



## Swytchglas

Why should glass be either translucent or clear?  
Why not both?

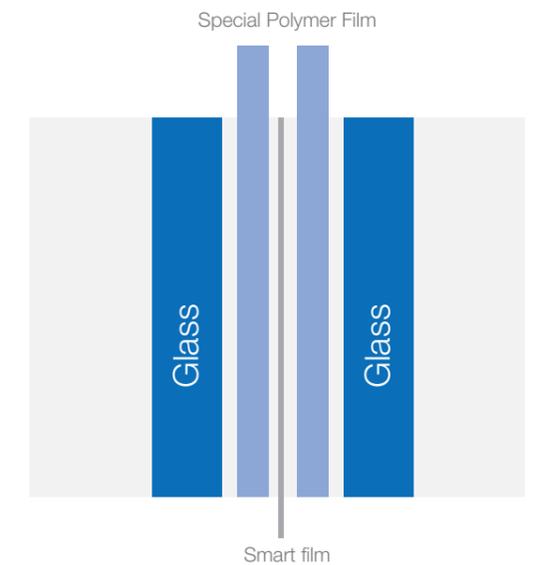
It is this thought that inspired us to create Swytchglas – the revolutionary smart glass from AIS that is ideal for a wide variety of applications ranging from residences to corporate boardrooms and everywhere in between.



## How It Works

The principle behind Swytchglas is the PDLC (Polymer Dispersed Liquid Crystal) technology that is very similar to the concept of LCD display.

AIS Swytchglas is a combination of parts that are illustrated below.



There is a smart film between the two Special Polymer films. The Smart Film is a suspension of liquid crystals in a polymer base that can be controlled using an electric charge. Under normal conditions the liquid crystals are randomly distributed and when light hits the glass, it is scattered by the liquid crystals.

When an electric current is passed through the glass pane, the liquid crystals align themselves into straight lines allowing all the light to pass through without scattering.

## Why AIS Swytchglas?

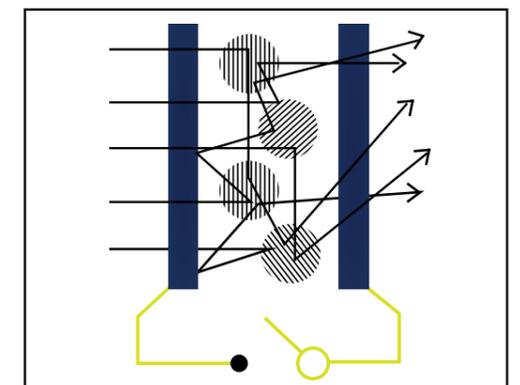
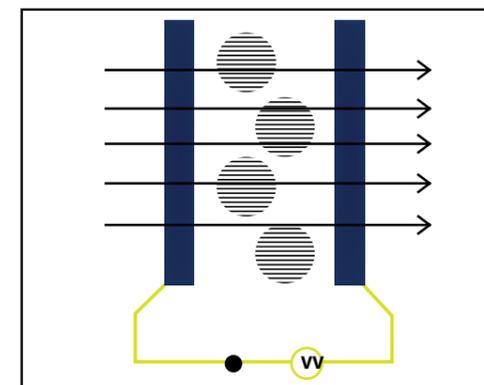
AIS Swytchglas is really the cutting edge in glass technology which has the power to control transparency making it the smartest glass around.

With AIS Swytchglas, you can turn the glass from transparent to translucent, with the click of a button. This presents a view into a whole new world of opportunities with glass.

### Key features of AIS Swytchglas

- Normally made from extra clear glass
- Variety of colour tints are possible
- Works with an electric switch or a remote control device
- Activates in less than 10 microseconds
- Blocks UV rays that are harmful to the skin
- Works in temperatures ranging from  $-10^{\circ}\text{C}$  to  $50^{\circ}\text{C}$
- Blocks up to 50% light in 'Off' mode
- Lasts a minimum of 20,000 cycles
- Low power consumption

- The interlayer behaves as a security film resisting any kind of intrusion or impact, thus ensuring safety.
- It has acoustic properties which dampen outside noise.





