

Title (en)

COUPLED CAVITY LD WITH TILTED WAVE PROPAGATION

Title (de)

GEKOPPELTE HOHLRAUM-LD MIT GENEIGTER WELLENÜBERTRAGUNG

Title (fr)

DISPOSITIF OPTOÉLECTRONIQUE ET PROCÉDÉ DE RÉALISATION CORRESPONDANT

Publication

EP 2036172 A2 20090318 (EN)

Application

EP 07859320 A 20070606

Priority

- IB 2007004283 W 20070606
- US 45398006 A 20060616
- US 81405306 P 20060616
- US 64855107 A 20070103

Abstract (en)

[origin: WO2008041138A2] A light emitting device emits light from the surface in a broad spectral range and a broad range of angles tilted with respect to the direction normal to the exit surface. An apparatus for generating wavelength-stabilized light is formed of a light-emitting device, an external cavity and at least one external mirror. Light emitted by the light-emitting device at a certain preselected angle, propagates through the external cavity, impinges on the external mirror and is reflected back. Reflected light undergoes interference with the emitted light. The interference can be constructive or destructive. Constructive interference results in a positive feedback. The positive feedback conditions are met at one or a few selected wavelengths within the luminescence spectrum of the active region. Then the apparatus generates wavelength- stabilized light. An apparatus may operate as a wavelength- stabilized light-emitting diode, a wavelength- stabilized superluminescent light-emitting diode, or a wavelength-stabilized laser, or an apparatus for frequency conversion.

IPC 8 full level

H01L 33/00 (2006.01); **H01S 5/14** (2006.01); **H01S 5/183** (2006.01); **H01L 33/10** (2010.01)

CPC (source: EP)

H01S 5/1021 (2013.01); **H01S 5/14** (2013.01); **H01S 5/183** (2013.01); **H01L 33/105** (2013.01); **H01S 3/109** (2013.01); **H01S 5/028** (2013.01); **H01S 5/1032** (2013.01); **H01S 5/1035** (2013.01); **H01S 5/1085** (2013.01); **H01S 5/1092** (2013.01); **H01S 5/125** (2013.01); **H01S 5/2027** (2013.01); **H01S 2301/18** (2013.01)

Citation (search report)

See references of WO 2008041138A2

Citation (examination)

LIM S F ET AL: "A proposal of broad-bandwidth vertical-cavity laser amplifier", IEEE PHOTONICS TECHNOLOGY LETTERS, IEEE SERVICE CENTER, PISCATAWAY, NJ, US, vol. 7, no. 11, 1 November 1995 (1995-11-01), pages 1240 - 1242, XP011427488, ISSN: 1041-1135, DOI: 10.1109/68.473458

Designated contracting state (EPC)

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

Designated extension state (EPC)

AL BA HR MK RS

DOCDB simple family (publication)

WO 2008041138 A2 20080410; **WO 2008041138 A3 20080731**; EP 2036172 A2 20090318; JP 2009540593 A 20091119; JP 5374772 B2 20131225

DOCDB simple family (application)

IB 2007004283 W 20070606; EP 07859320 A 20070606; JP 2009514936 A 20070606