

Title (en)
SEMICONDUCTOR LIGHT CONVERTING CONSTRUCTION

Title (de)
HALBLEITER-LICHTUMWANDLUNGSKONSTRUKTION

Title (fr)
CONSTRUCTION DE CONVERSION DE LUMIERE A SEMI-CONDUCTEUR

Publication
EP 2308104 A4 20140430 (EN)

Application
EP 09770725 A 20090610

Priority
• US 2009046835 W 20090610
• US 7590408 P 20080626

Abstract (en)
[origin: WO2009158191A2] Semiconductor light converting constructions are disclosed. The semiconductor light converting construction includes a semiconductor potential well for converting at least a portion of light at a first wavelength to light at a longer second wavelength; an outer layer that is disposed on the semiconductor potential well and has a first index of refraction; and a structured layer that is disposed on the outer layer and has a second index of refraction that is smaller than the first index of refraction. The structured layer includes a plurality of structures that are disposed directly on the outer layer and a plurality of openings that expose the outer layer. The semiconductor light converting construction further includes a structured overcoat that is disposed directly on at least a portion of the structured layer and a portion of the outer layer in the plurality of openings. The overcoat has a third index of refraction that is greater than the second index of refraction.

IPC 8 full level
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H01L 33/08 (2013.01 - EP); **H01L 33/44** (2013.01 - EP KR); **H01L 33/502** (2013.01 - EP); **H01L 2933/0091** (2013.01 - EP)

Citation (search report)
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• [A] EP 1653519 A1 20060503 - MITSUBISHI HEAVY IND LTD [JP]
• [A] GUO S P ET AL: "Distributed Bragg reflectors for visible range applications based on (Zn,Cd,Mg)Se lattice matched to InP", APPLIED PHYSICS LETTERS, AMERICAN INSTITUTE OF PHYSICS, US, vol. 77, no. 25, 18 December 2000 (2000-12-18), pages 4107 - 4109, XP012026930, ISSN: 0003-6951, DOI: 10.1063/1.1334650
• See references of WO 2009158191A2

Designated contracting state (EPC)
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DOCDB simple family (publication)
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DOCDB simple family (application)
US 2009046835 W 20090610; CN 200980132160 A 20090610; EP 09770725 A 20090610; JP 2011516415 A 20090610; KR 20117001361 A 20090610