



# ZHIYUAN BUILDING MATERIALS CO., LIMITED

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## PRODUCT DESCRIPTION

**Smart PDLC Switchable Film (Smart Film)** which is made of two layers of transparent conductive coating films sandwiched with Polymer Dispersed Liquid Crystal (PDLC) material. It is also called Smart Glass Film, Switchable Smart Film, Privacy Glass Film, PDLC Film, Magic Glass Film, Electronic Film etc.

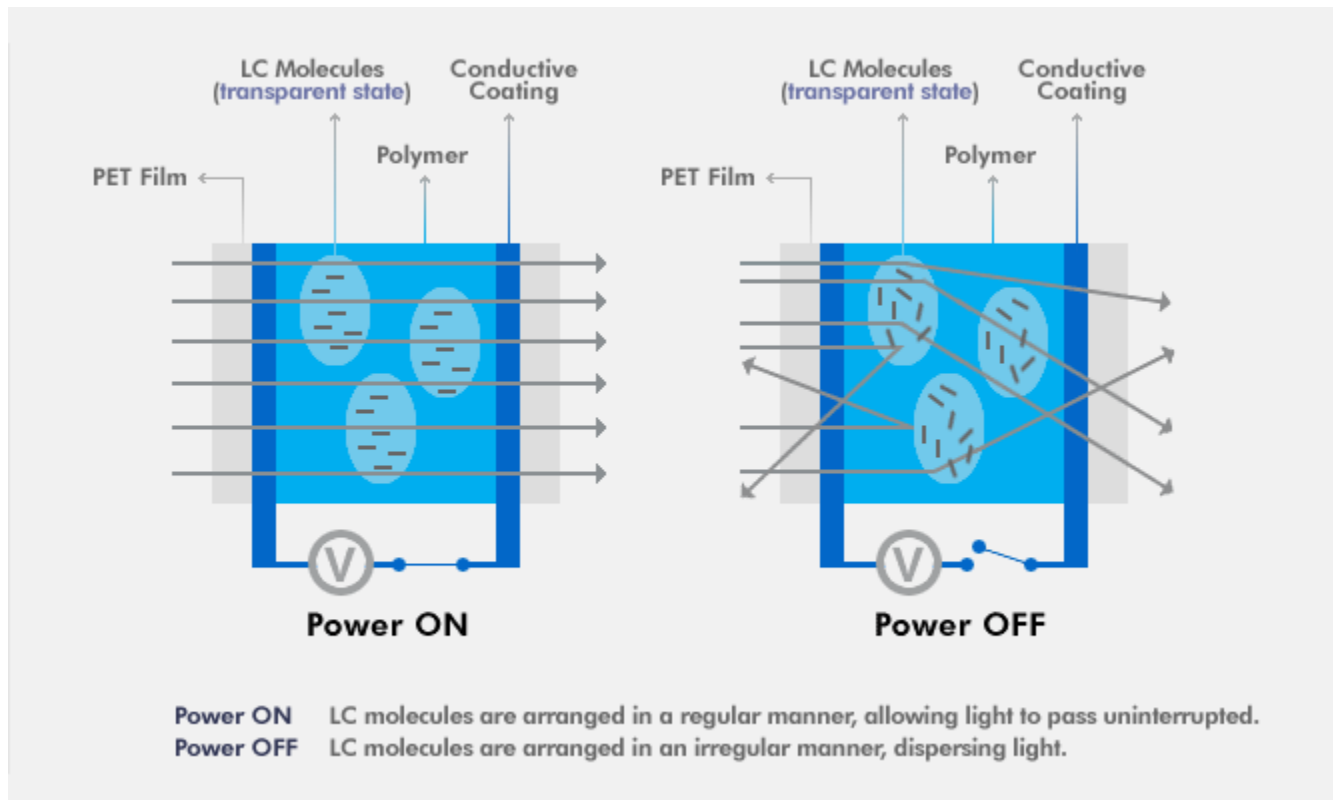
This film is used to laminated(sandwich) between two layer glass with EVA film, Then to make the PDLC smart glass.

