

ABSTRACT

**PHOTOLITHOGRAPHIC METHODS FOR MAKING LIQUID-CRYSTAL-ON-SILICON DISPLAYS WITH ALIGNMENT POSTS
AND OPTICAL INTERFERENCE LAYERS**

Five new methods for the formation of an improved liquid-crystal-on-silicon display are described, in which the device structure is enhanced by the photolithographic building of alignment posts among the mirror pixels of the micro-display. These five methods accommodate the fabrication of an optical interference multilayer, which improves the image quality of the reflected light. These five methods are:

Silicon Dioxide Posts by Wet Etching.

Amorphous Silicon Posts by Plasma Etching.

Silicon Nitride Posts by Plug Filling.

Insulation Material Posts by Lift-off.

Polyimide Posts by Photosensitive Etching.

(FIGURE 1 IS SUGGESTED FOR PUBLICATION)