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Mitsubishi Electric to Expand Lineup of Color TFT-LCD Modules with Projected Capacitive Touch Panels for Industrial Application

Featuring market-leading touch functionality and sensitivity combined with max. 5 mm-thick cover glass

TOKYO, July 14, 2016 – <u>Mitsubishi Electric Corporation</u> (TOKYO: 6503) announced today the launch of 6.5-inch VGA and 8.4-inch SVGA / XGA color TFT-LCD modules equipped with projected capacitive touch panels using cover glass of up to 5 millimeters in thickness. Sample sales will begin on August 1 via Mitsubishi Electric offices worldwide.





 $6.5\text{-inch VGA} \qquad \qquad 8.4\text{-inch SVGA} \,/\,\, XGA$ Mitsubishi Electric Color TFT-LCD module with projected capacitive touch panel

These new modules are designed to meet increasing industrial demand for thick cover glass and glass allowing operation with gloves. They also facilitate multi-touch sensing and accurate sensing even on wet screens. The combination of these cutting-edge touch capabilities and Mitsubishi's proven TFT-LCD technology will support diverse applications and installation scenarios.

Product Features

- 1) Projected capacitive touch panels offering superior operability for diverse industrial uses
 - Thick, 5-millimeter cover glass withstanding rugged usage
 - Ten-point touch operation with accurate sensing
 - High-level operability, even using gloves or on wet screens

2) Total touch-panel solution

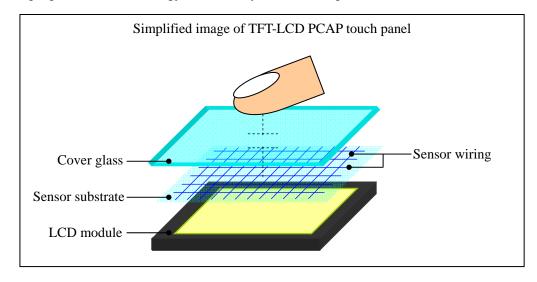
- One-stop solution for TFT-LCD, touch panel and touch-control board
- Optional optical bonding (resin bonding of the TFT-LCD module, touch-panel sensor and cover glass, offering clearer images in bright light)
- Tempered cover glass and anti-reflection/anti-smudge surface treatment allowing a wider range of uses
- Factory-installed TFT-LCD, PCAP touch panel, cover glass and touch controller offering superior reliability

Sample Sale Schedule

Product	Model	Display Size	Resolution	Brightness (cd/m ²)	Viewing angle (°) <u d="">, <l r=""></l></u>	Shipment
TFT-LCD Modules with Projected Capacitive Touch Panels	AA065VE11ADA11	6.5-inch	VGA	1000	80/60, 80/80	
	AA084SC01ADA11	8.4-inch	SVGA	400	85/85, 85/85	
	AA084SD01ADA11			400	80/60, 80/80	
	AA084SD11ADA11			900	80/60, 80/80	August 1,
	AA084XD01ADA11		1-inch XGA	500	85/85, 85/85	2016
	AA084XD11ADA11			800	85/85, 85/85	
	AA084XE01ADA11			400	80/60, 80/80	
	AA084XE11ADA11			800	80/60, 80/80	

Projected Capacitive Touch (PCAP)

Capacitive touch is a touch screen technology that uses two perpendicular layers of conductive material to form a grid. When electric current is applied, a uniform electrostatic field is created. The touch of a finger or other conductive object distorts the field, allowing the system to accurately track movement across the screen at multiple points. This technology is commonly used in smartphones and tablets.



Lineup of Color TFT-LCD Modules with Projected Capacitive Touch Panels (new models in bold)

Display Size	Resolution	Brightness (cd/m ²)	Viewing angle (°) <u d="">, <l r=""></l></u>	Model
	WVGA	800	85/85, 85/85	AA070MC01ADA11
7.0-inch		1000	85/85, 85/85	AA070MC11ADA11
7.0-IIICII		800	60/80, 80/80	AA070ME01ADA11
		1200	60/80, 80/80	AA070ME11ADA11
<u>6.5-inch</u>	<u>VGA</u>	<u>1000</u>	80/60, 80/80	<u>AA065VE11ADA11</u>
	<u>SVGA</u>	<u>400</u>	<u>85/85, 85/85</u>	AA084SC01ADA11
		<u>400</u>	<u>80/60, 80/80</u>	AA084SD01ADA11
		<u>900</u>	<u>80/60, 80/80</u>	AA084SD11ADA11
<u>8.4-inch</u>	<u>XGA</u>	<u>500</u>	<u>85/85, 85/85</u>	AA084XD01ADA11
		<u>800</u>	<u>85/85, 85/85</u>	<u>AA084XD11ADA11</u>
		<u>400</u>	80/60, 80/80	<u>AA084XE01ADA11</u>
		<u>800</u>	80/60, 80/80	<u>AA084XE11ADA11</u>

