Proceedings of the 19th International Display Workshops
Volume 3, Pages 1526-1528

Optical Lens Design for a Virtual Image Projector in a Helmet

Lin, H. T. ; Su, W. C. ; Chang, P. K. ; Wang, Yu-Wu

Abstract

A projection lens design for a virtual image projector in a helmet is presented. The designed projection lens system shows that optical modulation transfer function (MTF) is 0.55 at the spatial frequency of 40 lp/mm and field of view (FOV) is 8°. In this system, the imaging location is in the front of exit pupil with 1m, and the eye relief in this system is 81 mm.

Key words：Eyepiece optical system; HMD; HUD; LCOS; Virtual-display