Transparent Holographic Components

www.luminitholography.com

Transparent Holographic Components (THCs) enable bright, transparent, virtual images to be viewed in products such as augmented-reality glasses, smart glasses, head-up displays, vehicular displays, and near-to-eye displays. Luminit THCs use highly efficient holographic optical elements that direct light beams without the need for bulky and expensive optics. Luminit holographic technologies for near-to-eye or head-up displays use thin (10-30 micron) holographic photopolymer film. The holograms recorded in this film have properties of thick (Bragg) holograms that are wavelength and angle selective, with very low scattering. Their unparalleled transparency (>90%) and diffraction efficiency (>90% at peak) mean that THCs deliver brighter, more compact designs with larger virtual image size for head-up and head-mounted displays.

Benefits

- More efficient product design
- Larger virtual image size
- Reduced weight and more flexibility in packaging design
- Reductions in power consumption due to increased efficiency

Applications

- Augmented reality & Virtual Reality
- Automotive head up displays on windshields
- Head-mounted displays for off-axis image projection
- Personal wearable display eyewear
- Eye-tracking
- More efficient backlighting on LED and LCD lighting
- Enhanced solar concentrators, optical sensors and spectrometers
- Increased high capacity recording memory
- Automotive interior lighting such as dome and floor lights
- Welcome lighting or mud lights

SPECIFICATIONS:

MATERIAL COMPOSITION: POLYMER THIN FILM ON GLASS OR PLASTIC

MINIMUM SIZE: < 1 CM^2

MAXIMUM SIZE: > 1 FT^2

THICKNESSES: 10-30UM FILM ON VARIOUS SUBSTRATES

BRIGHTNESS UNIFORMITY: > 80%

SUBSTRATE: GLASS, ACRYLIC, POLYCARBONATE

DIFFRACTION EFFICIENCY: UP TO 90%

TRANSMISSION RATE: > 90%

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