

4.1-Inch System-on-Glass LCD Boasts Industry-Leading Picture Quality

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NEC LCD Technologies, Ltd. today announced the successful development of a 4.1-inch (10.4cm diagonal), wide video graphics array (W-VGA), system-on-glass (SOG) liquid crystal display (LCD) module for mobile devices boasting industry-leading picture quality.

Mass production of the newly developed SOG LCD module is targeted at the end of 2006 and will be carried out on the low temperature poly silicon (LTPS) LCD production lines of NEC Akita, Ltd.

The new SOG module has been realized by the following:

(1) Simultaneous pursuit of a wide color gamut and high luminance

A higher dimensional balance between an ultra-wide color gamut of 110% for NTSC and high luminance of 400cd/m² has been achieved by optimizing the back-light system and the color filter based on the high transmissivity of LTPS thin film transistor (TFT) LCD technology, realizing astonishingly clear and vivid color reproduction that has been insufficient in small-sized LCD modules for mobile devices such as mobile phones, PDAs and digital cameras to date.

(2) Downsizing through integration of peripheral circuitry

Downsizing and integration of instrumentation has been achieved by the following:

- LTPS employment, which enables a narrower LCD frame than that of amorphous silicon.
- Integration of semiconductor systems on the glass substrate of the TFT LCD enabling a reduction in the number of instrumentation parts built into the new SOG LCD.

Recently, there has been an increase in the adoption of small-sized LCD modules for mobile devices and industrial applications owing to current trends favoring compact devices and portable and handheld instruments. However, as conventional LCD modules for mobile devices do not include a driver circuit, it has been difficult for manufacturers to employ conventional LCDs in industrial and other applications. NEC LCD Technologies' new SOG LCD has not only succeeded in the inclusion of a driver circuit and a downsized model, making it suitable for a range of industrial applications, but also in realizing a superior level of picture quality enabling it to meet the demands of mobile devices as well as industrial and professional fields.

"Recognizing the need to develop a small-sized SOG LCD of superior picture quality, we at NEC LCD Technologies have striven for many years to enhance our SOG technology, one of our core competences, to enable a model that fulfills the needs of the industrial field. Going

forward, we are convinced that it will contribute to the expanded application of SOG LCDs in this field and we will continue to develop it further toward the provision of even higher dimensional picture quality." said Hidetoshi Usui, department manager in charge of product planning and marketing, NEC LCD Technologies, Ltd.

The new SOG LCD model will be displayed at FPD International 2005 being held in Pacifico Yokohama, Japan, from October 19 - 21.

Source: NEC

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