



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. Luminet THCs use highly efficient holographic optical elements that direct light beams without the need for bulky and expensive optics. Luminet 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

SPECIFICATIONS:

MATERIAL COMPOSITION: POLYMER THIN FILM ON GLASS OR PLASTIC

MINIMUM SIZE: < 1 CM²

MAXIMUM SIZE: > 1 FT²

THICKNESSES: 10-30UM FILM ON VARIOUS SUBSTRATES

BRIGHTNESS UNIFORMITY: > 80%

SUBSTRATE: GLASS, ACRYLIC, POLYCARBONATE

DIFFRACTION EFFICIENCY: UP TO 90%

TRANSMISSION RATE: > 90%

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