



# PRODUCT SPEC SHEET

Surface Applied Privacy Film  
Technical Guide & Product Overview





# Privacy On Demand

Solyx Switchable™ Surface Applied Privacy Film transforms existing glass into dynamic privacy glazing. Utilizing advanced PDLC (Polymer Dispersed Liquid Crystal) technology, the film transitions from transparent to private at the touch of a switch, creating flexible environments that adapt instantly to changing needs.

Unlike traditional blinds, shades, or curtains, Solyx Switchable preserves clean sightlines and contemporary aesthetics while maintaining access to natural daylight.

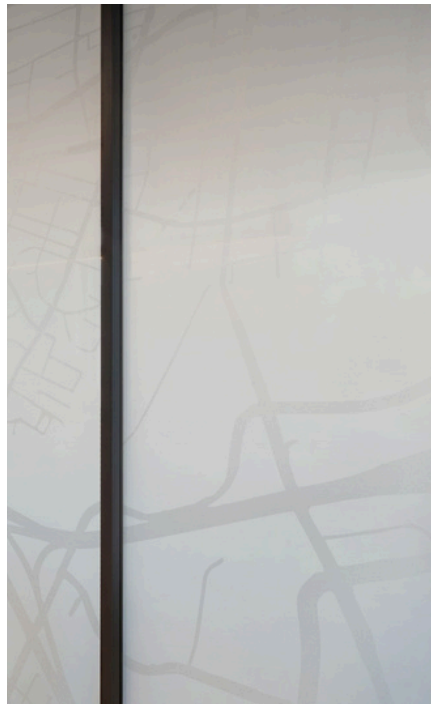
## About Switchable

### Key Benefits

- Instant privacy control
- Surface-applied retrofit solution
- Maintains natural light transmission
- Modern architectural appearance
- Projection-capable in private mode
- Ideal for commercial and residential applications

### Common Applications

- Corporate Offices
- Conference Rooms
- Healthcare Facilities
- Hospitality Spaces
- Luxury Residences
- Retail Environments
- Transportation Interiors



The film is opaque when OFF



The film is clear when ON

# Overview

## Electrical Specifications

Privacy when you need it, at the flip of a switch.

Solyx Switchable™ is designed for installation onto existing glass surfaces, allowing architects, contractors, and facility managers to upgrade conventional glazing into intelligent privacy glass without replacing the glass itself.

When electrical power is applied, liquid crystal molecules align to create a transparent appearance. When power is removed, the film returns to a translucent state, obscuring visibility while allowing light transmission.

