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**No. 2709**

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## Mitsubishi Electric Launches 8.4-, 10.4- & 12.1-inch Color TFT-LCD Modules with Circuit board-embedded LED Drivers

**Tokyo, November 12, 2012** – Mitsubishi Electric Corporation (TOKYO: 6503) announced today the launch of its new 8.4-, 10.4- and 12.1-inch TFT-LCD (thin film transistor liquid crystal display) industrial-use modules in both SVGA and XGA color versions. The six models, in addition to featuring high brightness and wide viewing angles, have a LED driver embedded in the circuit board to help reduce the size and cost of final products. Sales will begin successively from December 1 through Mitsubishi Electric global offices.



AA084XE01

AA104XF02

AA121XN01

Industrial-use color TFT-LCDs capable of high-quality images are used widely in POS terminals, bank ATMs, factory line displays and for many other applications. In the case of these conventional TFT-LCDs, however, the driver circuitry for the LED backlight must be added to the module to complete the final product. Mitsubishi Electric's six new modules eliminate the need for this circuitry, enabling the manufacturing of smaller products at reduced costs.

## **Launch Summary**

Product	Model	Shipment date	Production
8.4-inch SVGA TFT-LCD Module	AA084SD01	February 1, 2013	3,000 units each per month
8.4-inch XGA TFT-LCD Module	AA084XE01	March 1, 2013	
10.4-inch SVGA TFT-LCD Module	AA104SL02	December 1, 2012	
10.4-inch XGA TFT-LCD Module	AA104XF02	December 1, 2012	
12.1-inch SVGA TFT-LCD Module	AA121SU01	April 1, 2013	
12.1-inch XGA TFT-LCD Module	AA121XN01	January 7, 2013	

## **Product Features**

### **Circuit board-embedded LED driver for compact product design**

- A circuit board-embedded LED driver enables a compact, low-cost design.
- Optimized backlight design enables LEDs with strong structures measuring less than 10mm in thickness.

### **High brightness, wide viewing angles and broad operating temperature range for diverse applications**

- High brightness of 500 to 800cd/m<sup>2</sup> ensures clear images even in bright environments.
- Wide viewing angle of 140 to 160 degrees vertically and 160 degrees horizontally ensure excellent visibility, even for off-center installations viewed from the side.
- Wide range of operational temperatures, from -30 to 80 degrees C, to withstand extreme outdoor and indoor environments.

### **LED backlight with long life of 100,000 hours**

- The LED backlight has a typical operating life of 100,000 hours at 25 degree C ambient temperature.

### **Environmental design**

- Mercury-free and fully compliant with Europe's Restriction of Hazardous Substances Directive (RoHS).

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## Specifications

	AA084SD01	AA084XE01
Display Size/Resolution	8.4 inch (800×600 dots)	8.4 inch (1024×768 dots)
Display Area (mm)	170.4 (H) × 127.8 (V)	170.5 (H) × 127.9 (V)
Number of Dots	800 (H) × 600 (V)	1024 (H) × 768 (V)
Pixel Pitch (mm)	0.213 (H) × 0.213 (V)	0.1665 (H) × 0.1655 (V)
Contrast Ratio	600:1	600:1
Luminance (cd/m <sup>2</sup> )	600	500
Viewing Angle (CR>10; degrees)	-80 to +80 (H) -60 to +80 (V)	-80 to +80 (H) -60 to +80 (V)
Optimum Viewing Angle (Contrast Ratio)	6 o'clock	6 o'clock
Number of Colors	262K (6 bit/color) 16.77M (8 bit/color)	262K (6 bit/color) 16.77M (8 bit/color)
Color Gamut (NTSC; %)	40	40
Backlight Unit	LED	LED
Electrical Interface	LVDS 6/8 bit	LVDS 6/8 bit
Module Size (mm)	199.5 (W) × 149.0 (H) × 9.7 (D)	199.5 (W) × 149.0 (H) × 9.7 (D)
Operational Temperature (°C)	-30 to +80	-30 to +80
Storage Temperature (°C)	-30 to +80	-30 to +80

	AA104SL02	AA104XF02
Display Size/Resolution	10.4 inch (800×600 dots)	10.4 inch (1024×768 dots)
Display Area (mm)	211.2 (H) × 158.4 (V)	210.4 (H) × 157.8 (V)
Number of Dots	800 (H) × 600 (V)	1024 (H) × 768 (V)
Pixel Pitch (mm)	0.264(H) × 0.264 (V)	0.2055(H) × 0.2055 (V)
Contrast Ratio	700:1	700:1
Luminance (cd/m <sup>2</sup> )	700	600
Viewing Angle (CR>10; degrees)	-80 to +80 (H) -60 to +80 (V)	-80 to +80 (H) -60 to +80 (V)
Optimum Viewing Angle (Contrast Ratio)	6 o'clock	6 o'clock
Number of Colors	262K (6 bit/color) 16.77M (8 bit/color)	262K (6 bit/color) 16.77M (8 bit/color)
Color Gamut (NTSC; %)	40	40
Backlight Unit	LED	LED
Electrical Interface	LVDS 6/8 bit	LVDS 6/8 bit
Module Size (mm)	230.0 (W) × 180.2 (H) × 9.5 (D)	230.0 (W) × 180.2 (H) × 9.5 (D)
Operational Temperature (°C)	-30 to +80	-30 to +80
Storage Temperature (°C)	-30 to +80	-30 to +80

	AA121SU01	AA121XN01
Display Size/Resolution	12.1 inch (800×600 dots)	12.1 inch (1024×768 dots)
Display Area (mm)	246.0 (H) × 184.5 (V)	245.76 (H) × 184.32 (V)
Number of Dots	800 (H) × 600 (V)	1024 (H) × 768 (V)
Pixel Pitch (mm)	0.3075(H) × 0.3075 (V)	0.240(H) × 0.240 (V)
Contrast Ratio	600:1	600:1
Luminance (cd/m <sup>2</sup> )	800	700
Viewing Angle (CR>10; degrees)	-80 to +80 (H) -80 to +80 (V)	-80 to +80 (H) -80 to +80 (V)
Optimum Viewing Angle (Contrast Ratio)	6 o'clock	6 o'clock
Number of Colors	262K (6 bit/color) 16.77M (8 bit/color)	262K (6 bit/color) 16.77M (8 bit/color)
Color Gamut (NTSC; %)	40	40
Backlight Unit	LED	LED
Electrical Interface	LVDS 6/8 bit	LVDS 6/8 bit
Module Size (mm)	260.5 (W) × 203.0 (H) × 9.5 (D)	260.5 (W) × 203.0 (H) × 9.5 (D)
Operational Temperature (°C)	-30 to +80	-30 to +80
Storage Temperature (°C)	-30 to +80	-30 to +80

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### **About Mitsubishi Electric**

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 3,639.4 billion yen (US\$ 44.4 billion\*) in the fiscal year ended March 31, 2012. For more information visit <http://www.MitsubishiElectric.com>

\*At an exchange rate of 82 yen to the US dollar, the rate given by the Tokyo Foreign Exchange Market on March 31, 2012