

Smart Lite

ON-DEMAND
PRIVACY

SMART

SmartLite is a switchable glass manufactured by **Emirates Glass LLC**. At the flick of a switch SmartLite turns from a clear to an opaque glass panel to create on-demand privacy.





INTIMATE

Personal privacy does not necessarily need a solid door or wall. Artfully designed bathrooms radiate elegant intimacy with **SmartLight** separators, doors and windows, and allow for plenty of natural light when needed.

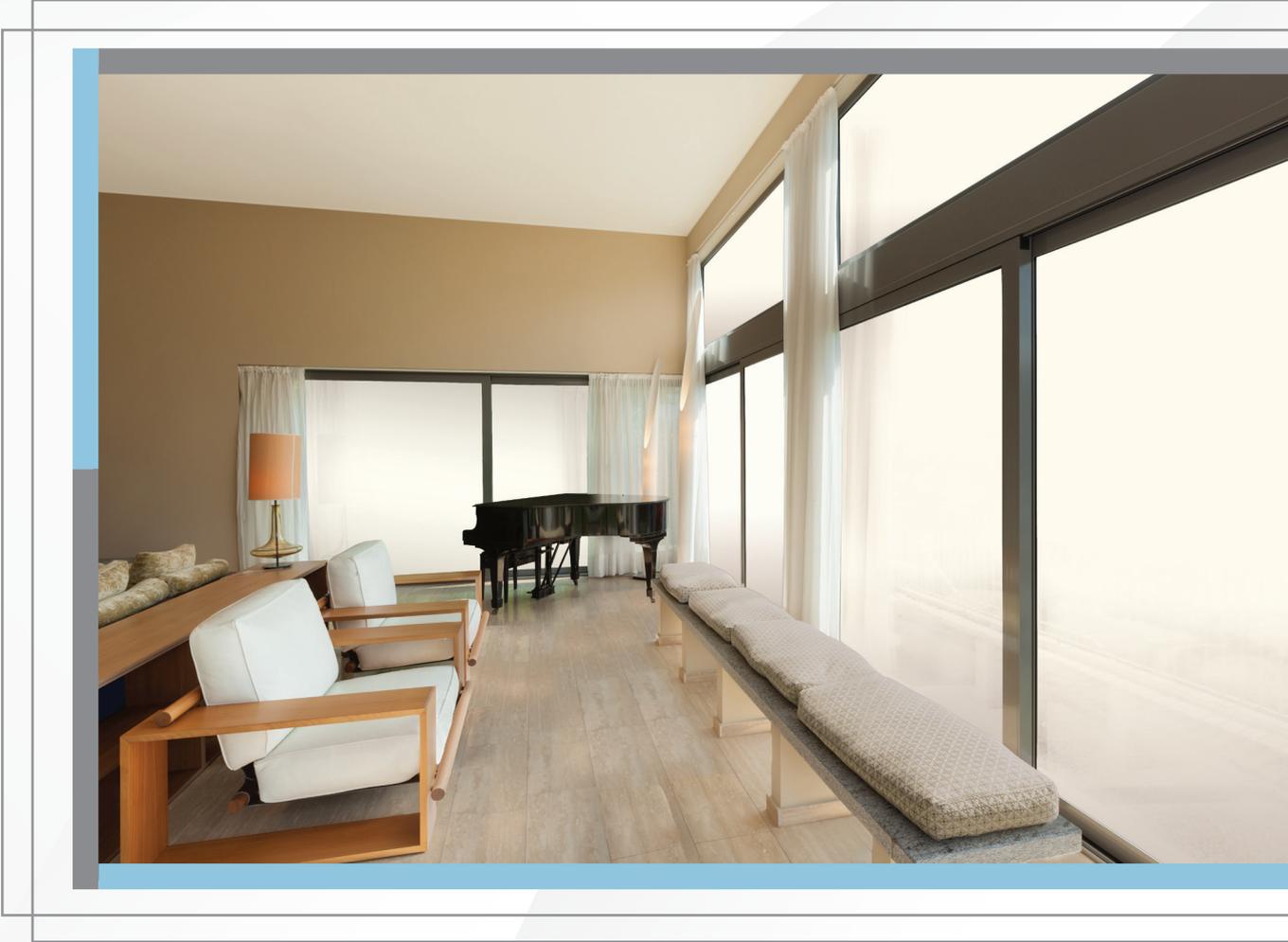




DECORATIVE

SmartLight is a hybrid design element that helps to create large open-style spaces by providing clear vision when switched on, while its classy, milky-white finish integrates flawlessly into contemporary interior architecture when switched off. Whenever aesthetics and function matter, **SmartLight** is the right choice.





FUNCTIONAL

Form does not always follow function – **SmartLight** can be integrated into the most challenging designs, no matter if curved, frameless, drilled or with cutouts, with ornaments or combined with other design elements.