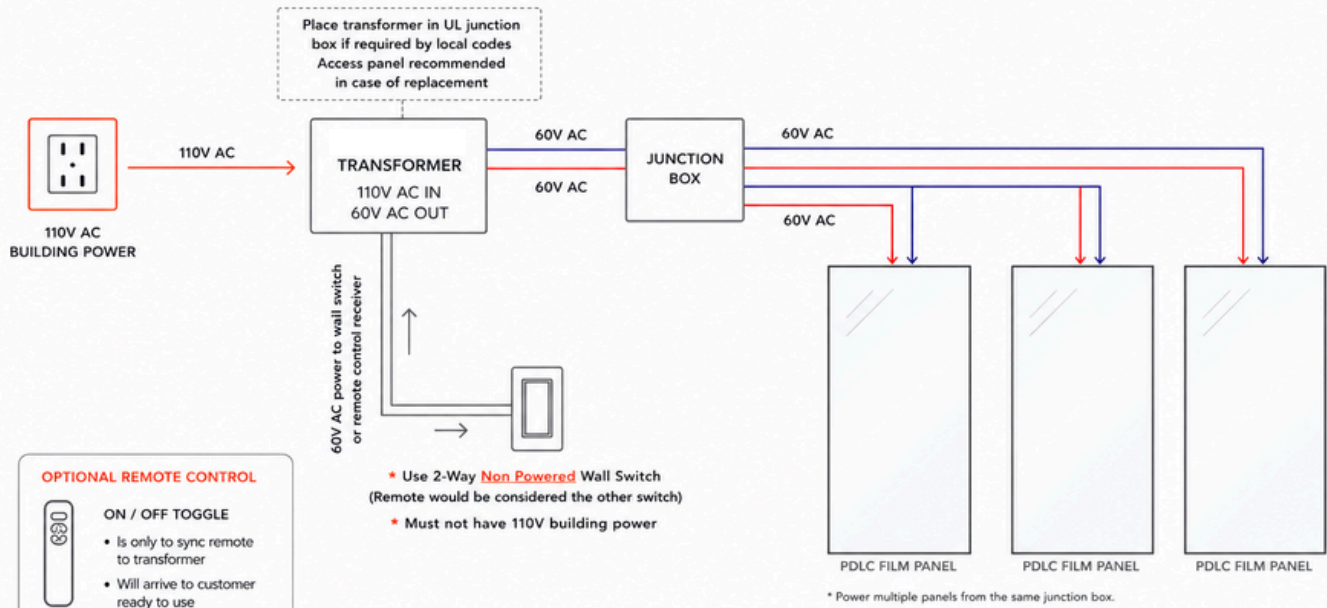
### Electrical Coordination

#### Before Installation:

- Coordinate all electrical requirements with a licensed electrician.
- Route power leads from each film section to an approved junction box.
- Electrical installations must comply with applicable local codes.
- Home-run connections to a junction box and then the transformer is recommended.
- Avoid daisy-chaining film sections.
- Protect and seal all busbar connections.



### WIRING DIAGRAM



#### IMPORTANT NOTES



All wiring must be installed in accordance with local and national electrical codes.



Use only approved components and do not exceed the specified voltage.



Installation should be performed by a qualified professional.

# Handling & Maintenance

## Solyx Switchable



**Proper handling ensures optimal performance and long-term durability.**

### Installation Best Practices

- Handle film carefully during transport and installation.
- Remove release liner gradually during application.
- Use approved installation tools and techniques.
- Apply film evenly to avoid air entrapment.
- Larger panels should be installed by two technicians.

### Precautions

- Do not crease, fold, pinch, or bend film.
- Avoid impacts on edges and corners.
- Protect from moisture exposure.
- Avoid excessive thermal expansion and contraction.
- Do not attach adhesives or mounted accessories directly to the film surface.

### Maintenance

For routine cleaning:

- Use soft microfiber cloths.
- Avoid abrasive pads or tools.
- Do not use sharp objects on the film surface.
- Apply cleaning solutions to cloths rather than directly to film.



# Understanding Optical Performance

Solyx Switchable™ performance values are measured under controlled laboratory conditions at normal incidence (0° viewing angle).

As with all PDLC technologies, visual characteristics may vary depending on:

- Viewing angle
- Observer distance
- Ambient lighting conditions
- Interior and exterior light balance

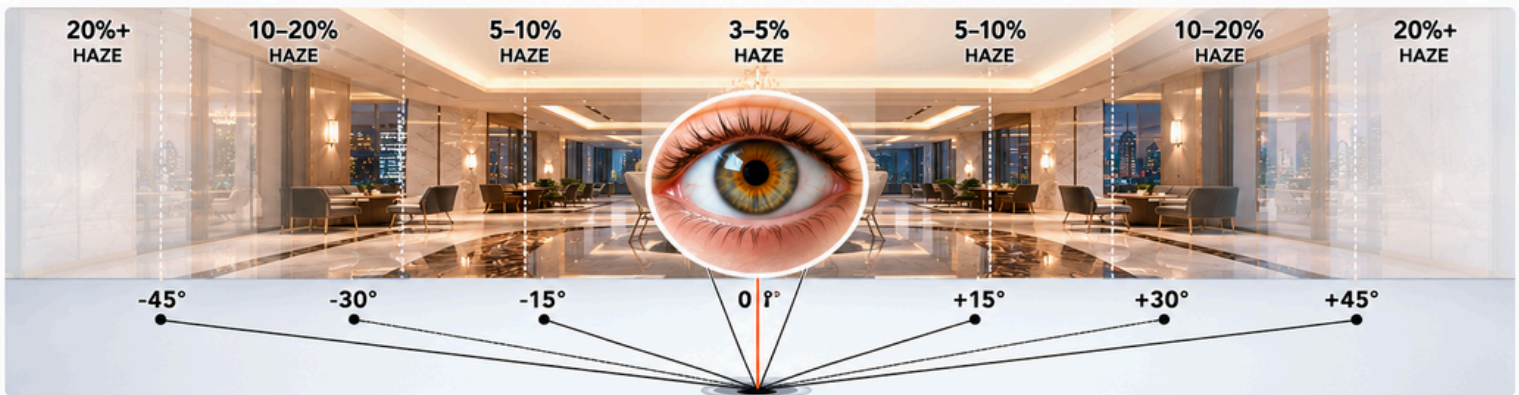
At wider viewing angles, light diffusion increases naturally within the PDLC structure, resulting in increased perceived haze and reduced clarity.

This characteristic is normal and should be considered when designing applications involving large expanses of switchable glass or frequent off-axis viewing.

## UNDERSTANDING OPTICAL PERFORMANCE

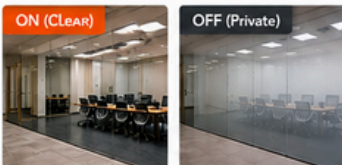
### Viewing Angle & Haze Characteristics

As with all PDLC technologies, the optical performance of Solyx Switchable™ film is affected by the viewing angle in relation to the surface. The chart below illustrates how apparent haze naturally increases as the viewing angle moves away from 0° (center, minimal haze) toward ±45° (outer edges, higher haze).



