

BLACKOUT FILM

DLC 1% 20:1

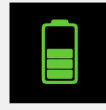
Blackout Smart Film switches between tinted and clear states instantly. When power is OFF, liquid crystals (LC) and dyes absorb light, making the film tinted. When power is ON, the liquid crystals align, allowing light to pass through for full transparency.

ADVANTAGES



Fast Switching Time

Changes from clear to tinted in less than a second



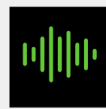
Low Power

Consumes 0.6–1.4 W/ft² (6–15 W/m²) when ON



Light Transmission

Transmits 21% of visible light when ON



Acoustic Insulation

Acts as a sound barrier reducing noise transmission



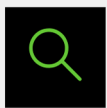
Long Lasting

Lasts over 15 years and endures 80 million switching cycles



Wellbeing

Allowing natural daylight



Low Haze

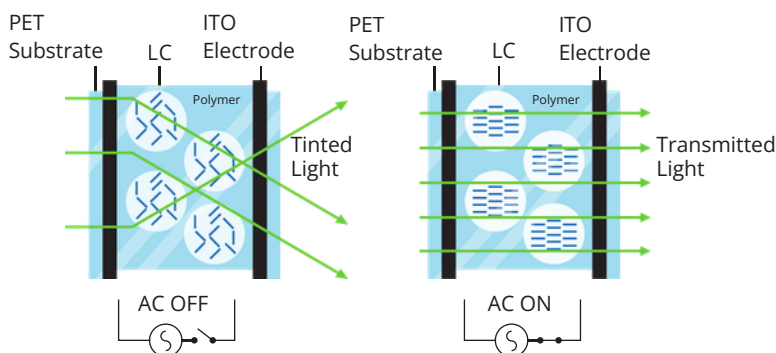
Maintains haze below 4%, preserving crisp views



Control

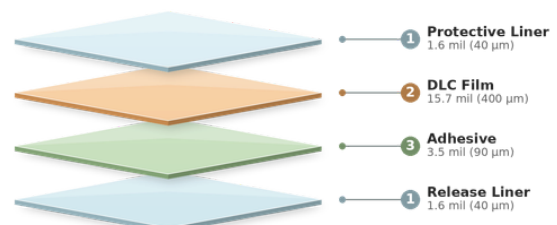
Certified controllers offer ON/OFF and dimming

WORKING PRINCIPLE



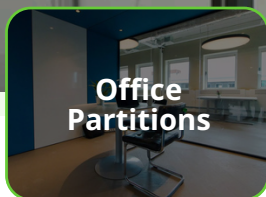
LAYERS STRUCTURE

Blackout DLC Film 1%



1 mm = 1,000 µm; 1 mil = 25.4 µm; 1 inch = 1,000 mil = 25.4 mm

APPLICATIONS



BLACKOUT DLC 1% SPECIFICATIONS

CATEGORY	PARAMETER	STATE	BLACKOUT
OPTICAL	Color	ON	Transparent
		OFF	Black
	Visible Light Transmittance	ON	21% $\pm$ 2%
		OFF	0.9% $\pm$ 0.3%
	Haze	ON	3.0%
		OFF	100%
	Viewing Angle	ON	> 120°
	UV Blocking Rate	ON	96.5%
		OFF	100%
	IR Blocking Rate	ON	15.8%
		OFF	97.7%
ELECTRICAL	Controller Input Supply		110 V / 220 V AC
	Working Operating Voltage	ON	48 V AC, 50 Hz
	Response Time	ON $\rightarrow$ OFF	10–150 ms
	Response Time	OFF $\rightarrow$ ON	10–50 ms
	Durability	ON	> 15 years
	Power Consumption	ON	0.6–1.4 W/ft ² (6–15 W/m ²)
	Operating Modes		ON, OFF, Dimming
MECHANICAL	Width		39.4" (1000 mm), 47.2" (1200 mm) 59.1" (1500 mm) or custom
	Roll Length		98 ft (30 m), 164 ft (50 m)
	Thickness		19 mil (480 μ m)
	Formats		Cut to Size, Roll
	Available Colors		Black
	Compliance		Company: ISO 9001, IATF 16949 Products: RoHS, CE, UL
ENVIRONMENTAL	Storage Conditions		–4 °F to 140 °F (–20 °C to 60 °C) 20–60% humidity
	Working Temperature		–4 °F to 194 °F (–20 °C to 90 °C)