privacy to carry out your important meetings and presentations, without distractions from onlookers and co-workers.

# DREAMGLASS® ALLOWS FOR INTELLIGENT SPACE PARTITIONING.





DREAMGLASS® PRIVACY GLASS

#### **REAR PROJECTION APPLICATIONS**

DreamGlass® can also be converted into a **rear projection screen with superior image quality** due to its liquid crystal properties which grant high contrast features. Simply place a projector in the opposite side where the image will be viewed to take advantage of this added value DreamGlass® offers!

Shop windows can turn into dynamic marketing tools by converting the glass surface into a rear projection screen to promote publicity campaigns. At the same time, it can also

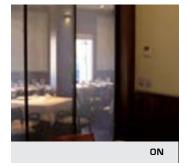
serve as a security measure when products must be hidden at night when the store is closed. Home cinemas, entertainment halls etc. are just some of the many applications you may also use our privacy glass for!





#### **OTHER APPLICATIONS**

DreamGlass® privacy glass usage is endless and is not limited to the previously mentioned applications. The application of DreamGlass® is spreading in houses, offices, banks, public buildings, shopping centers, cars, airplanes, etc. Do not hesitate to contact our Sales Department to discuss other ways of use.











# DREAMGLASS<sup>®</sup>; **THE NEW WAY TO PARTITION SPACES** WITH THE FLICK OF A SWITCH.





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#### **DISTRIBUTION NETWORK**

Please contact our main headquarters located in Madrid, Spain for distributor interest information.