Specifications

Specifications					
Mo	odel	AA065VE11ADA11			
Display siz	e/resolution	16.6cm (6.5 inches) VGA			
Display area (mm)		132.48 (H) × 99.36 (V)			
Numbe	r of dots	$640 \text{ (H)} \times 480 \text{ (V)}$			
Pixel pi	tch (mm)	0.207 (H) × 0.207 (V)			
Contra	ast ratio	600:1			
Luminan	ce (cd/m ²)	1,000			
Viewing	angle (°)	90/60 90/90			
<u d=""></u>	, <l r=""></l>	80/60, 80/80			
Co	lors	262K (6 bits/color), 16.7M (8 bits/color)			
Electrica	l interface	LVDS 6/8 bits			
Size	W	170.2 (LCD: 154.0)			
(mm)	Н	132.6 (LCD: 121.0)			
(11111)	D	14.3 (LCD: 11.0)*			
Operational ter	mperatures (°C)	-30 to +70			
Storage temp	peratures (°C)	-30 to +80			
Glass thicl	kness (mm)	Up to 5			
Black ma	sk printing	Available			
Strengthening treatment		Available			
Low-reflection treatment		Available			
Anti-smudge treatment		Available			
Optical bonding		Available			
Controller interface		USB			
Operating systems**		Windows7/8.1 and Linux			

Model		AA084SC01ADA11	AA084SD01ADA11	AA084SD11ADA11		
Display size/resolution		21.3cm (8.4 inches) SVGA				
Display area (mm)		170.4 (H) × 127.8 (V)				
Numbe	er of dots	800 (H) × 600 (V)				
Pixel pi	tch (mm)	0.213 (H) × 0.213 (V)				
Contra	ast ratio	1000:1	600:1			
Luminan	ce (cd/m ²)	400		900		
Viewing angle (°) <u d="">, <l r=""></l></u>		85/85, 85/85	80/60, 80/80			
Co	olors	262K (6 bits/color), 16.7M (8 bits/color)				
Electrica	l interface	LVDS 6/8 bits				
Size	W	209.5 (LCD: 199.5)				
(mm)	Н	159 (LCD : 149.0)				
(11111)	D	14.4 (LCD : 9.7)*				
Operational temperatures (°C)		-30 to +70				
Storage tem	peratures (°C)	-30 to +80				
Glass thic	kness (mm)	Up to 5				
Black ma	sk printing	Available				
	ing treatment	Available				
Low-reflection treatment		Available				
Anti-smudge treatment		Available				
Optical bonding		Available				
Controller interface		USB				
Operating systems**		Windows7/8.1 and Linux				

Model		AA084XD01 ADA11	AA084XD11 ADA11	AA084XE01 ADA11	AA084XE11 ADA11		
Display size/resolution		21.3cm (8.4 inches) XGA					
Display area (mm)		170.496 (H) × 127.872 (V)					
Number of dots		1024 (H) × 768 (V)					
Pixel pitch (mm)		0.1665 (H) × 0.1665 (V)					
Contrast ratio		1000:1		800:1			
Luminan	ice (cd/m ²)	500	800	400	800		
Viewing angle (°) <u d="">, <l r=""></l></u>		85/85, 85/85		80/60, 80/80			
Co	olors	262K (6 bits/color), 16.7M (8 bits/color)					
Electrica	l interface	LVDS 6/8 bits					
Size	W	209.5 (LCD : 199.5)					
(mm)	Н	159 (LCD : 149.0)					
(11111)	D	14.4 (LCD : 9.7)*					
Operational te	mperatures (°C)	-30 to +70					
Storage temperatures (°C)		-30 to +80					
Glass thic	kness (mm)	Up to 5					
Black mask printing		Available					
Strengthening treatment		Available					
Low-reflection treatment		Available					
Anti-smudge treatment		Available					
Optical bonding		Available					
Controller interface		USB					
Operating systems**		Windows7/8.1 and Linux					

^{*} Depends on cover glass thickness (1.1 mm thickness in this example)
** Support for other operating systems is available upon request.

Environmental Awareness

The model is mercury-free and fully compliant with the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS) directive 2011/65/EU.

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About Mitsubishi Electric Corporation

With over 90 years of experience in providing reliable, high-quality products, Mitsubishi Electric Corporation (TOKYO: 6503) is a recognized world leader in the manufacture, marketing and sales of electrical and electronic equipment used in information processing and communications, space development and satellite communications, consumer electronics, industrial technology, energy, transportation and building equipment. Embracing the spirit of its corporate statement, Changes for the Better, and its environmental statement, Eco Changes, Mitsubishi Electric endeavors to be a global, leading green company, enriching society with technology. The company recorded consolidated group sales of 4,394.3 billion yen (US\$ 38.8 billion*) in the fiscal year ended March 31, 2016. For more information visit: www.MitsubishiElectric.com

*At an exchange rate of 113 yen to the US dollar, the rate given by the Tokyo Foreign Exchange Market on March 31, 2016

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