

## SPECIALTY

# Switchable Glass SSG® PrivaGlas

Private residence  
at West Coast Road, Singapore



SSG® PrivaGlas allows architects and contractors to provide cost-effective creative design concepts with engineering flexibility.

### THE TECHNOLOGY

PDLC is a medium whose light scattering power is adjustable through applying an electric field. In their natural (uncharged) state, the PDLC droplets

SSG® PrivaGlas panels are a revolutionary breakthrough in display technology, which can transform glass from a cloudy white translucent barrier to an optically clear state with the flick of a switch. This smart glass features two panes of glass laminated with Polymer Dispersed Liquid Crystal (PDLC). SSG® PrivaGlas has the ability to change between opaque and transparent states instantaneously, providing privacy. This privacy glass also offers dynamic partitioning of interior building spaces, exterior façades, and can even double up as a projection screen used in convention centres and exhibition halls.

From custom residential to the most high-tech commercial applications,

align randomly. Light cannot pass through and thus scatters, resulting in a translucent state. When an electric field is applied across the material, the PDLC droplets reorient so that they form a straight line and incident light can pass through, resulting in a transparent state.

*Note: We recommend framing each panel with 15mm coverage along the two long sides and minimum 10mm coverage along the two shorter sides from the edge of the glass.*

*To prolong life of the switchable cells, it is also recommended to switch SSG® PrivaGlas to the 'off' state for at least 4 hours in a 24 hour period.*

### Performance information of SSG® PrivaGlas

Testing Parameters		ON	OFF
Optical	VLT (parallel light)	approx. 75%	< 1%
	Haze	< 7%	> 90%
	Viewing angle	approx. 150°	NA
	UV Blocking	> 99%	>99%
	Infrared Blocking	> 30%	>90%
	SHGC	0.78	0.06
Environmental	Operating Temperature	-10°C - 60°C	
	Storage Temperature	-20°C - 70°C	
Electrical	Power Supply	65 VAC and CE, UL certificate	NA
	Power Consumption	approx. 5W/m <sup>2</sup>	
	Respond Time	ON → OFF = 100ms	
		OFF → ON = 10ms	

SSG® PrivaGlas can be used with on/off control switch, remote control, timers, sensors and relay control switch.

### PRODUCT FEATURES

#### ACOUSTIC BARRIER

SSG® PrivaGlas is an effective sound control product. Sound attenuation is excellent and significantly surpasses that of monolithic glass.

#### FLEXIBLE APPLICATION

Both front and rear sides can be used as a high-resolution projection screen. Depending on the installation location, the projection is reflected both in the front or rear of the screen. Specifically, the best effect will be obtained in the rear mode.

#### HIGH VISIBLE LIGHT TRANSMISSION

This smart glass offers superior light transmittance for high visibility with very low haze in an off-axis viewing angle.

#### PRIVACY

A simple switch from transparent to opaque states for privacy and security allows the user an instant change and control over light, glare and solar heat gain.

#### ULTRAVIOLET SCREENING

SSG® PrivaGlas provides generous daylighting all while offering protection from UV radiation.

### USES AND APPLICATIONS

- Bank teller windows and automated teller security windows
- Bullet-proof security glass
- Command centres
- Electro-optical devices
- Hospitals
- Jewellery counters and showcases
- Outdoor advertising
- Partition and wall panels
- Presentation walls
- Privacy windows for rooms, executive offices, tradeshow and exhibitions
- Skylight and sunroofs
- Special effects for the entertainment industry
- Ultra-modern residential and commercial blind applications
- Window glass
- Bathroom partitions

### SPECIFICATIONS : Production Sizes

Minimum Size (W/mm x H/mm)	Maximum Size (W/mm x H/mm)
300 x 300	1,820 x 3,500

### Colours

Clear, bronze, blue, grey, green tinted.