

■ 工作原理

PDLC，中文名叫聚合物分散液晶。无电场下，液晶分子会呈现不规则的散布状态，呈现透光而不透明的外观；施加电场时液晶分子呈现整齐排列，光线可以自由穿透，呈现透明状态。

■ 主要有点

- ✓ 保护乘客隐私
- ✓ 个性化，可分档调节透光度

■ 主要应用

- ✓ 夹层玻璃（天窗/侧窗/后档）

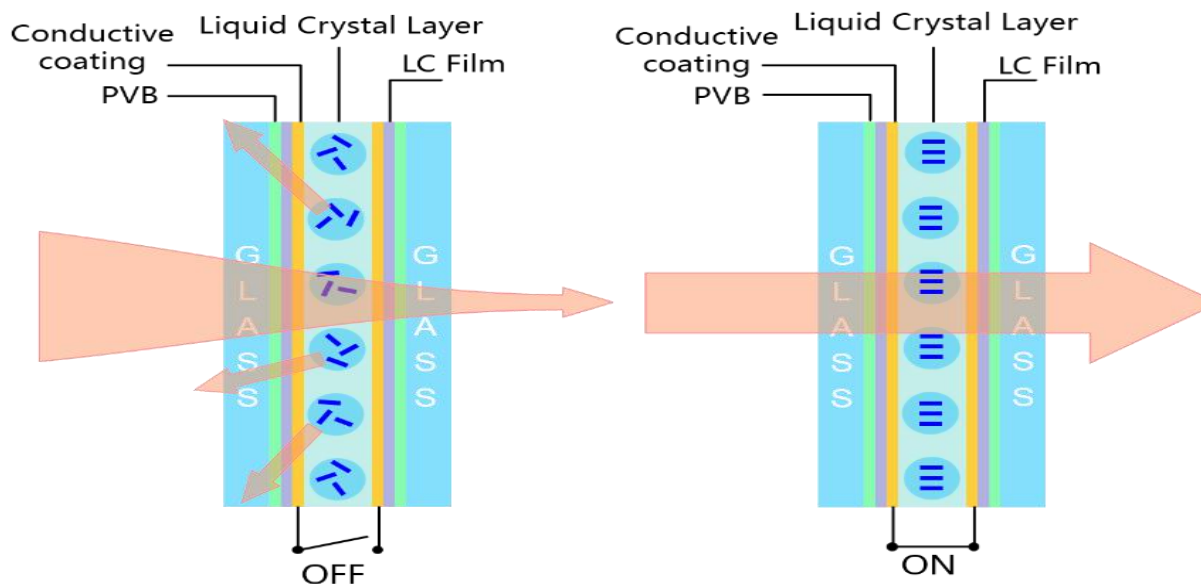
■ 主要指标

- ✓ 平行光透过率：0.5~78%可调
- ✓ 功率： $\leq 2W$
- ✓ 寿命：明暗切换700万次以上
- ✓ 驱动电压：0~36VAC

■ Status

- ✓ 具备量产能力

产品结构



■ Principe

PDLC is short for Polymer-Dispersed Liquid Crystal. When no electrical charge is applied, the crystals in the LC film diffuse/scatter light and the glass is translucent. When an electrical charge is applied, the crystals orient and the film becomes transparent.

■ Advantage

- ✓ Privacy protection
- ✓ Personalize, adjust the transmittance of glass

■ Advantage

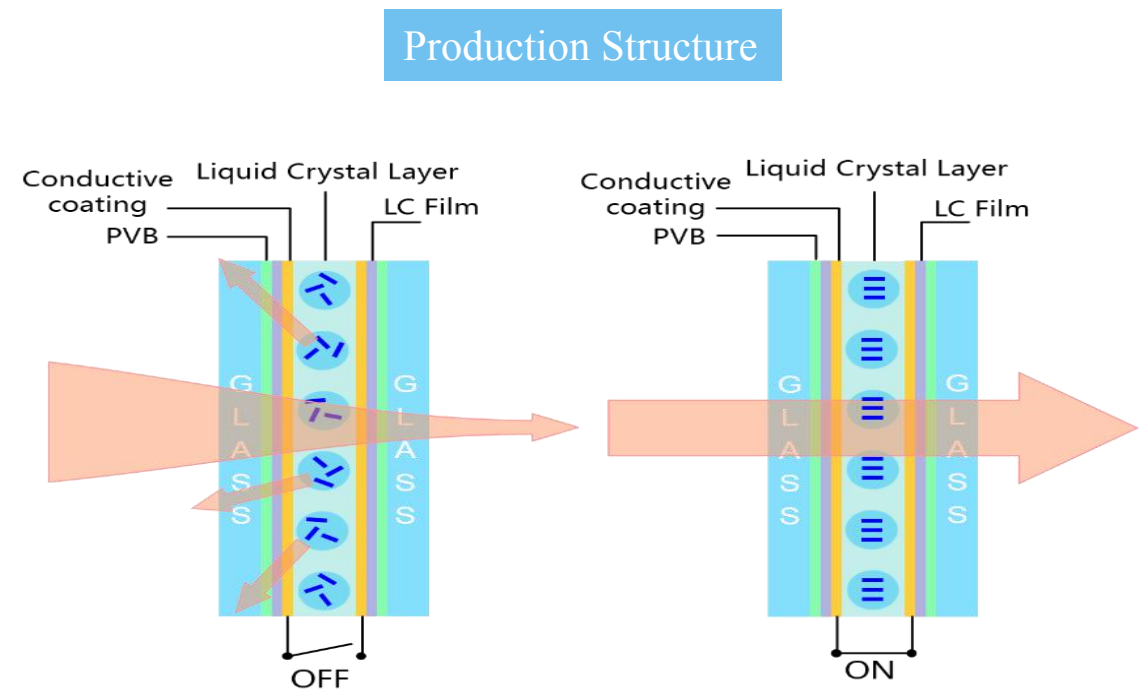
- ✓ Laminated Glass(Sunroof/side/rear window)