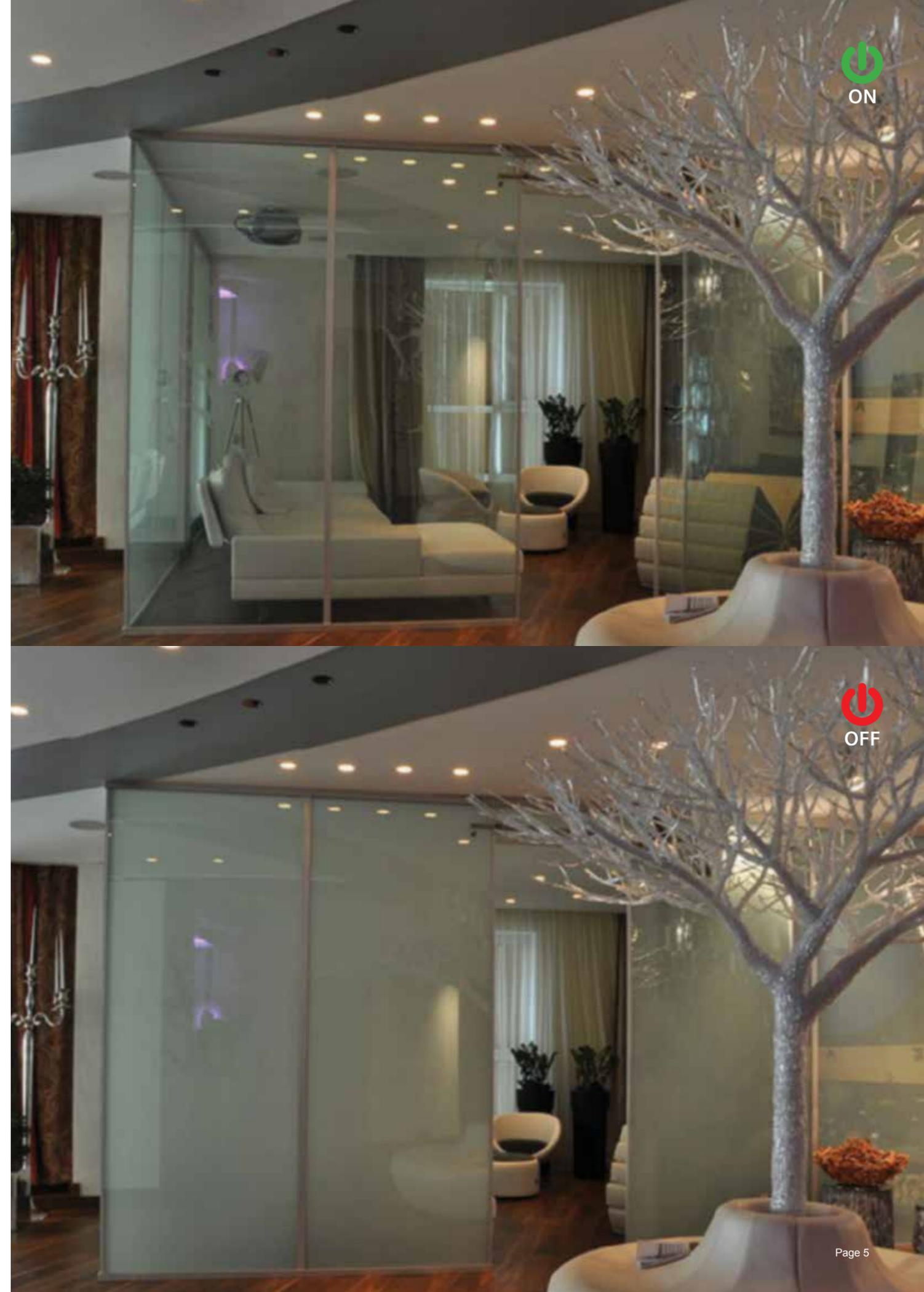
## Swytchglas for Homes

Expand horizons within the home with AIS Swytchglas – the smart glass that offers sophistication with comfort and privacy.

### Windows

When you choose AIS Swytchglas for your window, you benefit on multiple fronts – you have the flexibility of doing away with curtains and other obstructions to your view and also the comfort of blocking heat and the glare when you need to, saving air conditioning costs during summer.

