

Title (en)

GATED FILAMENT STRUCTURES FOR A FIELD EMISSION DISPLAY

Title (de)

GATE-FASERSTRUKTUREN FÜR EINE FELDEMISSIONSANZEIGEVORRICHTUNG

Title (fr)

STRUCTURES A FILAMENTS COMPORTANT DES GRILLES POUR DISPOSITIF D'AFFICHAGE PAR EMISSION DE CHAMP

Publication

EP 0807314 A1 19971119 (EN)

Application

EP 96905347 A 19960131

Priority

- US 9601461 W 19960131
- US 38340895 A 19950131
- US 38340995 A 19950131
- US 38341095 A 19950131

Abstract (en)

[origin: WO9624152A1] A gated filament structure for a field emission display includes a plurality of filaments. Included is a substrate, an insulating layer positioned adjacent to the substrate, and a metal gate layer position adjacent to the insulating layer. The metal gate layer has a plurality of gates, the metal gate layer having an average thickness "s" and a top metal gate layer planar surface that is substantially parallel to a bottom metal gate layer planar surface. The metal gate layer includes a plurality of apertures extending through the gates. Each aperture has an average width "r" along a bottom planar surface of the aperture. Each aperture defines a midpoint plane positioned parallel to and equally distant from the top metal gate layer planar surface and the bottom metal gate layer planar surface. A plurality of filaments are individually positioned in an aperture. Each filament has a filament axis. The intersection of the filament axis and the midpoint plane defines a point "O". Each filament includes a filament tip terminating at a point "A". A majority of all filament tips of the display have a length "L" between each filament tip at point A and point O along the filament axis where, $L \leq (s + r)/2$.

IPC 1-7

H01J 1/30; **H01J 9/02**; **H01J 31/12**

IPC 8 full level

H01J 1/304 (2006.01); **H01J 9/02** (2006.01); **H01J 29/04** (2006.01); **H01J 31/12** (2006.01)

CPC (source: EP)

H01J 1/3042 (2013.01); **H01J 9/025** (2013.01); **H01J 2201/30457** (2013.01); **H01J 2201/319** (2013.01)

Citation (search report)

See references of WO 9624152A1

Designated contracting state (EPC)

FR GB

DOCDB simple family (publication)

WO 9624152 A1 19960808; AU 4913496 A 19960821; EP 0807314 A1 19971119; EP 0807314 B1 20020424; JP 3832840 B2 20061011; JP H10513304 A 19981215

DOCDB simple family (application)

US 9601461 W 19960131; AU 4913496 A 19960131; EP 96905347 A 19960131; JP 52375696 A 19960131