



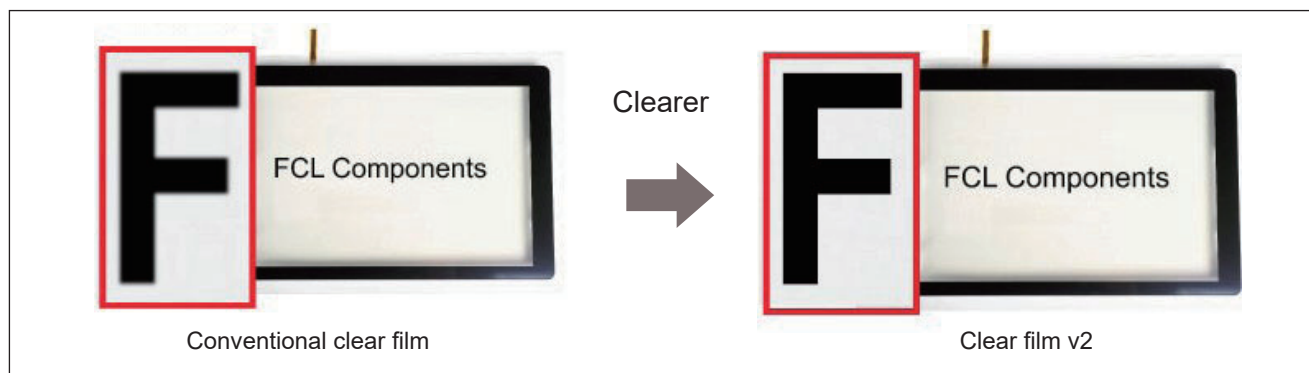
Sharper, brighter, smoother: Enhance your product design

The Clear Film V2 can be used with all FCL Components' resistive touch panels, providing excellent image clarity and smooth finger touch input, which is nearly identical to projected capacitive touch panels.

> Excellent image clarity and visibility

The Clear Film V2 has been developed to display images on an LCD more clearly and without distortion. Clarity has improved by approximately 2% compared to conventional clear-film technology, with an even greater improvement over non-glare film touch panels. It offers capabilities nearly identical to those of projected capacitive panels with a glass substrate. (Fig-1).

Note: Clarity (JIS K 7374) is set based on a conventional product, which is considered 100% according to our internal research.



> Excellent smooth touch experience

To achieve smooth operability similar to that of a smartphone, we have created a smooth film surface. Users can experience a satisfying operational feel when flicking, swiping, or performing dual touch operations, etc. Evaluation is conducted using the contact angle (JIS R 3257) as a smooth evaluation index (Fig-2).

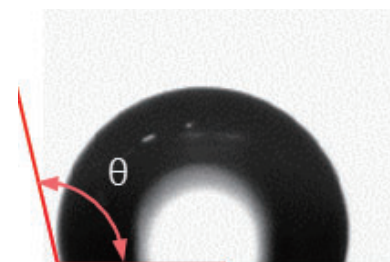






Fig 2: Contact angle
(Smooth evaluation index)

> High versatility

The clear film technology can be used with all FCL Components' 4-, 5-, and 7-wire resistive touch panels, including general glass-film touch panels and flush surface touch panels.

> Characteristics

		Resistive			Projected capacitive
		Clear Film V2	Conventional film	Non-glare film	
Clarity ^{*1}		 102% Little	 100% Glare	 35% Glare	 102% Little
Smooth touch input	Water contact angle ^{*2}	107°	60°	-	106°
	Touch navigation	☆☆☆☆☆ Entirely smooth	☆☆☆ Minimally smooth	☆☆☆☆☆ Somewhat smooth	☆☆☆☆☆ Entirely smooth

Notes

*1 : Image clarity (JIS K 7374) is indicated as a ratio when compared to the Clear Film V1, which is considered 100% based on FCL Components' internal research.

*2: In general, a larger water contact angle indicates smoother navigation of the fingers on the surface. (JIS R 3257).

The data for the Clear Film V1, non-glare film, and capacitance type data in this table are obtained from representative products selected by our company.

The transmittance of the resistive touch panel in this table is the data for the combination with high transmittance glass.

> Major Applications

- Multifunctional Peripherals (MFP), copier
- POS/ECR
- Medical (operation panel for portable medical devices and large medical equipment)
- Factory automation (machine tools, measuring equipment, inspection machines)
- Car navigation system, car audio
- Electric dictionary

FCL Components Touch Panels

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