



# AT THE HEART OF DYNAMIC WINDOWS

**Liquid Crystal Mixtures for Solar Control and Privacy** 



**Licrivision**<sup>®</sup> is a range of liquid crystal (LC) mixtures at the heart of dynamic windows. LC mixtures are embedded into LC cells1. Thanks to the quick response of the LC's components to an applied voltage, the intensity of the light, haze, glare and transparency may be instantly and finely modulated.

Licrivision® enables windows for solar control and privacy use in applications like architecture, interior design, transportation and more.

## Licrivision® Solar

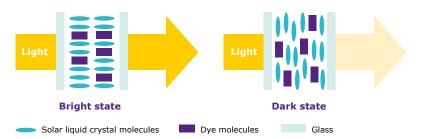
Licrivision® Solar offers a wide range of dye-doped LC mixtures, for nearly any CRI\* and saturation level. The dyes in the LC mixture are responsible for absorbing the light passing through the window. Their re-orientation happen instantaneously, is easily controlled by a low AC voltage, and allows for precisely tune the intensity of the light.

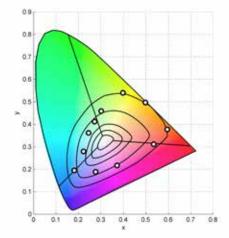
#### **Solar Control Performance**

The table below compiles data for: Solar Bright, our mixture with the brightest state; Solar Dark, the mixture with the darkest tint (especially suitable for roofs); Solar Blue, an example of colored mixture (to show that Licrivision® may be customized to the color needs of every application).

	Clearing Point (°C)	Light Transmittance		General Color Rendering Index	
		Bright%	Dark%	Ra bright	Ra dark
Solar Bright	114	52	11	96	95
Solar Dark	114	39	2	95	74
Solar Blue	114	52	13	89	45

Values were calculated, according to EN-410 and EN-673 using eyrise™ IGUs (Insulated Glass Units) as test system





CIF 1931 color space chromaticity diagram. The points represent examples for dark states achievable with current Licrivision® mixtures. The round lines are the saturation levels 1,2,3,5,7

## **Licrivision® Privacy**

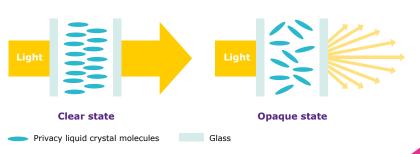
Licrivision® Privacy are cholesteric LC mixtures, capable of instantly turning a transparent window into an opaque panel. This effect is obtained by the re-orientation of the liquid crystals' components. Their resulting random position induces the scattering of the light, which provides a strong translucent state, i.e. no see-through is possible, still the transmitted light intensity remains high.

## **Privacy Performance**

The table below compiles data for Privacy Interior, our mixture for interior applications like partitioning walls and doors. It provides a very opaque "private" state and a unique clear state with high transparency and virtually no angular haze.

	Clearing Point (°C)	Light Transmittance		CRI*	Haze	
		Clear%	Opaque%	Ra	Clear	Opaque
Privacy Interior	101	85	75	97	<4%	>95%

Values were measured using eyrise™ cell as test system. \*CRI = General Color Rendering Index



### ¹eyrise™ LC cell

An LC cell is made of 2 TCO (Transparent Conductive Oxide) and PI (Polyimide) coated glass sheets or plastic substrates. By applying a voltage to the cell, the components of the Licrivision® mixture are switched to control the transmittance of the light passing through the window.

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