

Title (en)
METHOD FOR PRODUCING A MATRIX FROM THIN FILM TRANSISTORS WITH STORAGE CAPACITIES

Title (de)
VERFAHREN ZUR HERSTELLUNG EINER MATRIX AUS DÜNNSCHICHTTRANSISTOREN MIT SPEICHERKAPAZITÄTEN

Title (fr)
PROCEDES DE PRODUCTION D'UNE MATRICE A PARTIR DE TRANSISTORS A COUCHES MINCES PRESENTANT DES CAPACITES DE MEMOIRE

Publication
EP 1008179 A1 20000614 (DE)

Application
EP 98941232 A 19980626

Priority
• DE 9801759 W 19980626
• DE 19731090 A 19970719

Abstract (en)
[origin: DE19731090C1] Production of a matrix of thin film transistors (TFTs) with storage capacitors, especially for LCDs, involves: (a) applying and structuring a first conductive layer on a substrate to form column lines (32) and interposed portions of the row lines of the TFT matrix, transistor gate contacts and capacitor electrodes in a first masking step; (b) applying and structuring a TFT gate insulation, an undoped semiconductor layer and then a p- or n-doped TFT drain and source contact semiconductor layer in a second masking step; (c) applying and structuring a second transparent conductive layer to complete the row line portions (33.2), the drain and source contact metallisations (38), the capacitor top electrodes (39) and pixel electrodes (37) in a third masking step; (d) etching the doped semiconductor layer using the structured second conductive layer as mask; and (e) applying a transparent passivation. Also claimed is a similar process, in which the transparent conductive layer (preferably ITO) is applied and structured in step (a), the pixel electrodes are formed in step (a) and the conductive layer (preferably a metal such as Ta, Mo, Cr and/or Al) is applied and structured in step (c).

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H01L 21/84; H01L 27/12

IPC 8 full level
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