### ● HOW IT WORK?

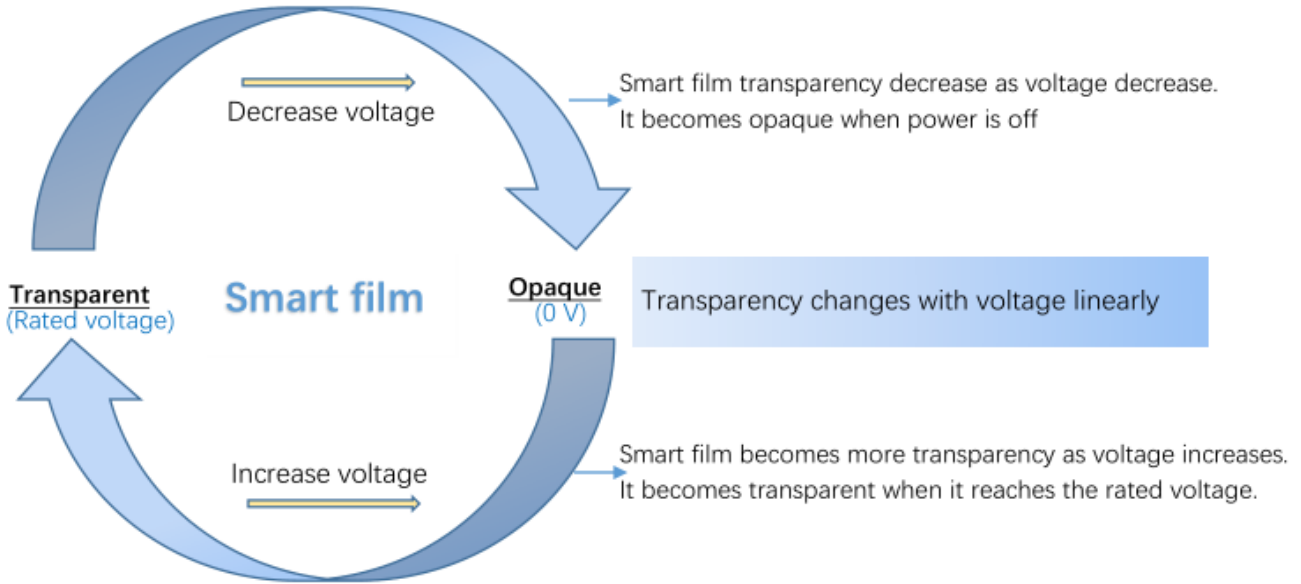
By applying or removing electric field to drive the liquid crystal molecules in aligned or disordered array, Smart PDLC film can realizes transparent or opaque effect.

This outstanding electro-optical characteristic enables it to a wide range of application in commercial entertainment, aviation and maritime, rail transportation, store windows and other critical national facilities, sites and so on.

### ● PICTURE OF PRODUCT THEORY:



● **TRANSPARENCY CHANGES WITH VOLTAGE LINEARLY**



● **TECHNICAL SPECIFICATIONS**

<b>Thickness</b>	a piece of Pdlc-interlayer thickness	0.38mm approximately
<b>Max size</b>	1800×4000mm	
<b>Life time</b>	>50,000hr (ON)	
<b>View angle</b>	150°	

<b>Optical Properties</b>	Visible Light Transmission	ON	>80%
		OFF	<1%
	Visual Angle	ON	150°
	UV Blocking	OFF/ON	>99%
<b>Electrical Properties</b>	Haze	OFF/ON	94%/6%
	Operating Voltage	ON	60VAC
	Frequencies	ON	50 to 60Hz
	Current	2mA/m2	2mA/m2
	Response Time	ON==>OFF	10ms
OFF==>ON		20ms	
<b>Specification</b>	Power Consumption	ON	5W/m2/hr
	Durable Temperature	-30°C to 100°C	
	Life Time	>50000hr	
	Thickness	0.38mm	

