

Title (en)
TRANSFLECTIVE DISPLAY DEVICE HAVING A BLACK/WHITE OR HALF-TONE DISPLAY IN THE REFLECTING OPERATING MODE

Title (de)
TRANSFLEKTIVE ANZEIGEVORRICHTUNG MIT SCHWARZ/WEISS- BZW. GRAUWERTANZEIGE IN DER REFLEKTIERENDEN BETRIEBSART

Title (fr)
DISPOSITIF D'AFFICHAGE TRANSFLECTIF AVEC AFFICHAGE NOIR/BLANC OU GRIS DANS UN MODE DE FONCTIONNEMENT REFLECHISSANT

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Application
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Abstract (en)
[origin: WO2004072716A1] The invention relates to a transreflective display device comprising a first transparent substrate (S1) for letting in light of a background lighting (LQ), whereby the first transparent substrate is provided with first electrodes (E1). The display device (A2) also comprises a second transparent substrate (S2) for displaying graphic patterns, whereby the second transparent substrate is provided with second electrodes (E21, E22, E23). An electro-optical material is provided, in particular, in the form of a liquid crystal layer (LC) between the first and the second transparent substrate. The display device additionally comprises pixel sections (BPA1, BPA2, BPA3) that are provided in overlapping areas of the respective first and second electrodes, have a respective reflecting element (R1, R2, R3) for reflecting light let in through the second substrate, and have a color filter element (FF1, FF2, FF3) for filtering and permitting light, which is let in through the first substrate, to pass through in the direction of the second substrate. The reflecting element is placed on sides of the second substrate, and the color filter element is placed on sides of the first substrate. This enables, during the transmissive operating mode of the display device, a colored display of graphic patterns whereas during the reflective operating mode, a black/white display or half-tone display of a high contrast and high brightness is provided.

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