■ Key indicators

- ✓ Parallel light transmittance: 0.5~78%
- ✓ Power: $\leq 2W$
- ✓ Life: light and dark switch ≥ 7 million
- ✓ Driving voltage: 0~36VAC

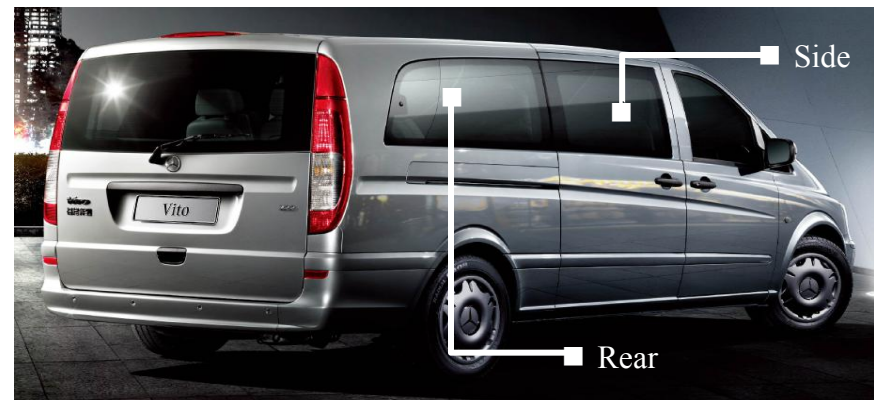
■ Status

- ✓ Have mass production ability



Typical performance

VRT film type	Power On (ISO9050-2003/D65 10°)					Power off (ISO9050-2003/D65 10°)					Votage (VAC)	
	Structure	Haze	TL	TE	TUV	TIR	Haze	TL	TE	TUV		TIR
2.1G+0.38PVB Dark+PDLC+0.38 PVBDark+2.1G		11.53	17.23	17.01	0.15	18.72	96.08	9.09	10.40	0.29	13.10	36.00



Benz Vito (Side/Rear side Windows)

■ 工作原理

功能粒子分散在PVB内，在常温下透明；光照受热或加热后，无色功能粒子 $\text{Me}(\text{La})_6$ 吸热反应，粒子 $\text{Me}(\text{Lb})_4$ 。

■ 主要优点

- ✓ 雾度低，颜色多种可选择
- ✓ 根据环境日晒温度自动变色，隔热效果好
- ✓ 生产加工工艺简单

■ 主要应用

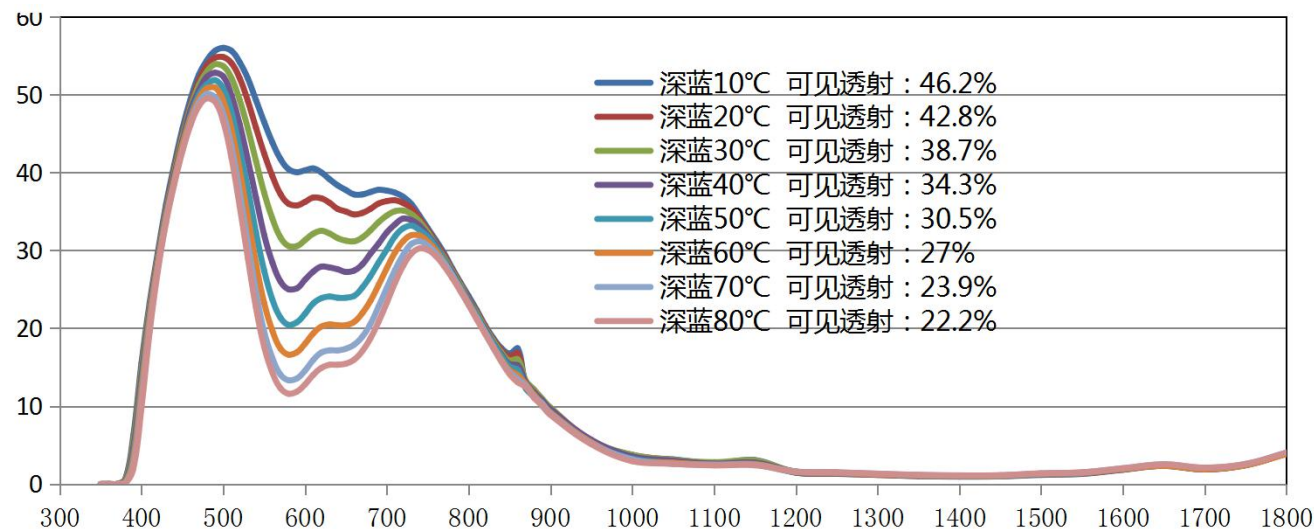
- ✓ 夹层天窗玻璃
- ✓ 夹层侧窗
- ✓ 夹层后档

■ Status

- ✓ Product verification



可见光区，温度越高透过率越低



Thermal-dimming glass

■ Principle

Dispersed function particles within PVB. It is transparent at room temperature, while be heated by illumination or heating, the colorless particles $\text{Me}(\text{La})_6$ will be transform to dark color particles $\text{Me}(\text{Lb})_4$ by means of endothermic reaction

■ Advantage

- ✓ Low haze, Personalize, adjust the color of glass
- ✓ Automatic color changing by solar,
- ✓ Simple process

■ Used on

- ✓ laminated sunroof
- ✓ laminated side window
- ✓ laminated backlite

■ Status

- ✓ Product verification



可见光区，温度越高透过率越低

