Sanyo Epson Develops High-Resolution LCDs

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Sanyo Epson has announced the development of three new high-resolution LCDs featuring "Photo Fine Chromarich" technology that achieves more than 100% coverage of the NTSC color gamut. Mass production of the displays will commence in early 2006.

The fusion of telecommunications and broadcasting through digitization and the seamless integration of cable and mobile communication have raised expectations for next-generation mobile devices. Consumers hope

such devices will bring more convenience, richer content, and wider service coverage. There is particularly increasing demand for LCDs with higher resolution, a wide color gamut, a wide viewing angle, and quick response, as well as being lightweight, compact, and ultra energy-efficient. The higher popularity and functionality of digital cameras and camera-equipped mobile phones mean that consumer demand for clearer displays are particularly strong in these areas.

Increasing the resolution and color range of LCDs is an important element in responding to these demands. Sanyo Epson, as a core company in achieving the "i3" (mobile display) strategy of the Epson Group's SE07 mid-range business plan, has developed products and technologies based on the concept of supplying clear, user-friendly displays that can be used anytime, anywhere.

The high-resolution LCDs that Sanyo Epson has developed feature a widened color gamut technology called "Photo Fine Chromarich" that enables superior resolution and extended color range by matching four color filters (the standard RGB plus cyan arrangement) with a new white backlight. The new displays (measuring 2.2, 2.8, and 4.5 inches) also boast higher aperture ratios and lower power consumption. In developing widened color gamut technology, Sanyo Epson extended the Epson Color Modulation (ECM) expertise cultivated by Epson in developing high-quality inkjet photo printers and applied it to LCDs. The technology enables colors like emerald green and blue to be reproduced with a level of accuracy not previously possible in small and medium-sized LCDs (screens currently on mobile phones cover only about 40% to 70% of the NTSC color gamut, with an average of about 50%).

For example, the images on online shopping sites will be much clearer and richer in color when viewed on a mobile phone equipped with one of the new displays. In digital cameras, meanwhile, as users will be able to view images with colors close to those produced by a printer on their

LCD monitors, they will be able to check photos before they print them.

The new "Photo Fine Chromarich" displays have specifications that are compatible with previous products, facilitating the development tasks of the product planners and designers at mobile equipment manufacturers. The driver IC contains the gamut-expanding algorithm in compressed form, so there is no need to increase the main memory of products. And as the input data is still in RGB format, old displays can simply be replaced with the new models. In the future, moreover, by equipping the displays with a high-speed serial interface, the mounted connection width can be narrowed by reducing the number of hard wiring, contributing to improved functionality and reductions in the size and weight of mobile devices.

Sanyo Epson will exhibit the three models at FPD International 2005, which will be held from October 19 to 21 at Pacifico Yokohama, Japan to stimulate demand for "Photo Fine Chromarich" LCDs for use in high-end mobile phones and digital cameras and also to promote new applications for the displays.

Source: Sanyo Epson