

PriWatt® CLC smart glass is an innovative light-regulating product that can be electronically controlled. In its off-state, it takes on a neutral black-grey appearance, offering features like light blocking, shading, and privacy protection.



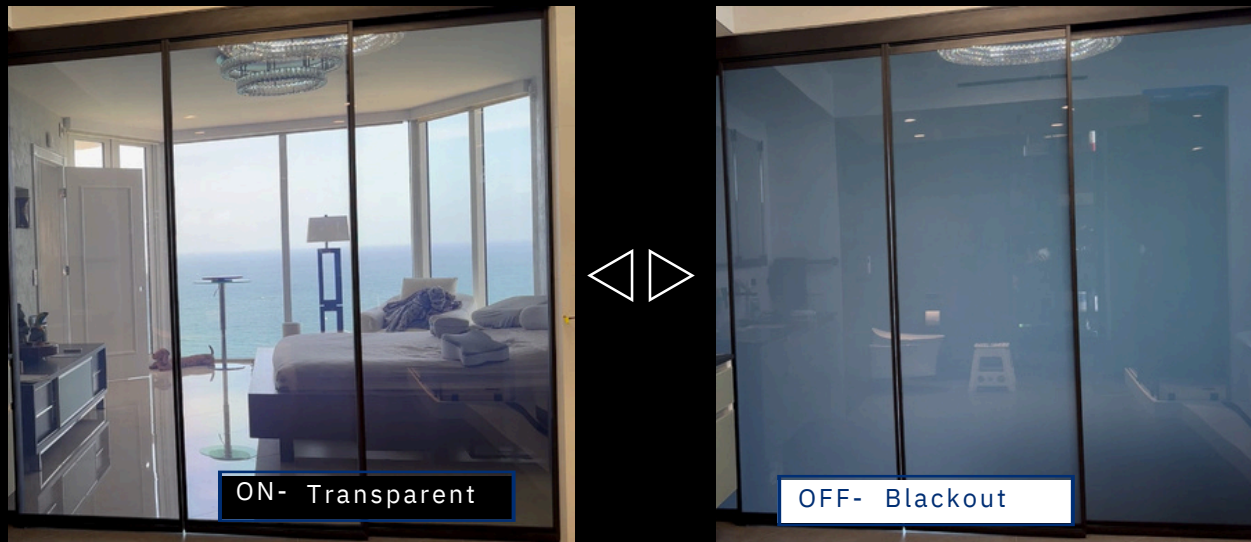
Characteristics

- High contrast ratio > 6 times;
- Low on-state haze (<3%), high off-state haze (>95%);
- Wide working temperature range: -30° C to 90° C;
- No viewing angle dependency;
- High insulation, with infrared blocking >80% and ultraviolet blocking >99%;
- High heat insulation (standard 2.5H exposure results in 7-10° C lower temperature compared to ordinary glass);
- Long lifespan, with switch cycles exceeding one million times.

PriWatt™ Blackout Technology

PRIWATT
BLACKOUT

CLC (Colorant Liquid Crystals) Glass is a high-performance laminated smart glass technology that allows instant transition between transparent and deep blackout states using an electrical current. Unlike other switchable glass types, CLC offers total light blocking, ensuring complete privacy and room darkening at the push of a button.

