

Title (en)

DBR LASER ELEMENT WITH HIGH ORDER BRAGG GRATING AND RIB WAVEGUIDE

Title (de)

DBR LASERELEMENT MIT BRAGG-GITTER HOHER ORDNUNG UND RIPPENWELLENLEITER

Title (fr)

ELEMENT OPTIQUE ET SON PROCEDE DE PRODUCTION

Publication

**EP 1805538 A1 20070711 (DE)**

Application

**EP 05811064 A 20051026**

Priority

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- DE 102004052857 A 20041026

Abstract (en)

[origin: WO2006045632A1] An optical element is disclosed having a planar vertical waveguide structure (1) on the surface of which are arranged a Bragg grating (5) and a rib waveguide (6), as well as a process for producing the same. The object of the present invention is to provide an optical element having a Bragg grating (5) and a rib waveguide (6) which can be produced faster and more economically than in the prior art, while continuing to satisfy predetermined optical requirements. For that purpose, a photoresist layer structure (3) which substantially corresponds to the structure of the Bragg grating (5) and rib waveguide (6) is formed on the substantially planar and even vertical waveguide structure (1), the photoresist layer structure (3) extending linearly in the region of the Bragg grating (5) with a width which corresponds to at least 70 % of the distance between two adjacent lines. The planar vertical waveguide structure (1) with the overlying photoresist layer structure (3) is then etched and the photoresist layer structure (3) is removed from the planar vertical waveguide structure (1).

IPC 8 full level

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CPC (source: EP)

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Citation (search report)

See references of WO 2006045632A1

Citation (examination)

KIM ET AL.: "1.5 micrometer Wavelength Distributed Feedback Lasers with Deeply Etched First-Order Vertical Grating", JAPANESE JOURNAL OF APPLIED PHYSICS, vol. 40, 15 October 2001 (2001-10-15), pages L1107 - L1109

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