

Title (en)  
VERTICALLY-COUPLED SURFACE-ETCHED GRATING DFB LASER

Title (de)  
VERTIKAL GEKOPPELTER OBERFLÄCHENGEÄTZTER DFB-GITTERLASER

Title (fr)  
LASER DFB À RÉSEAU GRAVÉ EN SURFACE À COUPLAGE VERTICAL

Publication  
**EP 2636110 A1 20130911 (EN)**

Application  
**EP 10859123 A 20101102**

Priority  
CA 2010001737 W 20101102

Abstract (en)  
[origin: WO2012058742A1] A VCSEG-DFB laser, fully compatible with MGVI design and manufacturing methodologies, for single growth monolithic integration in multi- functional PICs is presented. It comprises a laser PIN structure, in mesa form, etched from upper emitter layer top surface through the active, presumably MQW, gain region, down to the top surface of the lower emitter. Lower electrical contacts sit adjacent the mesa disposed on the lower emitter layer with upper strip contacts disposed atop the upper emitter layer on the mesa top. An SEG is defined / etched from mesa top surface, between the upper strip contacts, through upper emitter layer down to or into the SCH layers. Vertical confinement is provided by the SCH structure and the lateral profile in the bottom portion of the mesa provides lateral confinement. The guided mode interacts with the SEG by the vertical tail penetrating the SEG and evanescent field coupling to the SEG.

IPC 8 full level  
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CPC (source: EP)  
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Citation (search report)  
See references of WO 2012058742A1

Cited by  
CN109830891A

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