ABSTRACT

A NOVEL PASSIVATION SCHEME FOR LCD AND OTHER APPLICATIONS

A process for planarizing a passivation layer in order to maintain a uniform gap between the passivation layer of a bottom substrate and the top substrate of a LCD integrated circuit device is described. Semiconductor device structures in and on a semiconductor substrate wherein the semiconductor device structures are covered by an insulating layer. A metal layer is deposited and patterned to form metal lines wherein there is a gap between two of the metal lines. A passivation layer is deposited overlying the metal lines wherein the gap is not filled by the passivation layer. A layer of high density plasma oxide is deposited overlying the passivation layer and polished to leave the high density plasma oxide within the gap and to leave a planarized passivation layer surface. This will also a precise gap to be maintained in which to build the liquid crystal display material between the top substrate and the passivation layer of the bottom substrate.

(FIGURE 2 IS SUGGESTED FOR PUBLICATION)