Recently, interest in next-generation display is growing in the flat-panel display market because of the congestion and worsening profitability in the existing a-Si TFT-LCD. In order to implement next-generation display, it is necessary to develop new core technology of display and to improve performance of TFT (thin film transistor), the core device of Active-driven.

Thin film transistor can be distinguished into a-Si TFT, LTPS TFT, Organic TFT, Oxide TFT, etc. depending on the type of materials form semiconductor, out of gate electrode, dielectric, semiconductor, and source/drain electrodes that make-up the transistor. Samsung Electronics signed a license on Oxide TFT-related technology, the transistor that achieved rapid development of technology between the last 5 years.

Oxide TFT is not only possible to implement large-area and high-resolution, but also can be applied to no-glasses 3D TV, and Oxide materials can be processed at room temperature, so implementing flexible display that utilizes a plastic substrate can be done. It is also getting a lot of attention as next-transistor that can be applied to next-generation display with clarity advantage.

Oxide TFT is fully recognized for its potential and practical technology as backplane power devices of various display panels, research and development investments are made in display panel major companies in Korea and Japan with the mass production in mind, so sooner or later, Oxide TFT is expected to appear on the LCD, AMOLED, and e-paper market.

IHS Displaybank has issued a report on technology status and related companies’ development trends of the attention-attracting in the industry, Oxide TFT.
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