SMART FILM
T40 ADHESIVE GREY

Adhesive Polymer Dispersed Liquid Crystal (PDLC) smart film switches between opaque grey and clear grey 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.
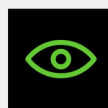
ADVANTAGES

Fast Switching Time
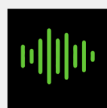Changes from clear to opaque in less than 10 ms

Ultra Clear
Transmits more than 45% of visible light

Long Lasting
Lasts over 15 years and endures 80 millions of switching cycles

Low Haze
Maintains haze below 4.0%, 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

PET Substrate | LC | ITO (Grey) Electrode | Polymer | Scattered Light | AC Off

PET Substrate | LC | ITO (Grey) Electrode | Polymer | Transmitted Light | AC On

LAYERS STRUCTURE

Protective Film 40 μm
Adhesive Layer 80 μm
PDLC Film 400 μm with Grey ITO
Protective Film 40μm

APPLICATIONS

Office Partitions

Conference Rooms

Medical Centers & Clinics

Bathroom partitions
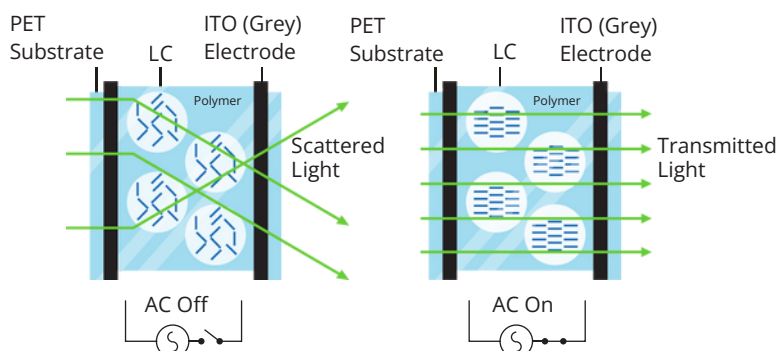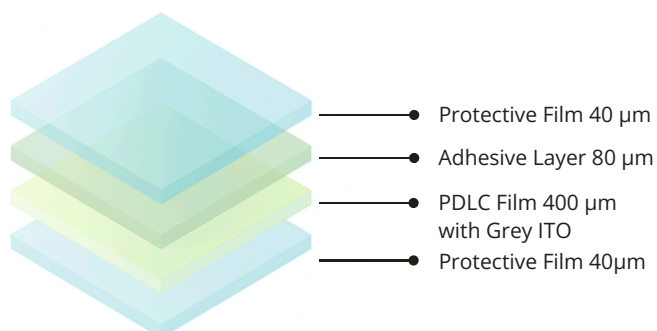
Showrooms
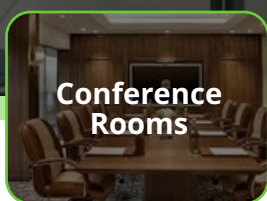
T40 SMART FILM ADHESIVE GREY SPECIFICATIONS

CATEGORY	PARAMETER	STATE	T40
OPTICAL	Color	ON	Clear Grey
		OFF	Opaque Grey
	Visible Light Transmittance	ON	48% ±1%
		OFF	5%±2%
	Parallel Light Transmittance	ON	45% ±1%
		OFF	3%±2%
	Haze	ON	<4.0%
	Viewing Angle	ON	>140°
	UV Blocking Rate	ON	99.6%
	SHGC	ON	0.37
		OFF	0.07
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)
	Operating Modes		On, Off, Dimming, Segments
MECHANICAL	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
	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)