

# GLASSFER

## NEW FRONTIERS: Light Control



## Switchable Glass: Glassfer's new challenge.

Smart glass is dynamic, allowing a traditionally static material to become alive and multifunctional, and refers to active technologies in which privacy glass films and coatings, activated by an electrical charge, change the appearance and functionality of the glass.

Switchable glass alter the amount of light transmitted through the glass, allowing this materials to appear as transparent, translucent, or opaque.

Types of active switchable glass technologies and their common applications include:

- **Polymer Dispersed Liquid Crystal (PDLC)** glass, eg: typically seen in privacy partitions in various industries.
- **Suspended Particle Device (SPD)** glass, eg: windows that tint to shade as seen in automotive and buildings.

To be able to reach the best prestation form this product, Glassfer has partnered with **Gauzy**, a true pioneer of nanotechnology for light control. Gauzy is the only material science company in the world developing, manufacturing, and marketing LCG® (Light Control Glass) technologies: SPD and Liquid Crystal.



## SPD SOLUTIONS

SPD contains miniscule solid particles which are suspended in liquid and coated between two thin layers of PET-ITO to create a film. It shades and cools interiors, blocking up to 99% of incoming natural or artificial light within seconds of shifting voltage.

Like PDLC, SPD can be dimmed, allowing for a customized shading experience. Unlike PDLC, SPD does not turn completely opaque, and therefore, is not suited for privacy, nor is it optimized for projection.

SPD is ideal for exterior, sky or water facing windows and can be used in indoor applications as well, where darkness is required. SPD is manufactured by only two companies in the world.



### Custom Shading

Dimming features allow complete control of how much light enters a space for a comfortable experience



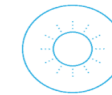
### Maintain Views

SPD blocks up to 99% of light, creating shade while maintaining a view of the outside scenery



### Energy Efficient

Improve energy ratings and earn green points by mitigating lighting and heating/cooling costs



### Optimize Light

Utilize natural light for energy savings and ambiance, and shade during peak hours for cooling and solar control

# APPLICATIONS



## Automotive

Shade and block glare with SPD sunroofs, sun visors, and windows while saving material costs, space, and protecting interiors



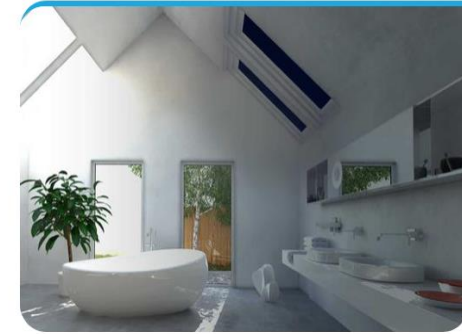
## Planes & Trains

Allow passengers to choose how they experience natural light, while still being able to enjoy outside scenery and natural views



## Marine

Enjoy serene ocean and sky views without strong light reflection, glare, and heat with smart glass in cabin, bridge, and deck windows




## Skylights & Facades

Replace complex shading systems allow for natural light, views, and sleek designs while being environmentally conscious

The SPD technology can be integrated into windows, partitions and other transparent surfaces in various sectors, including architecture, interior design, automotive, smart retail windows, and consumer electronics. SPD blocks up to 99%, tinting windows to create a shaded space or allowing light in when transparent.

It is possible to have different configurations of the product, even because it is customizable in dimensions. From a minimum of 200 x 300 mm, to a maximum of 1800 x 4000 mm. All the requests in this range are available.

Our technical office will suggest you which controller is better to use with your project to ensure the highest quality optical and mechanical performance with easy integration and installation.



### Key Specifications

- Ultra low haze: avg. 2.5%
- Minimal energy consumption: avg. 1.5w/m<sup>2</sup>
- Operating Voltages: 100VAC Square wave
- UV Blocking: 99%
- Switching Times: <3s
- The only available SPD with architectural widths and custom sizes

#### Controllers specifications:

- Mini, Flex, and MultiPlex options for various uses and configurations
- Small form factor and footprint with easy installation
- Large drive capacity up to 10 sqm
- Dimming and fading control for tunable shading
- Advanced protection features for better ROI and MTBF
- WIFI/DMX/RS-485 for compatibility with smart systems