#### 1 WORSE LIGHTING CONDITIONS

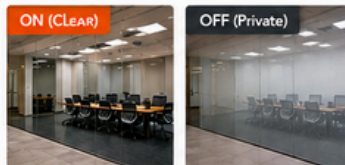
Light that is only on the outside of the conference room will cause an imbalance in light intensity. This will increase the haze.



Brighter on one side creates contrast, resulting in higher haze.

#### 2 BETTER LIGHTING CONDITIONS

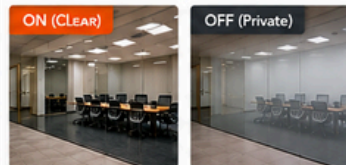
Light on the outside of the conference room is brighter in intensity than on the inside. This will result in a slight haze.



More exterior light reduces contrast for improved clarity.

#### 3 BEST LIGHTING CONDITIONS

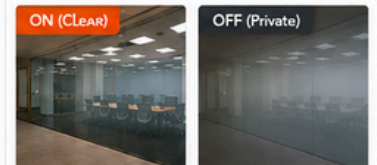
Light on the inside of the conference room and outside are evenly balanced in intensity and uniformly diffused at appropriate distances.



Balanced lighting from both sides provides the clearest results.

#### 4 LOW HAZE IN DARK STATE (LIGHTS OFF)

No lights on the inside or outside of the conference room will result in minimal haze.












Without light on either side, the film appears the most opaque.

*Actual performance may vary based on installation environment, lighting conditions, and observer position.*

# Power Supply

# Dimmer Transformer Controller

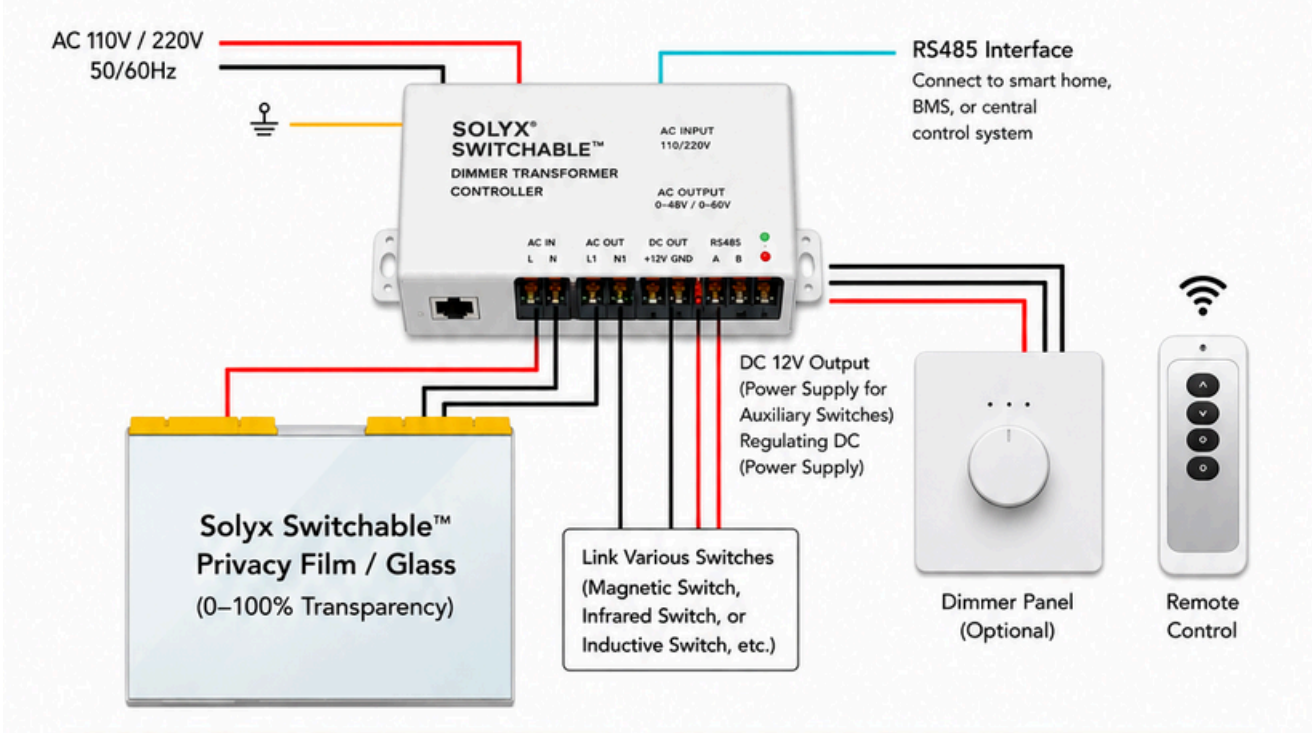
## TECHNICAL SPECIFICATIONS

	Input Voltage	AC110V / AC220V, 50/60Hz
	Output Voltage	AC0V-48V / AC0V-60V
	Capacity Options	50W / 100W / 200W
	Operating Temperature	32°F to 122°F
	DC Output	12V (For Auxiliary Switches)
	Protection	Short Circuit Protection
	Connection	Network Cable (1m Standard)
	Cable Port	Network Interface
	Display	LED Status Indicators

