

# AGP **UMU Glass**

privacy at the flick of a switch



# Switchable Vision

AGP 'UMU' Switchable Privacy Glass puts the user in control, allowing instantaneous switching between transparent and translucent states at the flick of a switch.

Glass for centuries has remained relatively unchanged. People rarely look at the glass, they just look through it. Privacy has always been a problem with windows that are there to let light in and keep the weather out as people can see in unless obscure glass is used. As this is not desirable in private areas, bulky curtains and blinds have traditionally been used to achieve privacy.

This has changed with AGP 'UMU', a revolutionary 'smart glass' product that is a favourite among architects, building owners and interior designers, looking for practical vision control advantages in a state of the art glass product.



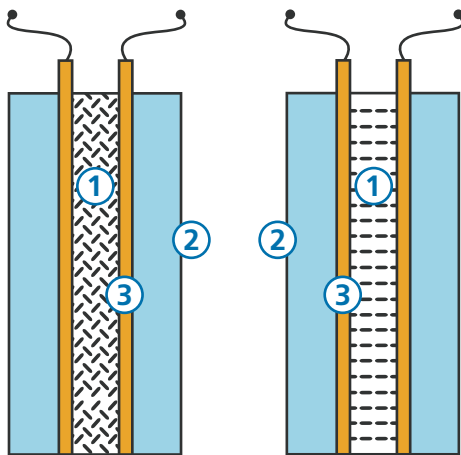


# Applications

From security doors and windows, boardroom partitions, observation windows, display windows, conference room walls and rear projection screens, the possibilities are endless. And as AGP 'UMU' is a laminated glass product, it has very good noise reduction properties, making it suitable where both sight and sound privacy is required.



# How It Works



Power Off

Power On

- 1 Liquid Suspension of Particles
- 2 Float Glass
- 3 Conductive Coating

AGP 'UMU' is a state of the art product which allows the same amount of light to pass through in both the transparent and translucent states.

AGP 'UMU' is a laminated glass containing a liquid crystal interlayer between two sheets of clear annealed glass. In transparent mode an electric current is passed through the interlayer which aligns the microscopic crystals along a number of parallel axes. When privacy is required, the current is switched off and the crystals fall into a random formation. It is the random nature of these crystals that diffuse light passing through the system to provide instant privacy.

The liquid crystal interlayer in AGP 'UMU' is similar to the product used in calculators, digital watches, television screens and laptop computers. The main difference is the method of control. In those electronic devices the characters (or pictures) are made by controlling individual pixels within the display area. AGP 'UMU' works by controlling the whole panel as one giant pixel. The response time in switching between translucent to transparent is approximately 1/100 second.

Switching control of the glass is achieved through the power supply and this allows many electronic switching methods to be used, such as a standard light switch, radar, proximity sensors, passive infra red, door lock reed switch and light sensing or impedance controls.



On



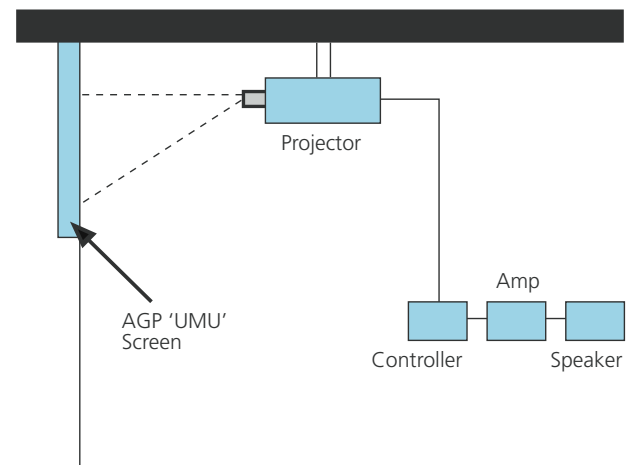
## Rear Projection



In the translucent state, AGP 'UMU' is ideal for use as a rear projection screen, with the added advantage of being able to flick a switch to make the glass transparent and reveal a display behind.

