



Reflecting
Tomorrow

PRIVY – X

EXTERIOR

TECHNICAL SPECIFICATIONS



PRODUCT FEATURES

Privy-X Switchable Film™ is the latest (3rd) generation of liquid crystal switchable film, having a similar function of what are commonly called an switchable window, smart glass, liquid crystal glass, privacy glass or PDLC, but at a much higher level. A novel non-linear polymer system and a new theory have been successfully used to solve all the previous problems in the switchable window industry, such as high haze in clear state, high driving voltage, moisture sensitive, UV instability, poor or no projection capability, narrow temperature range and short lifetime. The Privy-X technology has theoretically and practically blocked all chemical, electrochemical and optical factors that can cause the film to deteriorate. With these improvements, the total quality of Privy-X Film has been greatly improved to a much higher level. It perfectly combines light valve, projection and energy saving functions together. Haze in the clear state has been reduced from 10% to 3% ultra clearness, driving voltage has been reduced from 90V to 50-60V low and safe voltage, several new technologies have been used to protect liquid crystals and to extend operational life, and moisture, heat and UV stability have been greatly improved to suit both indoor and outdoor (lamination with regular glass) applications.

		Status	Data	Remarks
OPTICAL	Parallel Light Transmittance	On	> 76	
		Off	< 6	
	Total Light Transmittance	On	< 80	
		Off	< 50	
	Haze	On	< 8	
		Off	> 90	
UV Block	On/Off	> 98%		
Viewing Angle	On	> 160		
ELECTRICAL	Power Voltage	On	48 – 60 VAC	Varies from film sizes
	Response Time	On → Off	< 45 ms	
		Off → On	< 45 ms	
Power Consumption	On	4 W/m ²		
ENVIRONMENT	Work Temperature	On/Off	-20 – +70 °C	Far from heat, chemical, liquid, wet
	Storage Temperature		-15 – +50 °C	
	Humidity		< 70% RH	
DURABILITY	Life Time		> 50,000 hrs	
	Switch Time		> 8 million	
	Peel Strength		> 70 gf/inch	
	Temperature -20%, +70%, Humidity > 95% RH 240 H test passed			

Recommended Assembly and Glass Combination:

6mm Clear Low-E Tempered Glass + EVA Interlayer + Privy-X Switchable Film + EVA Interlayer + 6mm Clear Tempered Glass

Lamination Temperature : 0°C – 65°C – 115°C **Duration** : 3hrs., 40mins.
Cooling Down Temperature : 115°C – 25°C **Duration** : 2hrs.