

Epson's new 4K panel for 3LCD projectors

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Seiko Epson's 4K-compatible high-temperature polysilicon (HTPS) TFT liquid crystal panel for 3LCD projectors

(PhysOrg.com) -- Seiko Epson Corporation has announced the world's first 4K panel for 3LCD (liquid crystal display) projectors. The panel will enable the projectors to produce a bright image of 4096 x 2160 pixels resolution (2160p), which is four times the resolution of a top range high definition television or Blu-Ray Disc.

Epson's panel is a 4K compatible HTPS (high temperature polysilicon) TFT ([thin film transistor](#)) liquid crystal panel for 3LCD projectors. The panel measures only 1.64 inches (4.2 cm) along the diagonal. The images have outstanding contrast and brightness, and rich vibrant colors.

The panel uses a C2 Fine LCD, which is a technology invented by Epson that combines an inorganic liquid crystal alignment layer with a vertical alignment layer.

3LCD projectors have three separate LCD panels: one each for red, green and blue light. The single color light passes through the LCD panel that creates shades of the color. The single color images are then combined by a prism to create a full color image that is projected onto the screen via the projector lens. Because the 3LCD technology has no moving parts in the light control system the projected image is smooth, sharply detailed, and there is no break-up in the motion or color.

The new panels may mean 3LCD projectors will find application in replacing the large, expensive projectors used for digitally projecting film in cinemas, for industrial and corporate presentations, and in schools and at big events. They will also be ideal for applications such as industrial and architectural design and simulations requiring high resolutions. The 4K panels can also be used to project four full HD images simultaneously.

A prototype of a projector using the 4K panel will be exhibited at the International Broadcast Equipment Exhibition at Makuhari Messe, Chiba, in Japan from 18 to 20 November, 2009. It is not known when the panel will be released to the market.

More information: [Seiko Epson Press Release \(Japanese\)](#)

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