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 3/00 (2006.01); **G01C 3/08** (2006.01); **G01J 9/00** (2006.01); **G01S 7/08** (2006.01); **G01S 7/491** (2020.01); **G01S 17/36** (2006.01); **G01S 17/89** (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

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