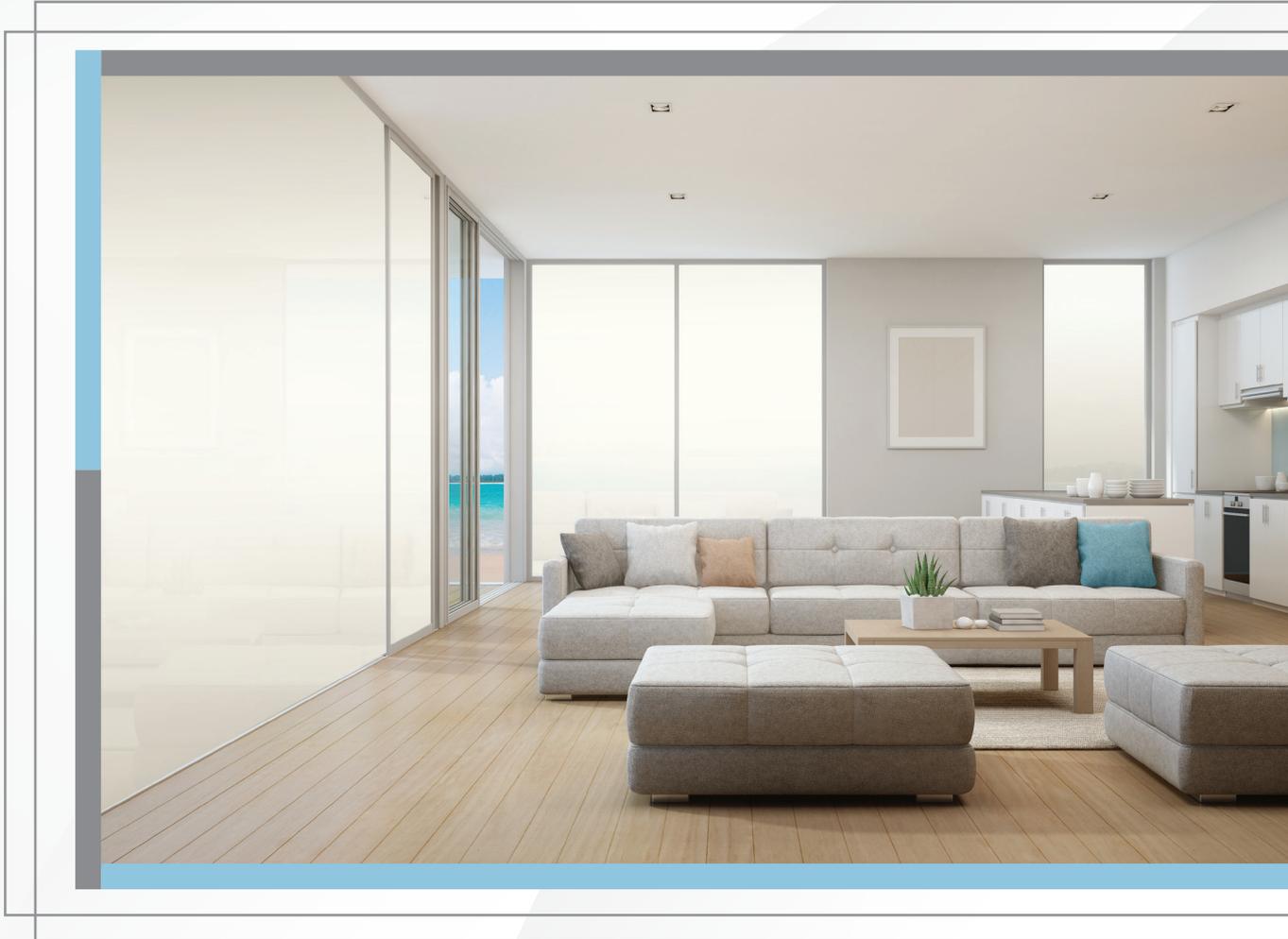




IMAGINATIVE

The applications for **SmartLite** are endless. Design professionals are exploring new ways with increasing novelty, in both residential and commercial projects to specify SmartLite into a wide range of installations.





HOW SMARTLITE WORKS



SmartLite is an active privacy glass allowing end users to switch between two states, ON and OFF. The PDLC (Polymer Dispersed Liquid Crystal) interlayer used in the manufacturing of **SmartLite** contains two layers of electro-optical cells, which are PET (polyethylene terephthalate) film layers coated with ITO (Indium Tin Oxide). In between these layers is an active layer of a transparent polymeric matrix of liquid crystal droplets. The ITO coated PET surfaces are used as optically transparent conductive electrodes.

