

September 1, 2020

Toppan Printing Co, Ltd.
Electronics Division
ORTUS Subdivision

Toppan : 10.4"-size Blanview LCD Module Sampling Start

Toppan Printing (Toppan) announced that they developed new IPS-FFS mode TFT-LCD module with implementing their proprietary "Blanview" technology.

Toppan's Blanview technology has been widely adopted in many industrial electronics equipment worldwide with receiving a high valuation to added values like low power consumption (low heating) and outdoor readability. New product is succeeded in having further values by combining Blanview technology with IPS-FFS high-quality image display technology.

Capacitive Touch Panel (PCAP) integration model is under developing and will bring to the market later.

In parallel, new products of standard Transmissive-type 10.4"-size TFT-LCD module will be added to their product lineup; one of new products has a PCAP touch function integrated.

Toppan's new product can cover versatile industrial electronics applications, like Factory Automation, Commercial Vehicles, Human-Machine Interface.

Features of New Product

1. Blanview Technology ^(*1) - Low Power Consumption & Outdoor Readability
 - Newly developed "Blanview-F" technology, which combined a high-quality display technology, IPS-FFS mode LCD^(*2), with Toppan's unique Blanview technology.
 - Low Power / Low Heating

Backlight power consumption is potentially 25-40% lower compared to similar specification products of other LCD manufacturers' (comparison by our measurement).

Transmissive-type new products can drive at low power consumption too.
 - Outdoor Readable Display

Blanview technology enables to enhance display readability in bright situations, like where a direct sunlight hits to the display surface.
2. IPS-FFS mode high-quality LCD
 - High-quality image quality and wide viewing angle.
3. Long Lifetime Backlight Unit
 - 70,000hrs expected lifetime ^(*3) Backlight design to support industrial electronics products used for a long period continuously.

4. Capacitive Touch Screen (PCAP) Integration

- PCAP touch function integrated models are developed in parallel. Transmissive-type model (P/N: COM104T9M10) will be released first; then, Blanview-based products are planned to bring to the market afterward.
- Touch Screen integrated models are supposed to be released as Standard Product (off-the-shelf product). Toppan supposes such Standard Products would give "easy-to-use" solution for any customers who want to use but cannot use PCAP touch function, due to a small demand quantity, or a lack of development resources.

(*1) Toppan's proprietary TFT-LCD technology enabling high sunlight display readability and low power consumption functionalities together

(*2) FFS = Fringe Field Switching

(*3) Expected lifetime is defined by the duration till the display brightness becoming half from the beginning

Product Specifications

Part Number	COM104H9M11xxx	COM104T9M12xxx	COM104T9M10xxx
Display Features	10.4" Landscape (4:3)	10.4" Landscape (4:3)	
Module Outline	230.0 x 180.20 x 11.0 mm	230.0 x 180.20 x 11.0 mm	TBD
Display Technology	IPS-FFS (Normally-Black) Blanview Technology	IPS-FFS (Normally-Black) Transmissive-type	
Resolution	800 x 600 pixels (96ppi)	800 x 600 pixels (96ppi)	
Power Supply	3.3V /12.0V	3.3V /12.0V	3.3V / 12.0V *LCD part only
Data Input (# of Colors)	LVDS 6bit (262K) LVDS 8bit (16.7M)	LVDS 6bit (262K) LVDS 8bit (16.7M)	
Color Purity (CF)	50% NTSC	50% NTSC	
Brightness (typ.)	[650]cd/m ²	[650]cd/m ²	[580]cd/m ²
Viewing Angle (U/D/L/R)	[85 / 85 / 85 / 85]	[85 / 85 / 85 / 85]	
Contrast	[1000]	[1000]	
Power Consumption (@ typ. Brightness)	[3.7] Watt	[3.7] Watt	[3.7] Watt *LCD part only
Backlight (Exp. Lifetime)	White LED, LED Driver embedded ([70,000hrs])	White LED, LED Driver embedded ([70,000hrs])	
Temperature	Operation: -30 ~ +70 °C Storage: -30 ~ +80 °C	Operation: -30 ~ +70 °C Storage: -30 ~ +80 °C	
Touch Screen	None [PCAP integrated model under development]	None	PCAP (Capacitive Touch)
Status	Sample Available Now, SOP (Target): Q2/2021	Sample Available Now, SOP (Target): Q2/2021	Sample: Q4/2020 SOP (Target): Q4/2021

* Under development product : Specifications are subject to change as the development goes on

Picture of New Product



Next Actions

1. Toppan will continuously extend TFT-LCD product lineup with "Blanview-F" technology in various display size and resolutions.

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