Title (en)

CONTROL OF CURRENT SPREADING IN SEMICONDUCTOR LASER DIODES

Title (de)

KONTROLLE DER STROMVERTEILUNG IN HALBLEITERLASERDIODEN

Title (fr)

COMMANDE DE LA REPARTITION DU COURANT DANS DES DIODES LASERS A SEMI-CONDUCTEURS

Publication

EP 1247316 A4 20060104 (EN)

Application

EP 00980351 A 20001110

Priority

- US 0031048 W 20001110
- US 16486499 P 19991112

Abstract (en)

[origin: WO0135506A1] A semiconductor laser diode (1) and method are described, wherein the path of the current through the device between the positive (12) and negative (14), conductors is controlled. Lateral spread of the gain current in the active region is prevented by implanting protons in areas of the active layer (10) flanking a desired gain region (24). The implanted regions (26) become less conductive, and prevent lateral spread of the gain current. The position of the implanted regions (26) can be selected so that the gain current only crosses a portion of the active layer (10) that supports desired lateral modes of the laser light.

IPC 1-7

H01S 5/22; H01S 5/20

IPC 8 full level

H01S 5/223 (2006.01); **H01S 5/20** (2006.01); **H01S 5/22** (2006.01)

CPC (source: EP)

H01S 5/20 (2013.01); H01S 5/2063 (2013.01); H01S 5/22 (2013.01)

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