

SMART FILM

T15 ADHESIVE BLACK

Adhesive Polymer Dispersed Liquid Crystal (PDLC) smart film switches between opaque black and clear black 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



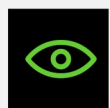
Fast Switching Time

Changes from clear to opaque in less than 10 ms



Low Power

Consumes less than 4W/m² when on



Ultra Clear

Transmits more than 10% of visible light



Acoustic Insulation

Acts as a sound barrier reducing noise transmission



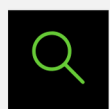
Long Lasting

Lasts over 15 years and endures 80 millions of switching cycles



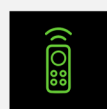
Wellbeing

Allowing natural daylight



Low Haze

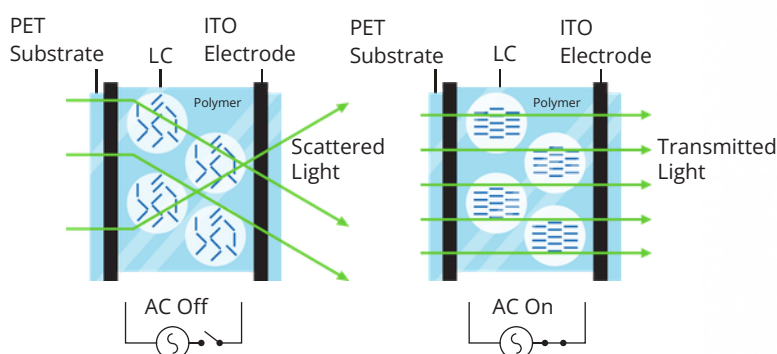
Maintains haze below 7.0%, preserving crisp views



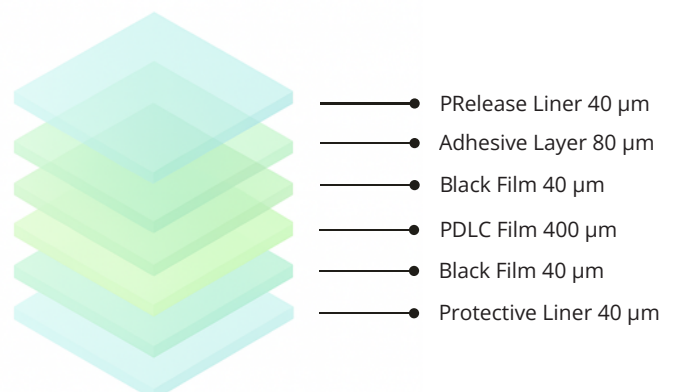
Control

Certified controllers offer on/off and dimming

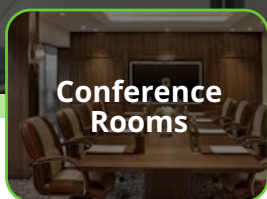
WORKING PRINCIPLE



LAYERS STRUCTURE



APPLICATIONS



T15 SMART FILM ADHESIVE BLACK SPECIFICATIONS

CATEGORY	PARAMETER	STATE	T15
OPTICAL	Color	ON	Clear Black
		OFF	Opaque Black
	Visible Light Transmittance	ON	12% ±1%
		OFF	1%±1%
	Parallel Light Transmittance	ON	10% ±1%
		OFF	1%±1%
	Haze	ON	4.0%
	Viewing Angle	ON	> 120°
	UV Blocking Rate	ON	99.6%
	SHGC	ON	0.1
		OFF	0.02
ELECTRICAL	Controller Input Supply		110V / 220V AC
	Working Operating Voltage	ON	48-65V AC
	Response Time	ON -> OFF	< 200 ms
	Response Time	OFF - > ON	< 10 ms
	Switching Times		> 80 million Times
	Durability	ON	> 15 years
	Smart Film Power Consumption	ON	< 4 W/m2/h (<0.36W/Sq. F)
	Controller Power Consumption		2-4 W/m2/h (0.19-0.37 W/Sq. F)
MECHANICAL	Operating Modes		On, Off, Dimming, Segments
	Width		1030, 1235, 1535mm (40 1/2", 48 5/8", 60 3/8")
	Roll Length		30m (≈100 ft) 50m (≈165 ft)
	Formats		Cut to Size , Roll, Custom Roll Blinds, Shapes
	Available Colors		White, Grey, Black, Custom
ENVIRONMENTAL	Compliance		Company: ISO9001, IATF16949 Products: RoHS,CE, UL
	Storage Conditions		-20°C~ 60°C (-4°F ~ 140°F) < 50% humidity
	Working Temperature		-20°C~ 80°C (-4°F ~ 176°F)