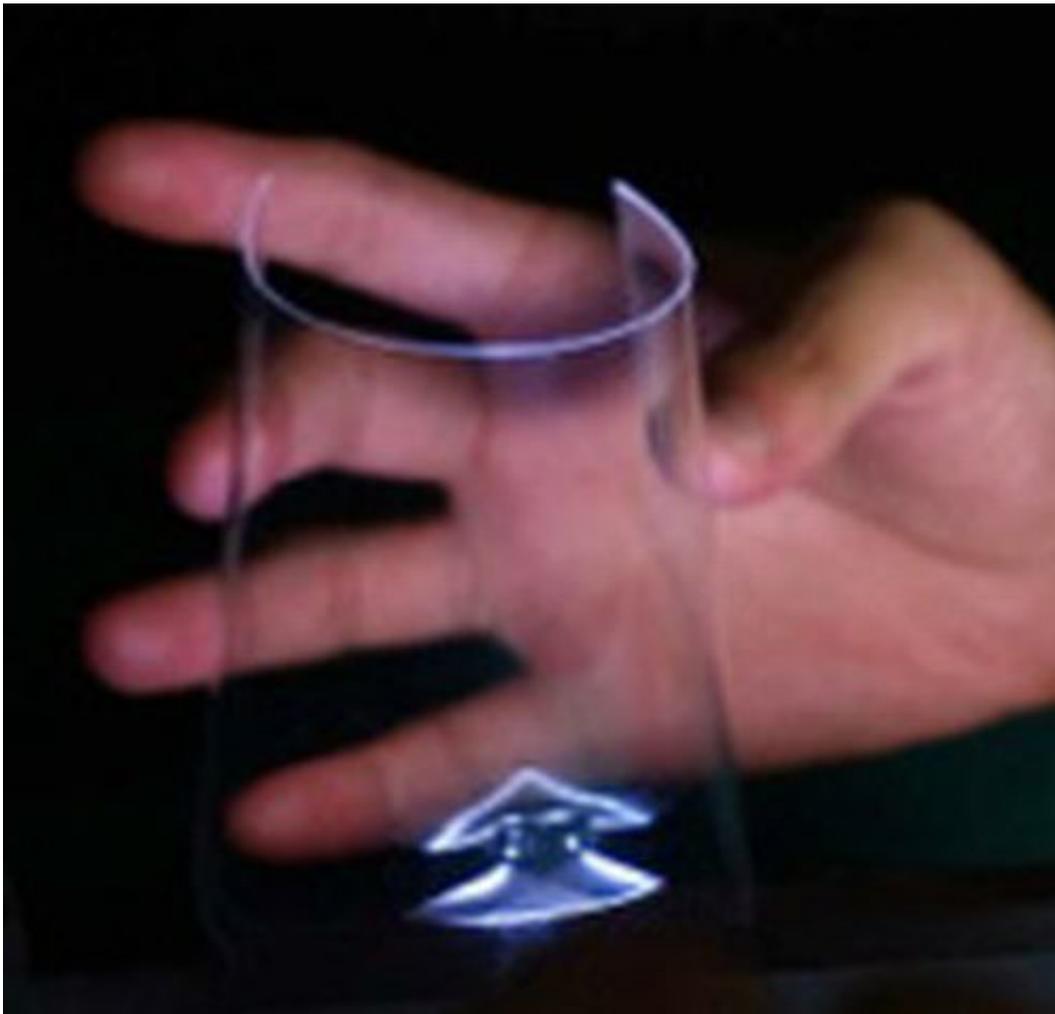


# Omron develops 3D display technology using transparent sheet

October 7 2014, by Nancy Owano

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Credit: Omron/Nikkei Electronics

Omron has technology that projects images in air by means of a

transparent sheet. Naoki Tanaka of Nikkei Electronics recently reported on what is called "Transparent Plate-type Space Projection Technology." The approach projects a three-dimensional still image in space by emitting light from a transparent sheet. A light-emitting diode (LED) lamp serves as a light source.

