

2D Silicon/Ferroelectric Liquid Crystal Spatial Light Modulators

We have developed a spatial light modulator technology based on foundry silicon fabrication processes. This technology employs a thin, ferroelectric liquid crystal light-modulating layer at the substrate's surface, producing electrically addressed display devices with resolutions up to 256x256 and frame rates up to 10 kHz. We have also fabricated optically addressed smart-pixel arrays for low-level image processing. Performance has advanced rapidly due to design innovations and effective use of modern process features.

Timothy J. Drabik
Albert H. Titus
Georgia Institute of
Technology

Mark A. Handschy
David Banas
Displaytech, Inc.

Stephen D. Gaalema
David J. Ward
Black Forest Engineering

from IEEE Micro, Volume 15, Number 4, August 1995, p.67-76