

Title (en)

FLAT PANEL DEVICE WITH INTERNAL SUPPORT STRUCTURE AND/OR RAISED BLACK MATRIX.

Title (de)

FLACHTAFEL-VORRICHTUNG MIT INNERER TRAGSTRUKTUR UND/ODER RELIEF-SCHWARZMATRIX.

Title (fr)

DISPOSITIF A PANNEAU PLAT POURVU D'UNE STRUCTURE INTERNE DE SUPPORT ET/OU D'UNE MATRICE NOIRE EN RELIEF.

Publication

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Application

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Abstract (en)

[origin: WO9418694A1] A flat panel device (300) includes a spacer (308) for providing internal support. The spacer can be made of ceramic or glass-ceramic. Spacer surfaces exposed within the flat panel device are treated to reduce secondary emissions and prevent charging of the spacer surfaces. A light-emitting structure contains a main section (302), a pattern of dark ridges (314) situated along the main section, and a plurality of electron-activated light-emissive regions (313) situated in spaces between the ridges. The dark ridges extend further away from the main section than the light-emissive regions to form a raised black matrix. When the light-emitting structure is used in an optical display, the raised black matrix contacts spacers (308) and, in so doing, protects the light-emissive regions from being damaged. The light-emitting structure can be formed according to various techniques of the invention.

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