

LAMINATION SMART FILM

Lamination Polymer Dispersed Liquid Crystal (PDLC) smart film is used by glass laminators between two glass layers to create triplex glass with EVA interlayer bonding. It switches instantly between opaque and clear states. When power is off, liquid crystals scatter light, making the film opaque. When power is on, the crystals align, allowing full transparency.

ADVANTAGES



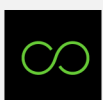
Fast Switching Time

Changes from clear to opaque in less than 10 ms



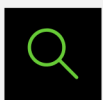
Ultra Clear

Transmits more than 83% of visible light



Long Lasting

Lasts over 15 years and endures 80 millions of switching cycles



Low Haze

Maintains haze below 3.0%, preserving crisp views



Low Power

Consumes less than 4W/m² when on



Acoustic Insulation

Acts as a sound barrier reducing noise transmission



Wellbeing

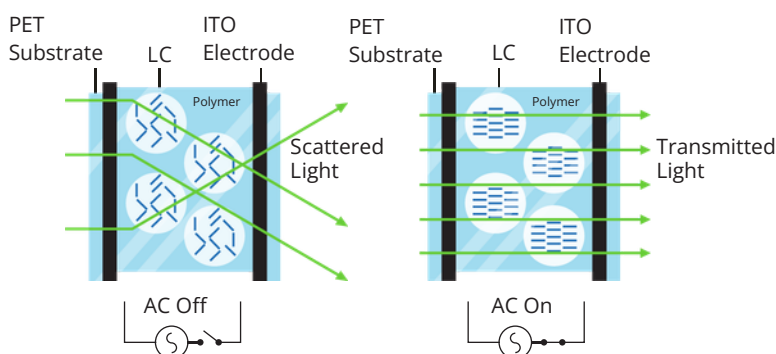
Allowing natural daylight



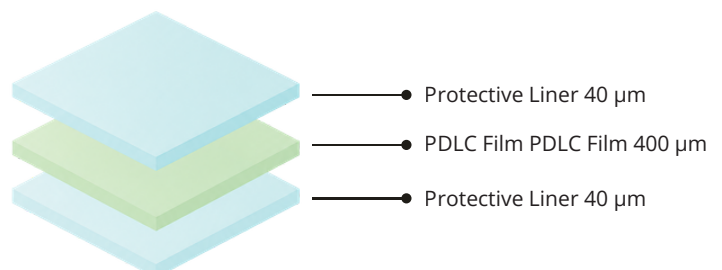
Control

Certified controllers offer on/off and dimming

WORKING PRINCIPLE



LAYERS STRUCTURE



APPLICATIONS



LAMINATION SMART FILM SPECIFICATIONS

CATEGORY	PARAMETER	STATE	T83
OPTICAL	Color	ON	Clear
		OFF	Opaque White
	Visible Light Transmittance	ON	> 82%
		OFF	< 10% ±2%
	Parallel Light Transmittance	ON	> 82%
		OFF	4%
	Haze	ON	< 3%
	Viewing Angle	ON	> 150°
	UV Blocking Rate	ON / OFF	98%
	SHGC	ON	N/A
		OFF	N/A
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	> 20 years
	Current	ON	< 200mA Sq.M (0.18 mA Sq.F)
	Smart Glass 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)
	Operating Modes		On, Off, Dimming, Segments
MECHANICAL	Glass Thickness		5+5, 6+6, 8+8, 10+10, 12+12, custom (3/16", 1/4", 5/16", 3/8", 1/2" custom)
	Max Width (Length unlimited)		White: 2000mm (70") Grey, Black: 1520mm (60")
	Glass Type		Annealed, Tempered, Clear, Low Iron, Ultra clear, IGU, Custom
	Available Colors		White, Grey, Black, Custom
	Compliance		Company: ISO9001, IATF16949 Products: RoHS, CE, UL
ENVIRONMENTAL	Storage Conditions		-20°C~ 60°C (-4°F ~ 140°F) < 50% humidity
	Working Temperature		-20°C~ 70°C (-4°F ~ 160°F)