

Wide-Field Freeform Projection Lens/Module for Augmented Reality

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KEYWORDS : Augmented reality, Freeform optics

Fully designed high efficient fly-eye lens type optical engine which enables to well fit the augmented reality (AR) glass frame and compact enough to connect the hinge into the AR glass frame to the temple. The single-material-single-component freeform prism projection lens design successfully achieved a near telecentric imaging, well corrected field aberration, and near diffraction limited optical performance. The freeform prism lens test using ultra accurate optical profilometer and near-eye-display (NED) testing equipment based testing for AR glass with/without waveguide show a reasonable results enough for good optical augmented reality imaging.

ACKNOWLEDGEMENT

This research was supported by LG Electronics Inc.