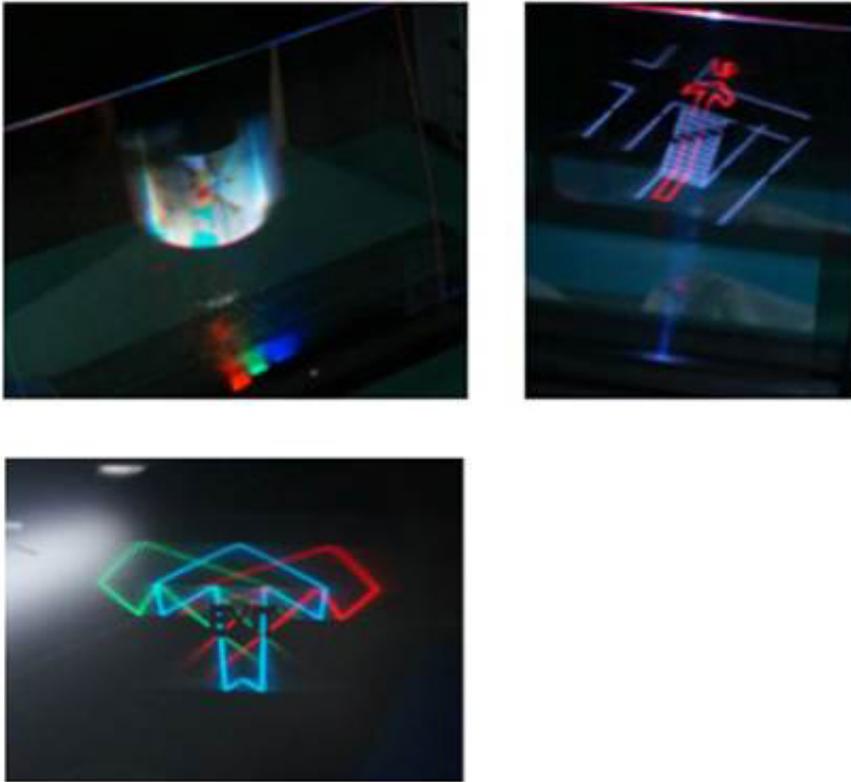
The Asahi Shimbun on Tuesday reported on the Omron approach, saying the company developed the technology "to enable three-dimensional images to appear if a [light-emitting diode](#) (LED) is shone on a [transparent](#) plastic board." Tanaka of Nikkei Electronics described the sheet as transparent, almost invisible, thin and lightweight. What is more, the sheet can be bent and attached to [transparent glass](#). With this transparent sheet, an image can be projected on both sides, and creatives can stack multiple transparent sheets for switching images, displaying color images and animation. (Asahi Shimbun noted how Omron came up with a plastic that has concave and convex surfaces.) Matthew Humphries of Geek.com commented that Omron, with its experience in developing LED back lights and light guide plates for LCD TVs, "decided to tweak its tech to create a display solution that does away with the traditional flat panel TV design altogether."

Suggested applications include 3D displays and augmented reality projects. According to Tanaka's report, "Omron considers that the new technology will be used for (1) signboards, (2) guide signs in public facilities such as train stations, (3) projection of images (information) around goods in shop windows and (4) visualization of sensitive areas in space for gesture-controlled devices and noncontact switches."

According to The Asahi Shimbun, the company is weighing how to put it into commercial use "and is set to start business negotiations to this end."

The Asahi Shimbun also noted the cost implications of this [technology](#), "Until now, special lenses and projection equipment had been necessary to create 3-D [images](#). Each system cost several tens of thousands of yen

to several hundreds of thousands of yen. With this Omron approach, "costs can be curbed substantially," said Masayuki Shinohara at the company.



Multiple transparent sheets can be stacked. Credit: Omron/Nikkei Electronics

The company's "Transparent Plate-type Space Projection Technology" will be shown at Ceatec Japan 2014 this month.

- More information:** — [techon.nikkeibp.co.jp/english/ ...  
\\_EN/20141005/380640/](http://techon.nikkeibp.co.jp/english/..._EN/20141005/380640/)  
— [www.geek.com/chips/transparent ... -3d-display-1606081/](http://www.geek.com/chips/transparent...-3d-display-1606081/)  
— [ajw.asahi.com/article/sci\\_tech ... ology/AJ201410070006](http://ajw.asahi.com/article/sci_tech...ology/AJ201410070006)

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