ABSTRACT OF THE DISCLOSURE

DISPLAY DEVICE HAVING AN ARRAY OF SPATIAL LIGHT MODULATORS WITH INTEGRATED COLOR FILTERS

By selectively placing color filters with different transmittance spectrums on an array of modulator elements each having the same reflectance spectrum, a resultant reflectance spectrum for each modulator element and it's respective color filter is created. In one embodiment, the modulator elements in an array are manufactured by the same process so that each modulator element has a reflectance spectrum that includes multiple reflectivity lines. Color filters corresponding to multiple colors, such as red, green, and blue, for example, may be selectively associated with these modulator elements in order to filter out a desired wavelength range for each modulator element and provide a multiple color array. Because the modulator elements are manufactured by the same process, each of the modulator elements is substantially the same and common voltage levels may be used to activate and deactivate selected modulation.

Figure 11A