

Title (en)

FIELD EMISSION DISPLAY CELL STRUCTURE AND FABRICATION PROCESS

Title (de)

FELDEMISSIONANZEIGEZELLENSTRUKTUR UND VERFAHREN ZUR HERSTELLUNG

Title (fr)

STRUCTURE CELLULAIRE D'AFFICHAGE A EMISSION DE CHAMP ET PROCEDE DE FABRICATION

Publication

EP 0827626 A4 19980617 (EN)

Application

EP 96915515 A 19960506

Priority

- US 9606336 W 19960506
- US 43802395 A 19950508
- US 43810795 A 19950508

Abstract (en)

[origin: WO9636061A1] A lateral-emitter field-emission device includes a thin-film emitter cathode (50) of thickness less than several hundred angstrom and has an edge or tip (110) with small radius of curvature. In the display cell structure, a cathodoluminescent phosphor anode (60), allowing a large portion of the phosphor anode's top surface to emit light in a desired direction. An anode contact layer contacts the phosphor anode (60) from below to form a buried anode contact (90) which does not interfere with light emission. The anode phosphor is precisely spaced apart from the cathode edge or tip and receives electrons emitted by the field emission from the edge or tip of the lateral-emitter cathode, when a small bias voltage is applied. The device may be configured as diode, triode, or tetrode, etc. having one or more control electrodes (140) and/or (170) positioned to allow control of current from the emitter to the phosphor anode by an electrical signal applied to the control electrode.

IPC 1-7

H01J 1/16

IPC 8 full level

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CPC (source: EP KR)

H01J 3/022 (2013.01 - EP); **H01J 9/025** (2013.01 - EP); **H01J 21/105** (2013.01 - EP); **H01J 31/127** (2013.01 - EP); **H01J 31/15** (2013.01 - KR)

Citation (search report)

[PA] EP 0681311 A1 19951108 - KARPOV LEONID DANILOVICH [RU]

Citation (examination)

- WO 9417546 A1 19940804 - KARPOV LEONID DANILOVICH [RU]
- US 5136764 A 19920811 - VASQUEZ BARBARA [US]
- See also references of WO 9636061A1

Designated contracting state (EPC)

DE FR GB NL

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