Instead of reflecting light back as most other obscure or translucent glasses do, the unique LCD interlayer in AGP 'UMU' allows light to be thrown forward through the glass. When in translucent mode, this allows an image to be projected onto the glass from behind with near perfect picture clarity using a video projector.

Once the video projector is switched off and the glass is switched to transparent mode, the display behind the glass can be revealed, making AGP 'UMU' ideal for product launches, shop windows, training rooms and video conferencing.



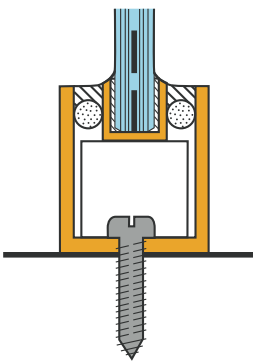


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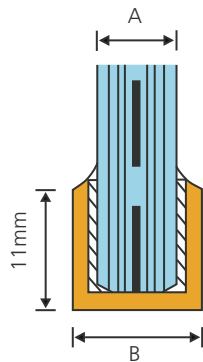
## In Pursuit Of Excellence

A proudly Australian owned and operated company, Architectural Glass Projects is the quality leader in the field of specialised architectural glazing and louvre systems. AGP has been responsible for some of Australia's most innovative and striking glass construction projects during the last 20 years. The company has the resources that are expected of a market leader in important sectors of industry with a highly skilled installation and service workforce which is second to none.

### Glazing



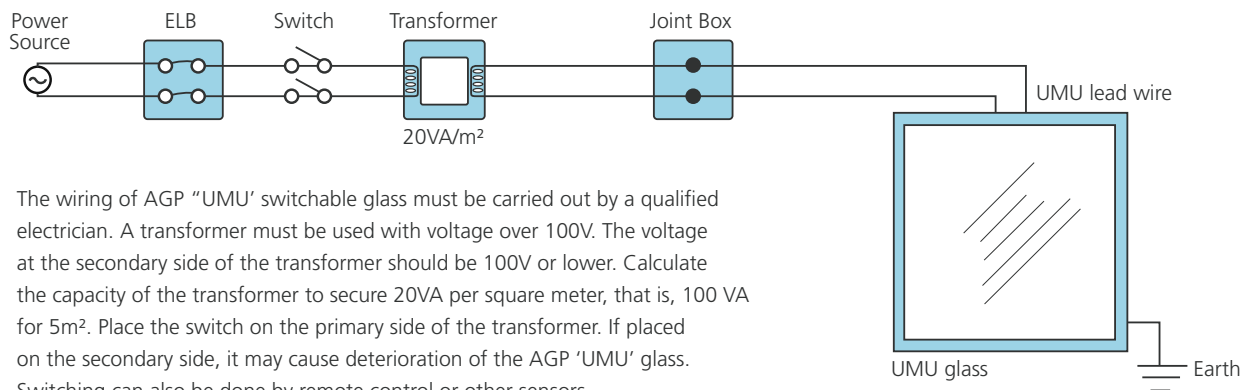
### Edge Protection



AGP 'UMU' can be custom made to any size within the maximum dimensions of 2750 x 990mm. Glass comes with edge protection on at least one side. It also can have edge protection fitted to 2, 3, or 4 sides as required.

A	6.5mm	10.5mm	12.5mm
B	10.0mm	14.0mm	16.0mm

### Electrical Wiring



The wiring of AGP "UMU" switchable glass must be carried out by a qualified electrician. A transformer must be used with voltage over 100V. The voltage at the secondary side of the transformer should be 100V or lower. Calculate the capacity of the transformer to secure 20VA per square meter, that is, 100 VA for 5m<sup>2</sup>. Place the switch on the primary side of the transformer. If placed on the secondary side, it may cause deterioration of the AGP 'UMU' glass. Switching can also be done by remote control or other sensors.