Title (en)

METHODS AND DEVICES FOR IMPROVED CHARGE MANAGEMENT FOR THREE-DIMENSIONAL AND COLOR SENSING

Title (de)

VERFAHREN UND VORRICHTUNG ZUM VERBESSERTEN LADUNGSMANAGEMENT FÜR 3D- UND FARBWAHRNEHMUNG

Title (fr)

PROCEDES ET DISPOSITIFS DESTINES A LA GESTION DE CHARGE AMELIOREE DANS LA DETECTION TRIDIMENSIONNELLE ET DE COULEUR

Publication

EP 1846948 A4 20090909 (EN)

Application

EP 06720322 A 20060206

Priority

- US 2006004053 W 20060206
- US 65091505 P 20050208

Abstract (en)

[origin: WO2006086281A2] TOF and color sensing detector structures have x-axis spaced-apart y-axis extending finger-shaped gate structures with adjacent source collection regions. X- dimension structures are smaller than y-dimension structure and govern performance, characterized by high x-axis electric fields and rapid charge movement, contrasted with lower y-axis electric fields and slower charge movement. Preferably a potential barrier is implanted between adjacent gates and a bias gate is formed intermediate a gate and associated source region. Resultant detector structures can be operated at the more extreme gate voltages that are desirable for high performance.

IPC 8 full level

G01C 3/08 (2006.01); **G01C 3/00** (2006.01); **G01J 9/00** (2006.01); **G01S 7/08** (2006.01); **G01S 7/491** (2020.01); **G01S 17/36** (2006.01); **G01S 17/894** (2020.01)

CPC (source: EP US)

G01J 3/50 (2013.01 - EP); **G01S 7/491** (2013.01 - EP); **G01S 17/36** (2013.01 - EP); **G01S 17/894** (2020.01 - EP US); **H01L 31/02024** (2013.01 - EP US)

Citation (search report)

- [X] WO 2004114369 A2 20041229 - CANESTA INC [US], et al
- See references of WO 2006086281A2

Citation (examination)

- EP 0944117 A1 19990922 - SONY CORP [JP]
- EP 0206363 A1 19861230 - PHILIPS NV [NL]

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CN106531751A; US10684122B2

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR

DOCDB simple family (publication)

WO 2006086281 A2 20060817; **WO 2006086281 A3 20071129**; EP 1846948 A2 20071024; EP 1846948 A4 20090909

DOCDB simple family (application)

US 2006004053 W 20060206; EP 06720322 A 20060206