ABSTRACT OF THE DISCLOSURE

DISPLAY REGION ARCHITECTURES

A bit depth of a pixel comprising multiple display elements, such as interferometric modulators, may be increased through the use of display elements having different intensities, while the lead count is minimally increased. An exemplary pixel with at least one display element having an intensity of 0.5 and N display elements each having an intensity of one can provide about 2N + 1 shades (e.g., 0, 0.5, 1.0, 1.5, 2.0, [N + 0.5]). In comparison, a pixel having N display elements, each having an intensity of one, can only provide about N+1 shades (e.g., 0, 1, 2, ..., N). Thus, using at least one display element having an intensity lower than the intensity of each of the other display elements increases the number of shades provided by the pixel by an approximate factor of two and increases the bit depth of the pixel, while minimizing the number of additional leads.