

Title (en)

METHOD FOR PRODUCING AN ELECTROMAGNETIC RADIATION-EMITTING SEMICONDUCTOR CHIP AND A CORRESPONDING ELECTROMAGNETIC RADIATION-EMITTING SEMICONDUCTOR CHIP

Title (de)

VERFAHREN ZUM HERSTELLEN EINES ELEKTROMAGNETISCHE STRAHLUNG EMITTIERENDEN HALBLEITERCHIPS UND ELEKTROMAGNETISCHE STRAHLUNG EMITTIERENDER HALBLEITERCHIP

Title (fr)

PROCEDE DE FABRICATION D'UNE PUCE A SEMICONDUCTEURS EMETTANT UN RAYONNEMENT ELECTROMAGNETIQUE ET PUCE A SEMICONDUCTEURS EMETTANT UN RAYONNEMENT ELECTROMAGNETIQUE

Publication

**EP 1532694 A2 20050525 (DE)**

Application

**EP 03750286 A 20030821**

Priority

- DE 0302786 W 20030821
- DE 10239045 A 20020826

Abstract (en)

[origin: WO2004021457A2] The invention relates to a method for producing a radiation-emitting semiconductor chip based on AlGaInP, comprising the following steps: preparing a substrate; applying a series of semiconductor layers to the substrate, said series of layers containing a photon-emitting active layer, and; applying a transparent decoupling layer comprising  $Gax(InyAl1-y)1-xP$ , whereby  $0.8 \leq x$  and  $0 \leq y \leq 1$ . The invention provides that the substrate is made from germanium and that the transparent decoupling layer is applied at a low temperature.

IPC 1-7

**H01L 33/00**

IPC 8 full level

**H01L 21/205** (2006.01); **H01L 33/00** (2010.01); **H01L 33/30** (2010.01)

CPC (source: EP US)

**H01L 21/02381** (2013.01 - EP US); **H01L 21/02543** (2013.01 - EP US); **H01L 21/0262** (2013.01 - EP US); **H10H 20/0133** (2025.01 - EP US); **H10H 20/824** (2025.01 - EP US)

Designated contracting state (EPC)

DE

DOCDB simple family (publication)

**WO 2004021457 A2 20040311**; **WO 2004021457 A3 20041223**; CN 100420042 C 20080917; CN 1679176 A 20051005; DE 10239045 A1 20040311; EP 1532694 A2 20050525; JP 2005536896 A 20051202; TW 200405584 A 20040401; TW I224399 B 20041121; US 2006003467 A1 20060105; US 7195991 B2 20070327

DOCDB simple family (application)

**DE 0302786 W 20030821**; CN 03820260 A 20030821; DE 10239045 A 20020826; EP 03750286 A 20030821; JP 2004531691 A 20030821; TW 92122994 A 20030821; US 52418605 A 20050208