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One mm-thick see-through holographic RGB illumination unit ega-rim

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In the field of the hologram, there are two big walls to disturb the development and market growth. First big wall is the holographic media production issue. Such as a photopolymer material is very useful for creating the hologram contents, however, available products and supply roots are strictly limited in the world. To make a solution to this first wall, we have started photopolymer production in Japan with an overseas photopolymer development company by the technological cooperation. Second big wall is the limitation of the expression methods for hologram contents and holographic pictures. An external light source has been mandatory for observing the sufficient quality of holographic image. To make a solution to this second wall, we proposed the brand-new illumination unit by using holographic technology. The unit thickness was only 1 mm and has a transparency; it looks like a just plane glass. In spite of this, the light can be lead from the edge of this glass and emit from the surface with certain angle. Therefore, this illumination unit can be set very close to the hologram content or hologram picture, i.e. enables to combine with them as an photo-frame. In Japanese, usually the picture pronounces /e/ or /ga/ and a frame is a rim in English. Therefore, this unit is so-called "Ega-rim". By using the Ega-rim laboratory proto-type, basic performance was proven experimentally. We hope everybody can enjoy a hologram easily by using Ega-rim and open up the hologram market worldwide.

Biography

Hideyoshi Horimai has received his PhD from The University of Tokyo. In 1998, he has invented the original holographic storage technology, so-called Collinear Holography, its disk format was approved at world first International Standard as "HVD" in 2007. His other developments were holographic 3D-image printer system, 360-degree 3D display, digital holographic microscope and holographic window for BIPV.

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