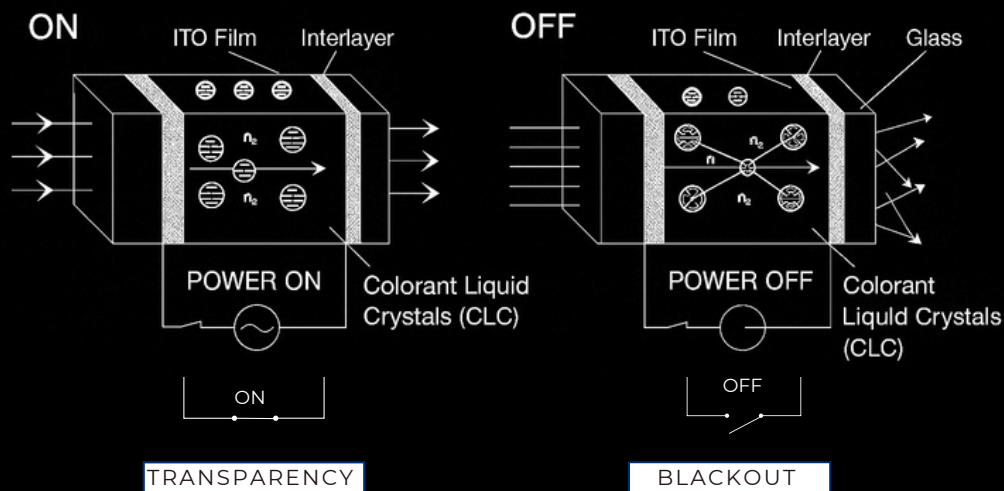


Working Principles

CLC Glass consists of a laminated structure with a CLC smart film—engineered with crystal-aligned molecules—sandwiched between two sheets of glass. In its default state (powered off), the molecules block all light, rendering the glass fully opaque and black. When electrical current is applied, the crystals align, allowing light to pass through and turning the glass clear.

This technology is ideal for environments where total privacy or blackout functionality is essential—such as home theaters, conference rooms, or luxury bedrooms. It also offers UV protection, reduces glare, and enhances energy efficiency by blocking solar heat in its off state.

Modulation of light transmission by colorant liquid crystals



TECHNICAL SPECIFICATIONS



We test our product regularly to ensure adhesion and safety. As a Certified Laminator our tolerances exceed those defined for industry by SGCC, IGCC, UL and ASTM. We pride ourselves on our ability to tackle complex challenges, push the boundaries of design, and exceed client expectations with every project we undertake.



UL Certificate E514182
a. cULus - Recognized component to UL 962 5th edition
b. CSA C22.2 No. 0.4, Bonding of Electrical Equipment, Edition 4.
Product Category IYQX2/8

Patent US 11,686,966 B2
Canadian Patent #3.212.838
SGCC 9059
IGCC 5997-P L23

ELECTRICAL	TECHNICAL	OPTICAL
Working Voltage (ON): 48-60VAC	Glass Type: Low Iron, Laminated, Heat Treated or Fully Tempered	Visible Light Transmission (OFF): 6%
Power Consumption <0.5W/SF	Glass Color: Clear, Low iron	Visible Light Transmission (OFF): 38%
Frequency of Current: 50/60Hz	Max Size 58 inch x 130 inch	Haze (ON): 3% Haze (OFF): 95%
Responding Time (OFF-ON): <5ms	Thickness 3/8 inch Thickness 1/2 inch Thickness 9/16 inch Weight ~5 lbs/sqft	UV Block: 99% /365nm-380nm
Responding Time (ON-OFF): <150ms	Shape: Any shape or curved including holes, notches and cut outs.	IR Block (ON): 98% IR Block (OFF): 20%
Switch Speed ON < 200 milliseconds	Sound transmission class (STC) ~ 40 Operating Temperature: -30°C - 90°C	SHGC (ON): 0.74% SHGC (OFF): 0.31%
Switch Speed OFF < 10 milliseconds	Lifespan (ON): > 10 Years On/Off > 2,000,000 Times	Light Transmission View Angle (ON): 170°

TECHNICAL SPECIFICATIONS



WEATHER RESISTANCE TEST

Radiotolerance	UV light 1 00h Under 300nm 0.83w/m2	TL 3%, Haze 2%,
Boiling water resistance test	2h In 100°C hot water t.TL s3%, t.HAZE s2%, 6 Es2	TL 3%, Haze 2%,
Humidity-resistance	336h In 49-54°C Water	TL 3%, Haze 2%,
High temperature test	2000h in go•c	TL 5%, Haze 5%,
Storage in cold	1 000h In -30°C	TL 3%, Haze 2%,
Thermal shock	1000 Cycles Cycle: -30°C, 5h;8o-c,o.5h	TL 3%, Haze 2%,
Durability of ON/OFF	30,000 Cycles	TL 5%, Haze 3%,

