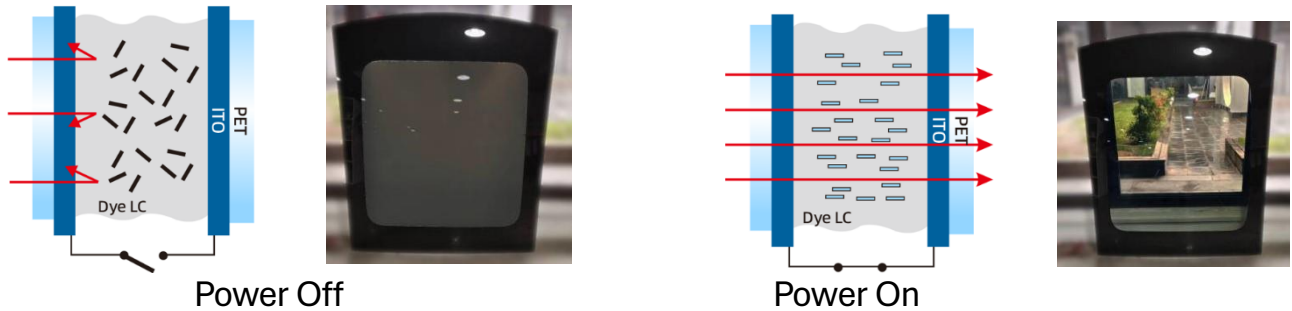


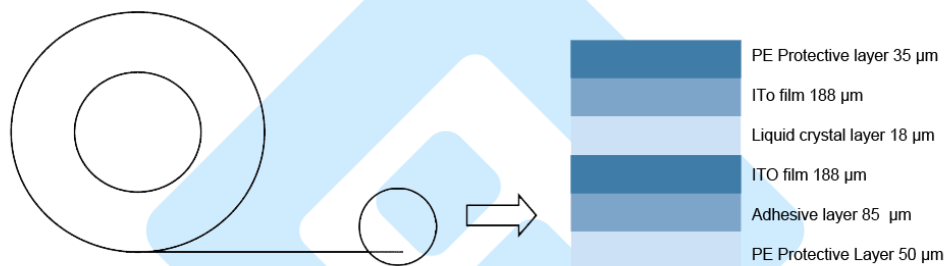
Blackout Smart DLC Film Specification

1.Product:

DLC Smart Film utilizes advanced dye-doped liquid crystal technology to switch between transparent and black opaque states, offering both privacy protection and solar shading. Unlike traditional PDLC film, which only provides privacy without shading, DLC Smart Film overcomes this limitation. It is the ideal solution for residential windows, curtain wall glass, and other architectural applications.



2.Product Structure:



2.1 Polymer Coating Thickness: 18μm

We use a standard 18μm polymer layer instead of thinning it to increase light transmission. This ensures optimal visual clarity while maintaining excellent light-blocking performance.

2.2 Adhesive Layer Thickness: 85μm

A thicker 85μm adhesive layer provides stronger adhesion, making installation more secure and easier to handle.

2.3 Roll size: 1*50m, 1.2*50m, 1.5*50m

Product Description		Black DLC Film
Working voltage		AC60V
Thickness		0.4mil
Material		Mitsubishi Japan Optical PET
Operation model	Power on	Transparent
	Power off	Opaque
Color	Avaliable color	Black
Power on	Visible light transmittance	65%
	Haze	1.4±0.5%
Power off	Visible light transmittance	1.65%
	Haze	99%
View angle	View angle	About 180 Degree
Electrical	Switch time	Less than 1 second (Off > On: about 200milliseconds On > Off: about 600milliseconds)
	Operating voltage	AC60±5V
	Power consumption	3.7W/sqm
	Frenquency rate	50-60Hz
	Dimmer function	Yes

SFB smart film ensures good light blocking performance while achieving high transparency.

3. Durability Performance:

Product Description	Black DLC Film
Sunlight-resistant	Yes
Max effective working temperature	T:70℃
UV Block	On Model/ Off Model>99%
IR Block	On Model>17%/Off Model>80%
Lifetime	More than 100000h (20years)
Operating temperature	T:-20℃-90℃
Product temperature resistance	T:-85℃-130℃
Anti-scratch coating	thickness: 1-2 μm,standard:2H
Resistance to yellowing	UV Weathering Tester,500hours $\Delta YI \leq 5$
Batch-to-batch color consistency	ΔE (Delta E) color difference measurement method, Standard: $\Delta E \leq 2.5$

3.1 Sunlight-resistant:

DLC film is engineered with UV-resistant materials and design, making it fully suitable for continuous use under direct sunlight without performance degradation.

3.2 Max effective working temperature:

DLC film performs reliably at temperatures up to 90℃ without becoming transparent when unpowered.

3.3 Resistance to yellowing :

Built for long-term durability, UV-blocking PET, oxidation-resistant ITO, and UV-stable polymers,making them ideal for continuous exposure to direct sunlight.

3.4 Batch-to-batch color consistency:

We maintain strict control over every production stage—from raw materials to ITO coating and polymer formulation—to ensure consistent color across batches. This allows different batches to be used together seamlessly, eliminating visible color variation and maximizing material utilization.

4. Warranty:

Warranty: five (5) years;