

Title (en)
DISLOCATION-BASED LIGHT EMITTER WITH AN MIS STRUCTURE

Title (de)
VERSETZUNGSBASIERTER LICHTEMITTER MIT MIS-STRUKTUR

Title (fr)
ÉMETTEUR DE LUMIÈRE À BASE DE DÉCALAGE À STRUCTURE MIS

Publication
EP 2030252 A1 20090304 (DE)

Application
EP 07729669 A 20070530

Priority

- EP 2007055256 W 20070530
- DE 102006026457 A 20060531
- DE 102006047071 A 20060926

Abstract (en)
[origin: WO2007138078A1] Light-emitting semiconductor component (600) having a substrate (S, 200) which has a first interface between a first silicon layer (100) and a second silicon layer (102), whose grating structures which are thought to be ideal are rotated through an angle of rotation relative to one another about a first axis (118) which is perpendicular to the surface of the substrate and are tilted through a tilt angle about a second axis which is parallel to the surface of the substrate (108) in such a manner that there is a dislocation network (D) in the region of the interface, wherein the angle of rotation and the tilt angle are selected in such a manner that an electroluminescence spectrum of the semiconductor component (600) has an absolute maximum of the emitted light intensity at a wavelength of either 1.3 micrometres or 1.55 micrometres.

IPC 8 full level
H01L 33/00 (2010.01); **H01L 33/16** (2010.01); **H01L 33/34** (2010.01)

CPC (source: EP)
H01L 21/76254 (2013.01); **H01L 33/0037** (2013.01); **H01L 33/0054** (2013.01); **H01L 33/16** (2013.01); **H01L 33/34** (2013.01); **H01S 5/30** (2013.01); **G02F 1/13473** (2013.01); **G02F 2203/34** (2013.01); **H01S 3/0637** (2013.01); **H01S 5/3009** (2013.01); **H01S 5/3031** (2013.01)

Citation (search report)
See references of WO 2007138078A1

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 MT NL PL PT RO SE SI SK TR

Designated extension state (EPC)
AL BA HR MK RS

DOCDB simple family (publication)
DE 102006047071 A1 20071206; EP 2030252 A1 20090304; WO 2007138078 A1 20071206

DOCDB simple family (application)
DE 102006047071 A 20060926; EP 07729669 A 20070530; EP 2007055256 W 20070530