Bathe your room in soft sunlight during the day and let in the glow of moonlight at night – only with AIS Swytchglas





### Bathroom Partitions

When it comes to home décor, bathrooms too have evolved in aesthetics along with the rest of the house. Make your bathroom stand out in contemporary elegance with AIS Swytchglas.

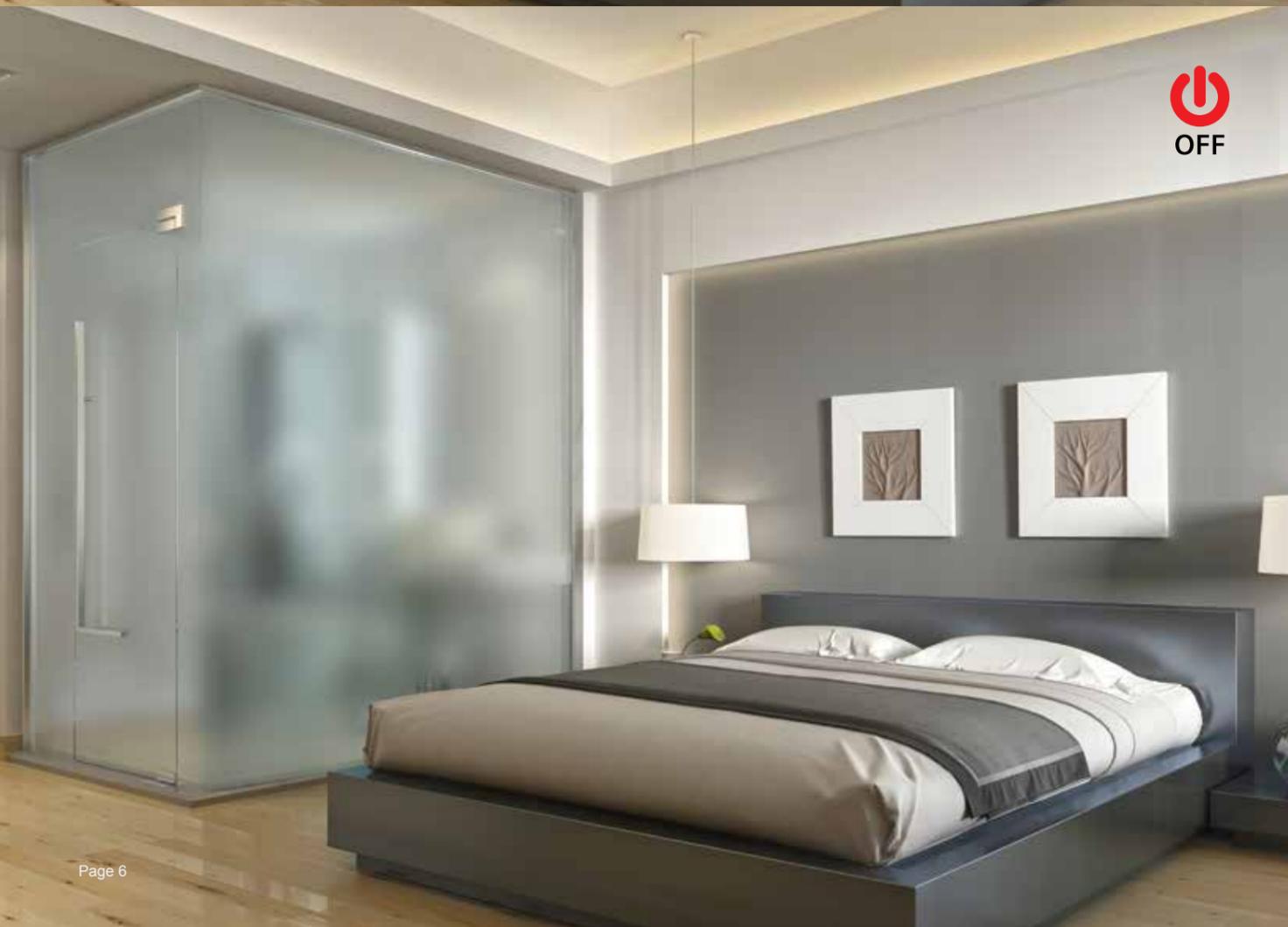
You can use it as a room divider between your bedroom and bathroom to achieve a perfect balance of openness and privacy. Moreover, it helps you capture plenty of natural light, and makes your room seem spacious and stylish.

