

# Toshiba unveils glasses-free 3-D TV

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Toshiba Corp. believes it has a solution for television viewers who like 3-D but hate the glasses.

The Tokyo-based company on Monday unveiled the world's first high definition liquid crystal display 3-D television that does not require special glasses - one of the biggest consumer complaints about the technology.

Toshiba describes the TVs as being for "personal use." Whether consumers embrace the new TVs remains to be seen. Many might be put off by the fact they'll have to be very close to the screen for the 3-D

effect to really work not to mention the steep price tag.

Electronics and entertainment companies around the world are banking on 3-D to fuel a new boom in TV, movies and games. Most 3-D TVs on the market today rely on glasses to rapidly deliver separate images to each eye, which creates a sense of three-dimensional depth.

In its new TVs, Toshiba uses a "perpendicular lenticular sheet," which consists of an array of small lenses that directs light from the display to nine points in front of the TV. If a viewer is sitting within the optimal viewing zone, the brain integrates these points into a single 3-D image.



Japanese electronics company Toshiba unveils the world's first 3D television that does not require viewers to wear special glasses, called the "Regza GL1 Series", at a preview in Tokyo. The new 12 and 14-inch 3D TVs combine image processing technology with a double convex sheet to render depth-filled images from any angle using parallax.

"The result is precise rendering of high quality 3-D images whatever the

viewing angle within the viewing zone," Toshiba said in its release.

The system is similar to what's used in Nintendo's 3DS, the company's highly anticipated handheld device that features glasses-free 3-D gaming.

Toshiba will offer two sizes - 12 inches and 20 inches - designed for personal use. The technology isn't advanced enough yet to integrate into larger screens. Suggested viewing distance for the 20-inch model is 90 centimeters (35.4 inches) and 65 centimeters (25.6 inches) for the 12-inch size.

The TVs will go on sale in Japan in late December, Toshiba said. They smaller version will cost about 120,000 yen (\$1,400), and the larger one will be double the price.

The company did not release details on overseas availability.

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