

Touch Panel Technology & Cost Analysis

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Abstracts

Since the introduction of flat panel display TVs in early 2000, the presence of CRT TVs has almost disappeared. Due to competition between PDPs and LCDs, not many PDP producers have stayed in the PDP business. Moreover, Panasonic, a leading PDP producer, recently terminated its PDP TV business. In a little over 10 years, LCDs have become a major TV technology and the flat panel display market is about to face challenges of OLED display technology.

For the past ten years, LCD TV products have been making improvements and featuring new designs and systems. Every year, LCD systems have been developed to make improvements that included integrating LED back lighting units, realizing high definition and 3D TVs. Now TV producers are hoping to revive the stagnant TV market by introducing ultra high definition (UHD), which is in 3840 x 2160 (4K2K) resolution format TV. The UHD TV is known to deliver on a large screen a realistic image quality viewing experience; however, its distortion on the edges of the screen and low contrast ratio based on viewing angles issues that most need improvement. As a solution, the industry suggests that a curved display, which is capable of offering a realistic screen quality without sacrificing the contrast ratio by designing curvature screen that maintains an optimum viewing distance between viewers the center and edges of the display.

Despite a sluggish economy, TV producers are trying to promote TV demand by adapting the UHD TVs and large curved TVs to attract potential TV buyers.

Toward the latter part of 2013, the set makers have introduced curved TVs. Starting with Sony's 65" FHD Curved LCD TV in September 2013, Samsung Electronics unveiled a world's first 65" curved UHD LCD TV and a 55" curved UHD OLED. Then in October 2013, LGE introduced the world's first 77" curved UHD OLED TVs during IFA. Changhong, a leading Chinese brand, also exhibited its 55" FHD LCD TV at the IFA show. Newer and better-curved TVs are expected by CES 2014. The industry expects

that curved and/or UHD TVs will enter into strong competition in 2014.

This report focuses on Curved TV technology, explaining overall market trends, suggesting issues regarding curved TVs and resolution. This report will be a useful guide for professionals ranging from marketing research, product planning, developing, processing, and producing to component producers of curved TVs.

Important Points of the Report:

1. Background and concept of Curved TVs
2. Defining curvature methods by TV viewing conditions and case studies
3. Expected issues in curvature designs and solutions from Panel & Set makers view.
4. Issues in process from Panel and Set makers' point of view
5. Process trends by producers
6. The future of curved displays

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