### Walls and Partitions

Give your transparent walls the AIS Swytchglas advantage. You can turn OFF for complete privacy and ON when you need visibility.

Smart glass solutions from AIS are best for homes where transparent walls lend a rich and refined feel to the décor.

The switch mechanism is guaranteed to work for a minimum of 20,000 on/off cycles, giving you a long-lasting reason to switch to smart.





# AIS Swytchglas for Commercial Spaces

## Conference Rooms and Cabins

Making an impression on your customers or even your own team was never as easy. Switching from transparent to translucent at the flick of a switch was only in the movies. Now you can have it with AIS Swytchglas.

## Façade Glass and Windows

As a commercial building owner, you would know all too well that air-conditioning and lighting comprise the biggest overheads in the maintenance of commercial spaces. AIS Swytchglas can address this issue when it is used for façades or windows by preventing the sun's heat from getting in, thus saving power and bringing down costs substantively. So now, you don't have to shy away from having a brilliant glass façade for your office building or commercial complex!

## Hospitals, Salons, and Spas

Selective privacy areas are crucial in many spaces. Have you been struggling here?

Blinds are cumbersome to use and curtains are not elegant. You need something smart. AIS Swytchglas panels replace blinds and curtains quite elegantly and efficiently, letting you choose between privacy and openness.

## Hospitality / Medical Facilities

AIS Swytchglas is also suited to the hospitality domain right from restaurants to pubs, bars and clubs, business centres, conference facilities, and also in medical / dental clinics. It can serve as a suave and high-tech replacement to traditional curtains, blinds, and opaque walls.



## Parameters

OPTICAL REFERENCE	MODE	
	ON	OFF
Visible Light Transmission	74%	50%
UV Blocking	98%	98%
Haze (Level of Blur)	8%	> 95%

ELECTRICAL REFERENCE	MODE	
	ON	OFF
Working Voltage	65 V AC / 110 V AC (50 HZ)	
Remote Control (Working Range)	25 m	25 m
Response Time	Td. 10 Microseconds	Tr. 2 Microseconds
Power Consumption	< 10 W / Sqm	

ELECTRICAL OPERATION	MODE	
	ON	OFF
Visibility through glass pane	Transparent	Translucent

	MIN	MAX
GLASS SIZE RANGE	300 mm x 300 mm	1800 mm X 2400 mm (1800 mm X 3000 mm on request)
TOTAL GLASS THICKNESS	4 mm Glass + 1.87 mm Combined Lamination Film + 4 mm Glass	12 mm Glass + 1.87 mm Combined Lamination Film + 12 mm Glass

PANEL SHAPES	Rectangular Shapes (odd shapes can be made on request)
COLOUR VARIANTS	Green, Bronze, Blue, etc. (colours are feasible with use of Tinted Glass)
INSTALLATION APPLICATIONS	Interior Panels, Doors, & Windows (away from direct water and moisture)

### Precautions during Installation and Use

- Detailed analysis would be required if the application involves exposure of the glazing to temperatures below -10°C or exceeding 50°C
- Special care must be taken to ensure that there is ZERO pressure on the surface of the panel, over the moulding, and on the cables
- In order to avoid maintenance hassles, the power supply unit must remain accessible, even if located remotely
- A waterproof switch (as opposed to a standard switch) and a remote control are strongly suggested by AIS for better operation of Swytchglas
- The installation has to meet respective electrical regulations and must be performed only by trained technicians
- The glass must be turned off for a minimum of 4 hours after every 24 hours of usage
- When used in bathrooms, avoid turning on the glass during waterlogging

### Cutting and Drilling

Since AIS Swytchglas is delivered in the dimensions that they are ordered in, subsequent drilling or cutting is not possible without the risk of damage to the structure of the glass composite.

### Electrodes and Wires

The electrodes present in the glass can be positioned at the top, bottom, left, or right depending on the size of the glass pane and the application intended, while the wires that lead out can be drawn from the electrodes' central position.

### Warranty

AIS offers a 3-year warranty on the functionality of Swytchglas. This warranty is valid as long as our installation and maintenance standards are followed.



**Asahi India Glass Ltd.**

**For a clear view into the world of smart glass, contact us:**

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