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A NOVEL LIGHT SHIELD CUM GAP FILL SCHEME FOR MICRODISPLAY BACKPLANE FABRICATION

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ABSTRACT OF THE DISCLOSURE

A light shield apparatus and formation method for preventing the transmission of incident light towards active devices of the display. In one embodiment, the present invention recites forming a plurality of metal pixels wherein adjacent ones of the plurality of metal pixels have a gap region disposed therebetween. The present embodiment then recites
10 depositing a light absorbing antireflective coating material within the gap region to form a light shield such that transmission of incident light through the gap region towards underlying active devices is reduced. Hence, the present embodiments also reduce problems associated with
15 Liquid Crystal alignment difficulty and passivation integrity (cracking of thin passivation). Next, the present embodiment deposits a thin composite passivation layer above the plurality of metal pixels and the antireflective coating material. As a result, the antireflective coating material disposed in the gap region reduces the transmission of incident light between the
20 metal pixels and towards the active devices of the display and alleviates problems associated with excessive step height between metal pixels.

FIGURE 2H



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