**An intelligent power supply for adjustable privacy film & glass.**




The Solyx Switchable™ Dimmer Transformer Controller converts standard AC power into an intelligent power supply for switchable privacy film and glass.





Supporting dimming, wireless remote control, and RS485 integration, it provides precise transparency control for commercial and residential applications.






# Solyx Switchable


## Technical Specifications

OPTICAL PERFORMANCE		
	Visible Light Transmission (ON)	88% ±1%
	Visible Light Transmission (OFF)	5%
	UV Rejection	99%

ELECTRICAL PERFORMANCE		
	Switching Time (ON → OFF)	200 ms
	Switching Time (OFF → ON)	220 ms
	Operating Voltage	60 VAC
	Power Consumption	Avg. 1 W/SF

ENVIRONMENTAL & RELIABILITY		
	Operating Temperature	5°F to 149°F (-15°C to 65°C)
	Expected Service Life	10–15 Years
	Warranty	5 Years

### KEY FEATURES

 <p><b>PRIVACY ON DEMAND</b> Instantly changes from clear to private at the touch of a switch.</p>	 <p><b>NATURAL LIGHT</b> Maintains access to daylight even in the private state.</p>	 <p><b>RETROFIT SOLUTION</b> Surface-applied film installs directly onto existing glass.</p>	 <p><b>MODERN DESIGN</b> Seamless appearance with no blinds, shades, or visible hardware.</p>	 <p><b>PROJECTION CAPABLE</b> Ideal for presentations and collaborative environments.</p>
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*Actual performance may vary based on installation environment and conditions.*

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# Solyx Switchable

## Frequently Asked Questions

### **What is the warranty for Solyx Switchable™ Film?**

Solyx Switchable™ Film is backed by a 5-year warranty with registration.

### **Do you offer samples of switchable film?**

Yes. Qualified dealers can purchase PDLC and non-PDLC samples for \$50, including shipping. The sample cost is fully credited toward your first Solyx Switchable™ Film order.

### **How do I place an order?**

Switchable Film orders are placed by email. Contact us at [info@decorativefilm.com](mailto:info@decorativefilm.com) to begin the ordering process.

### **How do I find an installer?**

Connect with certified Solyx Switchable installers in your area by contacting our team at [info@decorativefilm.com](mailto:info@decorativefilm.com).

### **Does switchable film block UV rays?**

Yes. Solyx Switchable™ Film blocks up to 99% of harmful UV rays.

### **Can switchable film be applied to existing glass?**

Yes. Switchable film is an ideal retrofit solution and can be dry-applied to existing flat glass surfaces.

### **What power is required for switchable film?**

Switchable film operates using low-voltage electrical connections.

#### Specifications

- Operating Voltage: 60 VAC
- Energy Consumption: Average 1 W/SF

The transformer can be plugged into a standard wall outlet or hardwired into a junction box.

### **How is pricing determined for Solyx Switchable?**

Every Solyx Switchable order is quoted to meet the specification and material demands of each individual project. Contact our team at [info@decorativefilm.com](mailto:info@decorativefilm.com) to receive a quote.

### **What is the price of decorative film used with Solyx Switchable Film?**

Stock designs are sold by the foot and browsable on our website, [decorativefilm.com](http://decorativefilm.com). We offer custom decorative film solutions at exclusive pricing for our installing dealers. Contact us to discuss your project requirements.

### **How is decorative film applied with switchable film?**

The decorative film is applied directly to the glass surface. Solyx Switchable is then dry-applied over the decorative film layer.

### **How much does shipping cost?**

Solyx Switchable ships via UPS Ground at a flat rate of \$160 per box of up to 10 panels.

### **What are the maximum panel dimensions?**

Solyx Switchable is available in widths up to 71 inches and lengths up to 144 inches, with larger dimensions available by special order.

### **Can I project onto switchable film?**

Yes. Solyx Switchable™ Film can be used as a projection surface when in privacy mode.

### **Questions?**

Contact our Solyx Switchable support team at [info@decorativefilm.com](mailto:info@decorativefilm.com) or visit our Solyx Switchable Resource Page at [info.decorativefilm.com/solyx-switchable-film](http://info.decorativefilm.com/solyx-switchable-film)