



T91 SMART FILM

ADHESIVE WHITE

Adhesive Polymer Dispersed Liquid Crystal (PDLC) smart film switches between opaque and clear states instantly. When power is OFF, liquid crystals (LC) scatter light, making the film opaque. When power is ON, the crystals align, allowing light to pass through for full transparency.

ADVANTAGES



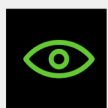
Fast Switching Time

Changes from clear to opaque in less than 10 ms



Low Power

Consumes less than 0.5 W/ft² (5 W/m²) when ON



Ultra Clear

Transmits 90% of visible light when ON



Acoustic Insulation

Acts as a sound barrier reducing noise transmission



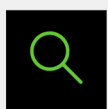
Long Lasting

Lasts over 15 years and endures 80 million switching cycles



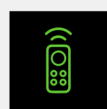
Wellbeing

Allowing natural daylight



Low Haze

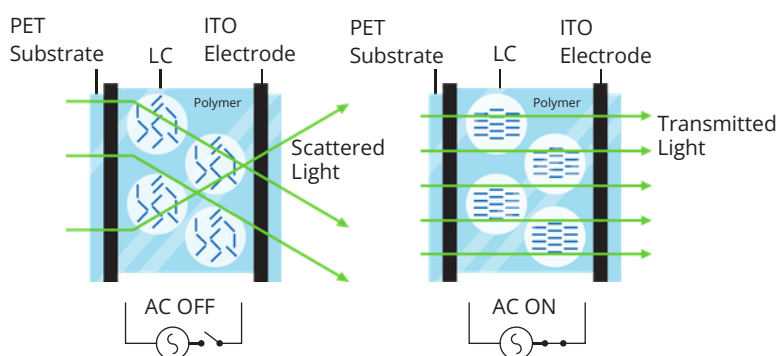
Maintains haze below 2.5%, preserving crisp views



Control

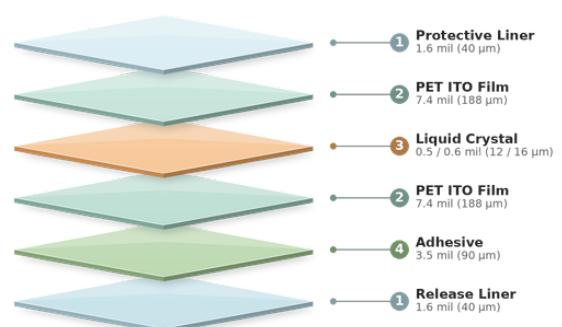
Certified controllers offer ON/OFF and dimming

WORKING PRINCIPLE



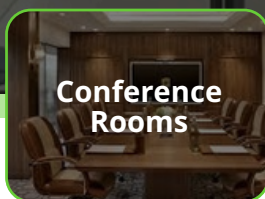
LAYERS STRUCTURE

T91 Adhesive Smart Film



1 mm = 1,000 µm; 1 mil = 25.4 µm; 1 inch = 1,000 mil = 25.4 mm

APPLICATIONS



T91 SMART FILM ADHESIVE WHITE SPECIFICATIONS

CATEGORY	PARAMETER	STATE	T91 - 0.6 mil (16 μm)	T91 - 0.5 mil (12 μm)
OPTICAL	Color	ON	Clear	
		OFF	Opaque White	
	Visible Light Transmittance	ON	90% ±2%	90% ±2%
		OFF	83% ±5%	85% ±5%
	Parallel Light Transmittance	ON	87.75%	87.75%
		OFF	0.83%	0.85%
	Haze	ON	< 2.5%	< 2.5%
	Viewing Angle	ON	> 140°	> 140°
	UV Blocking Rate	ON	99.7%	99.7%
	SHGC	ON	0.923	
	OFF	0.638		
ELECTRICAL	Controller Input Supply	110 V / 220 V AC		
	Working Operating Voltage	ON	48–65 V AC (50/60 Hz)	
	Response Time	ON → OFF	< 200 ms	
	Response Time	OFF → ON	< 10 ms	
	Switching Cycles	> 80 million		
	Durability	ON	> 15 years	
	Smart Film Power Consumption	ON	< 0.5 W/ft² (< 5 W/m²)	
	Controller Power Consumption	0.2–0.4 W/ft² (2–4 W/m²)		
	Operating Modes	ON, OFF, Dimming, Segments		
MECHANICAL	Width	40.6" (1030 mm), 48.6" (1235 mm) 60" (1520 mm), 71" (1800 mm)		
	Roll Length	98 ft (30 m), 164 ft (50 m)		
	Formats	Cut to Size, Roll, Custom Roll Blinds, Shapes		
	Available Colors	White		
	Compliance	Company: ISO 9001, IATF 16949 Products: RoHS, CE, UL		
ENVIRONMENTAL	Storage Conditions	–4 °F to 140 °F (–20 °C to 60 °C) 20–60% humidity		
	Working Temperature	–4 °F to 149 °F (–20 °C to 65 °C)		