

PRESS RELEASE



Artience Lab.

Artience Lab Inc.

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WOWGRAM®

Development of a New Illumination Technology “WOWLight –HoCODA– “
for Display of a Full Color 3D Hologram “WOWGRAM”
on a Transparent Light Guiding Plate,
with a Proposed Application to Contact-free Touch Panels
- Presented at the “3D Image Conference 2021” -

Artience Lab Inc. (CEO: Akira Shirakura, headquartered in Mobara, Chiba Prefecture) announces the development of an illumination technology that enables display of a full-color 3D hologram “WOWGRAM” on a transparent light guiding plate. Compact and bright three-dimensional image display is made possible without any working at the edge, for a hologram reproduced by illumination with light traveling by total internal reflection inside a glass or acrylic plate. This is realized by placing an array of deflecting holographic optical elements (HoCODA), which has been originally developed, in counter-position to an LED array. This technology was presented at the 3D Image Conference (online meeting: July 1-2, 2021).



① Monochrome (Red) prototype



② Monochrome (Green) prototype



③ Full Color prototype

video of sample



<https://youtu.be/hnUNCnwABCg>

Artience Lab is developing the technology involving the basic capabilities of holograms, which now includes technology for high quality reproduction of the light-guided type, in addition to that of the reflection (front lighting) type which has been under development for some time. Presently, success has been achieved in light-guiding ideal illuminating light in a compact form factor without any working at the edge by placing an array of deflecting holographic optical elements (HoCODA), which has been originally developed, in adjacent counter-position to an LED array on a light guiding plate. This enables display of full-color three-dimensional images and moving images that hover over a transparent glass or acrylic plate when required, while not disturbing its transparency otherwise.

Exploitation of this technology can realize, in addition to such displays as that of warnings on the front protective glass of an automotive instrument display panel, or of information for vehicles in the rear, also such displays as that of advertisements and sign boards in building and vehicle windows, or of decorations on display panels of amusement devices, gaming devices and home appliances.



As an example of application of this technology, Artience Lab has developed a prototype contact-free input UI (user interface), in view of the widening use of such stations as ATMs, self-operated check-out registers, or KIOSK terminals which may be touched by many and unspecified persons, that enables the operation of a touch panel without contacting the panel. It is made possible to display such items as buttons in the form of floating images hovering over the screen by attaching a light-guided type WOWGRAM on a display such as a conventional LCD monitor.

Artience Lab plans to drive the development of this technology and its applications, and produce in volume, to supply to set manufacturers, as devices, customized WOWGRAMs, holographic optical elements (HoCODAs) as well as, upon request, custom LED arrays.

Artience Lab plans to move forward to develop markets and technology in various fields focusing on the hologram technologies of “WOWGRAM” and “WOWLIGHT” by continuing to introduce products that provide high customer satisfaction to the market.

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