

Title (en)  
APPARATUS FOR AND METHOD OF FREQUENCY CONVERSION

Title (de)  
VORRICHTUNG UND VERFAHREN ZUR FREQUENZUMSETZUNG

Title (fr)  
APPAREIL ET PROCEDE DE CONVERSION DE FREQUENCE

Publication  
**EP 1595316 A4 20060823 (EN)**

Application  
**EP 04712143 A 20040218**

Priority  
• IL 2004000148 W 20040218  
• US 36782403 A 20030219

Abstract (en)  
[origin: WO2004075362A2] Apparatus for frequency conversion of light, the apparatus comprises: a light-emitting device for emitting a light having a first frequency, the light-emitting device being an edge-emitting semiconductor light-emitting diode having an extended waveguide selected such that a fundamental transverse mode of the extended waveguide is characterized by a low beam divergence. The apparatus further comprises a light-reflector, constructed and designed so that the light passes a plurality of times through an external cavity, defined between the light-emitting device and the light-reflector, and provides a feedback for generating a laser light having the first frequency. The apparatus further comprises a non-linear optical crystal positioned in the external cavity and selected so that when the laser light having the first frequency passes a plurality of times through the non-linear optical crystal, the first frequency is converted to a second frequency being different from the first frequency.

IPC 8 full level  
**G02F 1/35** (2006.01); **H01S 1/00** (2006.01); **H01S 3/082** (2006.01); **H01S 3/10** (2006.01); **H01S 5/14** (2006.01); **H01S 5/183** (2006.01); **H01S 5/20** (2006.01); **H01S 5/04** (2006.01); **H01S 5/06** (2006.01)

IPC 8 main group level  
**H01S** (2006.01)

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Citation (search report)  
• [YD] US 6304585 B1 20011016 - SANDERS STEVEN [US], et al  
• [YD] US 6097540 A 20000801 - NEUBERGER WOLFGANG [MY], et al  
• [Y] US 4063189 A 19771213 - SCIFRES DONALD R, et al  
• [Y] WO 9908352 A1 19990218 - SIMAKOV VLADIMIR ALEXANDROVICH [RU], et al  
• [A] US 5321718 A 19940614 - WAARTS ROBERT G [US], et al  
• See references of WO 2004075362A2

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DOCDB simple family (publication)  
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**IL 2004000148 W 20040218**; CN 200480010504 A 20040218; EP 04712143 A 20040218; JP 2006502641 A 20040218; KR 20057015317 A 20050819; TW 93103972 A 20040218