Design and Fabrication of Three Dimensional Micro Mirror Piezoelectric Actuators

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ABSTRACT

Because the change of science and technology adds the improvement that people's quality of the life required, development and studying absorbed quite a lot of mental and physical efforts to the display of all circles. In development of the projection television using the digital light processing (DLP) technology. Focus the light source on and cross color filter and then throw to DMD chip. Through urge electrode control every little lens slope angle and control deflection time with switch over all reflection direction throw and present looking like via scene afterwards. Its key technology is making of DMD. This text does analysis and designs to the little surface of the mirror by way of piezoelectricity actuating device promptly to another kind of drive way. The purpose is to analysis that one winds small mirror that axis of center of surface of the mirror rotated and moved. It ’ s principle is to urge the structure of the piezoelectricity cantilever beam to produce and send motive force and displacement with the voltage, and turn back the roof beam to join surface of the mirror and get the result of rotate or surface of the mirror of translation through the coincidence roof beam, and make the micro mirror of the same level have the degree of freedom .

Keywords : Piezoelectric, Micro mirror, Sol-gel

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