

## Design of Optical System for Electrostatic Field Distribution Measurement Using Micromirror Array

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An optical system for electrostatic field distribution measurement using a micromirror array fabricated by a micro-electromechanical systems (MEMS) process has been designed. Each micromirror is suspended by two thin torsion bars, which is made by a silicon-on-insulator (SOI) wafer fabrication process. The deflection of each mirror by an electrostatic field is measured optically using a two-dimensional optical scanner and a position-sensitive detector (PSD). Another optical system for increasing the sensitivity has also been proposed, which will widen the voltage measurement range. The electrostatic field distribution measurement system was applied to a human body model, and the removal effect of electricity was tested using removing tools.

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