



PDLC SMART FILM – HIGH TEMPERATURE | Specialty Series

Professional Switchable Privacy Glass Solution for High-Temperature Environments

High-performance PDLC Smart Film engineered for demanding environments where elevated temperatures, solar exposure and reliable privacy control require enhanced thermal resistance.

Product Overview

The High Temperature PDLC Smart Film is a specialized switchable privacy solution developed for installations exposed to elevated operating temperatures and demanding environmental conditions.

When powered, the film becomes transparent, allowing natural light to pass through the glass. When power is removed, the liquid crystal molecules disperse and the glass transitions to an opaque state, providing immediate privacy.

With an operating temperature range of **-30°C to +90°C**, this series offers significantly increased thermal tolerance while retaining the key characteristics of conventional PDLC technology, including fast switching, low power consumption, high UV protection and excellent privacy performance.

The High Temperature series is particularly suitable for projects involving increased solar exposure, warmer environments or applications where standard PDLC operating-temperature limits may not provide sufficient margin.

Key Benefits

- ✓ High Temperature Resistance
- ✓ Operating Range up to +90°C
- ✓ UV Protection ≥99%
- ✓ IR Rejection ≥60%
- ✓ Instant Privacy Control
- ✓ Low Power Consumption
- ✓ Fast Switching Response
- ✓ Smart Control Integration Ready

Typical Applications

High Solar Exposure: Glass panels subject to increased solar exposure and elevated surface temperatures.
Commercial Buildings: Offices, meeting rooms, glazed partitions and architectural environments requiring increased thermal tolerance.

Retail & Exhibition: Showrooms, display areas and commercial spaces with large glazed surfaces or increased solar exposure.

Hospitality: Hotels, restaurants, leisure facilities and premium guest environments exposed to demanding temperature conditions.

Residential: Luxury villas, apartments and architectural glass applications where higher operating-temperature capability is required.

Technical Specifications

PARAMETER	SPECIFICATION
FILM TYPE:	Self-Adhesive High Temperature PDLC Smart Film
LIGHT TRANSMISSION (ON):	83.5%
HAZE (ON):	4.53%
OPERATING VOLTAGE:	60V AC
POWER CONSUMPTION:	≤5 W/m ²
VIEWING ANGLE:	≥160°
UV REJECTION:	≥99%
IR REJECTION:	≥60%
RESPONSE TIME (OFF→ON):	≤30 ms
RESPONSE TIME (ON→OFF):	≤200 ms
OPERATING TEMPERATURE:	-30°C to +90°C
EXPECTED LIFESPAN:	100,000 Hours
SWITCHING CYCLES:	≥2 Million
AVAILABLE WIDTH:	Up to 1500 mm

Control Options

					
Wall Switch	Remote Control	Motion Sensor	Mobile App	Smart Home	BMS Integration

Professional Installation by Bullconcept

Bullconcept Smart Solutions Ltd. provides complete turnkey PDLC Smart Film solutions, including technical consultation, site assessment, product selection, professional installation, system commissioning, and after-sales support.

Every project is individually evaluated to ensure the most suitable film type, control method, and installation approach for the specific environment and customer requirements.

Maintenance & Care

Detailed cleaning and maintenance instructions are available in the PDLC Smart Film Care & Maintenance Guide, available at <https://smartfilm.bullconcept.com>.

Important Notes

This product is intended to be installed, connected, and commissioned by qualified professionals. Final suitability depends on the project environment, glass condition, dimensions, control requirements, and site-specific installation conditions.

Ready to discuss your project?

Contact our team for a free consultation.

Contact



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