Title (en)

SEMICONDUCTOR LASER DEVICE

Title (de)

HALBLEITERLASERGERÄT

Title (fr)

DISPOSITIF LASER A SEMICONDUCTEUR

Publication

EP 0956623 A1 19991117 (EN)

Application

EP 98903741 A 19980127

Priority

- JP 1631397 A 19970130
- US 9801494 W 19980127

Abstract (en)

[origin: WO9834304A1] A method for fabricating a semiconductor laser diode and the laser diode constructed therewith. A laser diode according to the present invention is constructed by depositing a buffer layer (9) on a substrate (8). A crystalline layer (10-13) is then deposited on the buffer layer (9). The crystalline layer (10-13) includes the waveguide for the laser. A portion (110) of the buffer layer (9) is etched from under the crystalline layer (10-13) leaving a portion (110) of the crystalline layer (10-13) cantilevered over the substrate (8). The crystalline layer (10-13) is then cleaved in the cantilevered portion (110) to generate a reflecting surface (15) for reflecting light generated in the waveguide. This method is well suited for GaN based laser diodes that are to be constructed on sapphire substrates.

IPC 1-7

H01S 3/025; H01L 33/00

IPC 8 full level

H01L 33/32 (2010.01); **H01S 5/00** (2006.01); **H01S 5/02** (2006.01); H01S 5/323 (2006.01)

CPC (source: EP)

H01L 33/007 (2013.01); **H01S 5/0201** (2013.01); H01L 2224/48463 (2013.01); H01L 2224/4918 (2013.01); H01S 5/0202 (2013.01); H01S 5/0203 (2013.01); H01S 5/0213 (2013.01); H01S 5/32341 (2013.01)

Citation (search report)

See references of WO 9834304A1

Designated contracting state (EPC)

DE FR GB

DOCDB simple family (publication)

WO 9834304 A1 19980806; EP 0956623 A1 19991117; JP H10215031 A 19980811

DOCDB simple family (application)

US 9801494 W 19980127; EP 98903741 A 19980127; JP 1631397 A 19970130