In the OFF state, liquid crystal molecules are randomly orientated in the absence of an electric field, resulting in the scattering of transmitting light and the diffusive appearance of **SmartLite**. When switched ON, electrical current is applied between the two ITO electrodes and the liquid crystal molecules are polarized and ordered in the direction of the electric field. As a result, a large portion of the incoming light transmits without scattering from the liquid crystals and hence giving **SmartLite** its transparent appearance.

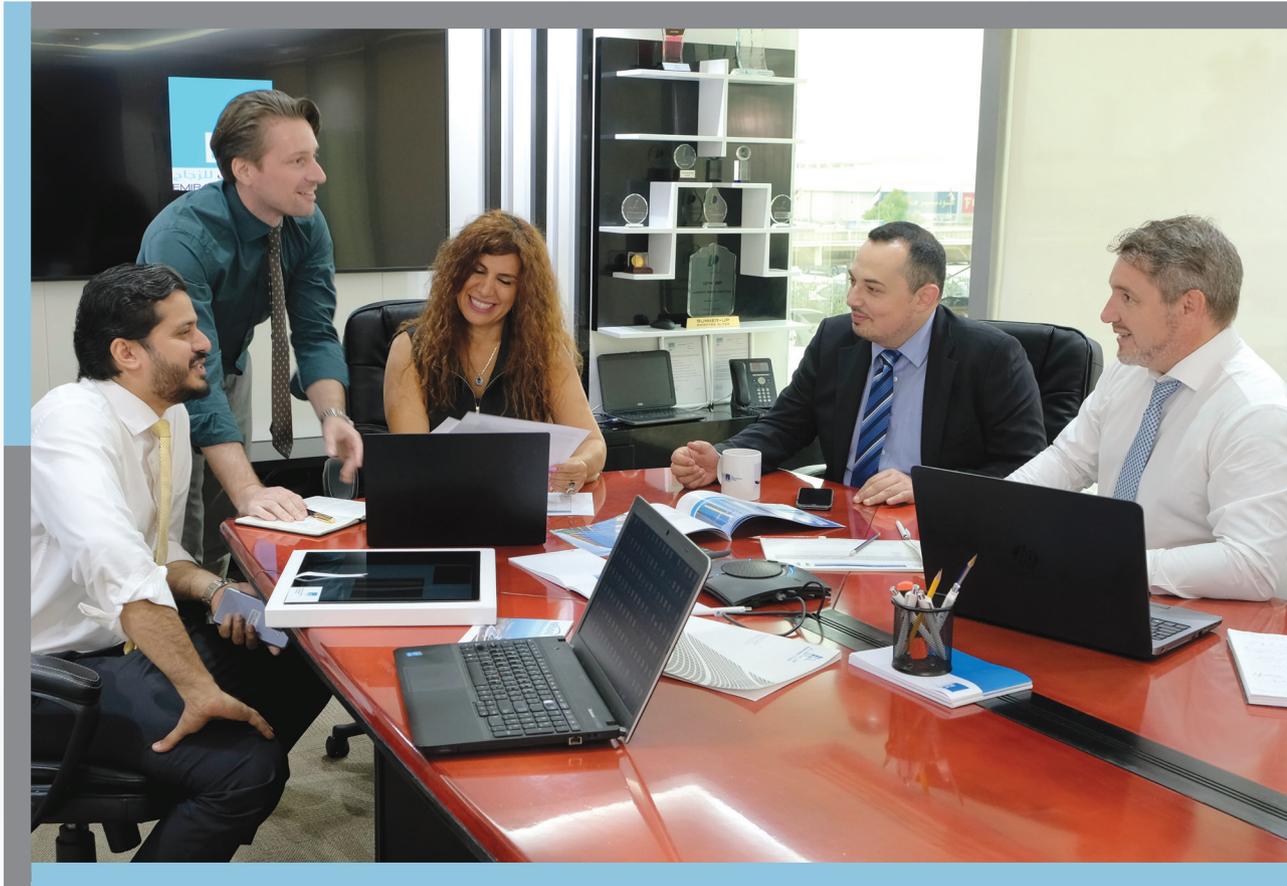


TECH DATA SHEET

Product	SmartLite
Colour	Paper White (other colours on request)
Dimensions	1200mm Max. Width (wider on request)
Operations	Transparent (On) Opaque (Off)
Light Transmittance	82% On - 2% Off
Opacity	6% On - 95% Off
UV Blocking	98%
IR Blocking	40%
Response Time	On/Off: 50ms - Off/On: 10ms
Operation Voltage	48 Volts - AC
Power Consumption	~5.5 W/m ² (On)
Driving Current	~115mA/m ²
Frequency	50/60 Hz
Operating Temperature	-30 to +80 Deg.C
On/Off Cycle	3,000,000
Life Time	>50,000 Hours
Size	On Request
Curvature	2m Radius

FLEXIBLE/SUPPORTIVE

Our professional technical team is available to answer all your questions as well as support design initiatives for applications beyond windows, doors, glass balconies, sliding doors and sunroofs.





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