Panasonic Develops World's Largest 152-Inch Full HD 3D Plasma Display

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Panasonic Corporation has developed the world's largest 152-inch 4K x 2K definition Full HD 3D plasma display. The display features a revolutionary new plasma diaplay panel (PDP) Panasonic developed with its new super-efficient quadruple luminance efficiency technology.

The technology enhances PDP's unique advantages as self-illuminating device, contributing to delivering an overwhelmingly immersive experience to viewers. The Panasonic 152-inch Full HD 3D PDP creates a true full HD 3D world by faithfully reproducing 3D content such as Hollywood 3D movie titles.

Self-illuminating plasma panels offer excellent response to moving images with full moving picture resolution, making them suitable for rapid 3D image display. By employing the newly-developed ultra high-speed 3D drive technology, which adopts the super-efficient quadruple luminance efficiency technology, the new panel achieves a higher illuminating speed, about one fourth the time of conventional full HD panels. This technology enables high-quality full HD 3D display on the ultra large 152-inch 8.84 million pixel (4K x 2K) panel.

The panel also incorporates a crosstalk reduction technology, essential for producing clear 3D images. Compared to other display technologies that use line-at-a-time driving method, PDPs use frame-at-a-time driving method that gives PDP TVs an advantage in crosstalk reduction in principle. Panasonic has successfully developed a unique technology to minimize double-image that occurs when left- and right-eye images are

switched alternately. The development has resulted in the 3D compatible plasma display that can render clear and smooth high-quality pictures by accurately reproducing video sources.

The ultra-large 152-inch Full HD 3D PDP, which delivers true 3D movie-theater experience, follows the development of the industry's first 103-inch Class size Full HD 3D PDP Panasonic introduced in 2008 and the home theater size 50-inch Class Full HD 3D PDP in 2009.

This year, which is really the first year of 3D Television, 3D TVs are expected to accelerate the growth of the flat-panel television market by providing new values to customers.

Television has evolved over the years through technological innovations. It started as a device to produce images to be simply watched and then it became a tool when connectivity with other AV devices is added. Now, with the 3D technology, it has developed into a device that delivers an immersive viewing experience, moving into literally an era of "next dimension."

Panasonic launches its first Full HD 3D TVs in 2010 with PDP technology, which is highly suitable for 3D TVs, to offer the utmost picture quality. Panasonic's new 3D TVs will deliver a true full HD 3D quality to create new, and exciting television experiences.

Because 3D plasma displays can reproduce highly realistic images, they are considered ideal not only for home theater use but also for a wide variety of uses such as business, medical, education and commercial applications.

Panasonic will make the First Year of 3D Television as a springboard to boost its popularity, capitalizing on the company's ability to offer complete end-to-end solutions from professional 3D camcorders and Blu-

ray Disc authoring service to consumer use 3D TVs and displays and 3D-enabled Blu-ray Disc players.

Furthermore, Panasonic strives to accelerate the spread of 3D products and drive growth in the the flat-panel television market, focusing on the development of a 3D infrastructure including 3D content through increased cooperation with Hollywood studios and broadcasters.

Key Features of the new Full HD 3D PDP

1. Newly developed ultra high-speed 3D drive technology enables 3D display on ultra-large (152-inch), super high resolution (4K x 2K) panels

Using the super-efficient quadruple luminance efficiency technology, Panasonic developed ultra high-speed 3D drive technology. Compared to the conventional full HD panels, the technology allows the new panel to achieve the same brilliance at about one-fourth time. The new 152-inch panel also uses a new technology that enables even and stable discharge. Thanks to this discharge technology, the new panel can provide full HD images for left and right eyes formed with twice the volume of information as regular full HD images across the vast expanse of the screen equivalent to nine 50-inch panels with super high resolution (4,096 x 2,160; 2.07 million pixels) - four times the full HD (1,920 x 1,080; 8.84 million pixels) specification - while maintaining the brightness.

The new advanced PDP delivers high-quality 3D images, with virtually infinite 5,000,000:1 contrast ratio, accurate color reproduction and subtle gradation tones, on the ultra-large screen. With characters in the screen approach the viewers in life size, the new panel creates an overwhelmingly immersive experience.

2. Cross-talk reduction enables clear, high-definition 3D images

Because displaying 3D images involves alternate displays of left- and right-eye images, reducing the overlap (cross-talk) between these images is essential for high-quality 3D images. Compared to other display technologies that use line-at-a-time driving method, PDPs use frame-at-a-time driving method that gives PDP TVs an advantage in crosstalk reduction in principle. Incorporating newly-developed phosphors with short luminescence decay time - one third the time of conventional phosphors - as well as illumination control technology, the cross-talk reduction technology has succeeded in minimizing double images.

Enhancing the video reproduction capability of PDP, which has full moving picture resolution, the technology enables crisp and clear, high-quality 3D images by faithfully reproducing video sources.

3. Full HD x 2 frame sequential method

To reproduce 3D images, the new PDP uses the full HD x 2 frame sequential method that displays time sequential images, alternately reproducing discrete full HD (1920 x 1080 pixels) images for the left and right eyes on the display frame by frame. By adopting the method which is used in showing Hollywood 3D films in theaters, the new panel accurately reproduces high-quality 3D images in the living room.

Source: Panasonic