

Title (en)

SINGLE-MODE DBR LASER WITH IMPROVED PHASE-SHIFT SECTION AND METHOD FOR FABRICATING SAME

Title (de)

EINMODEN-DBR-LASER MIT VERBESSERTEM PHASENSCHIEBETEIL UND VERFAHREN ZU SEINER HERSTELLUNG

Title (fr)

LASER DBR MONOMODE AVEC SECTION DE DEPHASAGE AMELIOREE, ET SON PROCEDE DE FABRICATION

Publication

EP 1509975 A4 20050615 (EN)

Application

EP 03731472 A 20030529

Priority

- US 0317166 W 20030529
- US 15934702 A 20020531
- US 15936102 A 20020531

Abstract (en)

[origin: WO03103107A1] An edge-emitting laser (100) for generating single-longitudinal mode laser light. A semiconductor active region (120) amplifies, by stimulated emission, light in the laser cavity at a lasing wavelength. There are first and second grating sections (141,143) adjacent to the active region (120) and having first and second reflectivities respectively and a first effective index of refraction. The first and second grating sections (141,143) have a Bragg wavelength substantially equal to the lasing wavelength. A gratingless phase-shift section (142) is disposed adjacent to the active region (120) and between the first and second grating sections (141,143) and has a second index of refraction different than the first index of refraction and a length sufficient to impart a phase shift for light at the lasing wavelength sufficient to achieve longitudinal mode operation.

IPC 1-7

H01S 3/08; **H01S 5/00**; **H01S 5/0625**

IPC 8 full level

H01S 5/0625 (2006.01); **H01S 5/12** (2021.01)

CPC (source: EP US)

H01S 5/1082 (2013.01 - EP); **H01S 5/12** (2013.01 - EP US); **H01S 5/1203** (2013.01 - EP); **H01S 5/124** (2013.01 - EP); **H01S 5/1243** (2013.01 - EP)

Citation (search report)

- [XA] US 4796273 A 19890103 - YAMAGUCHI MASAYUKI [JP]
- [A] EP 0559192 A2 19930908 - NIPPON TELEGRAPH & TELEPHONE [JP]
- [A] US 6088377 A 20000711 - MATSUDA MANABU [JP]
- [A] US 4847857 A 19890711 - OHKURA YUJI [JP]
- [PA] US 2002181516 A1 20021205 - KAMATH KISHORE K [US]
- [E] US 2003147441 A1 20030807 - AKULOVA YULIYA ANATOLYEVNA [US], et al
- See references of WO 03103107A1

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PT RO SE SI SK TR

DOCDB simple family (publication)

WO 03103107 A1 20031211; AU 2003240967 A1 20031219; EP 1509975 A1 20050302; EP 1509975 A4 20050615

DOCDB simple family (application)

US 0317166 W 20030529; AU 2003240967 A 20030529; EP 03731472 A 20030529