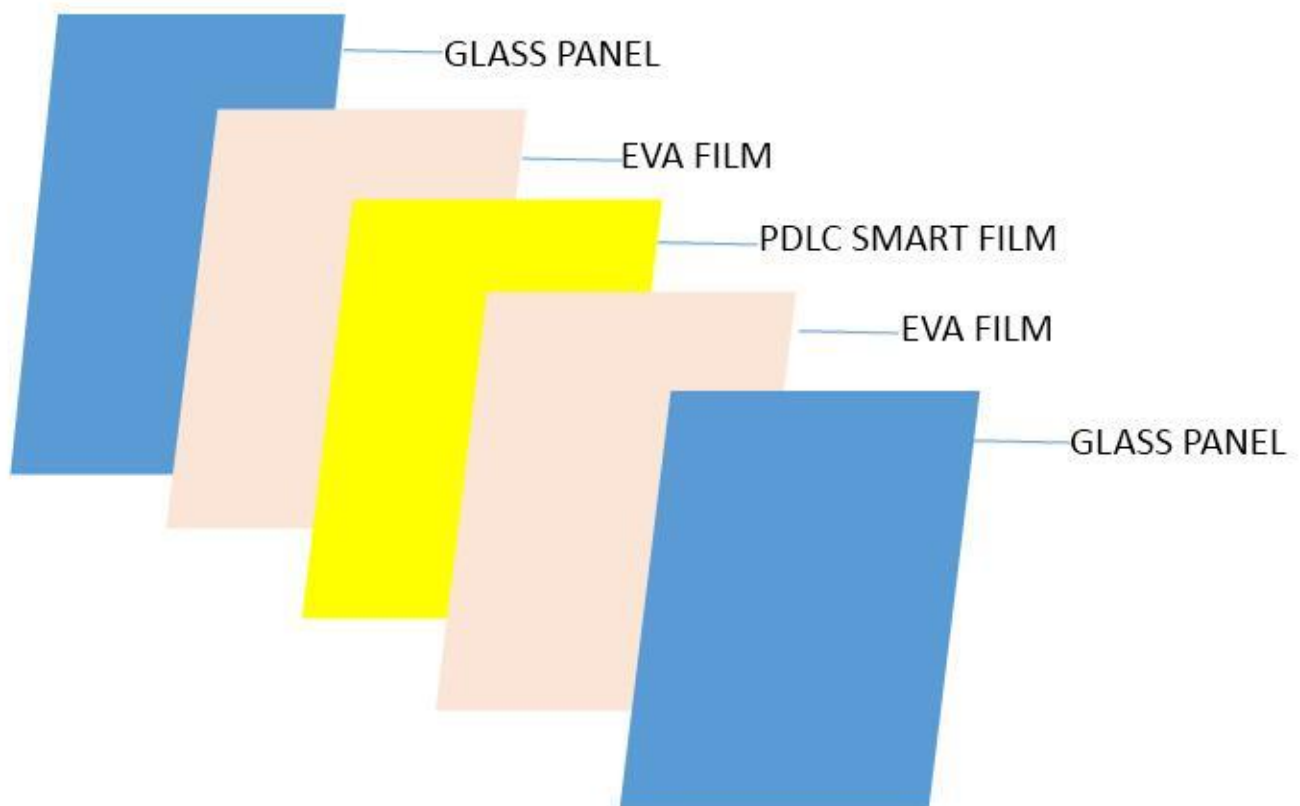
## ● LAMINATION SMART FILM:

To well protect the PDLC film and let it long time working, especially for environment with much moisture, we suggest customer use lamination smart film to be sandwich laminated between 2 layers glass.

Choosing to purchase our lamination smart film and have a local glass company to create the final products(smart glass). This method cuts down on shipping costs and potential loss due to breakage vs.purchasing our finished glass when a dealer is not nearby.

## HOW TO COMBINE THE GLASS AND SMART FILM?

SEE AS BELOW:



● APPLICATION:



Power on



Power off

**OFFICE**

**BATHROOM**



Power off



Power on



Power off



Power on

**BANK**

**HOSPITAL**



Power off



Power on