

Title (en)
LASER SYSTEM COMPRISING SEVERAL LONGITUDINALLY PUMPED LASER-ACTIVE SOLID BODIES

Title (de)
LASERSYSTEM MIT MEHREREN LONGITUDINAL GEPUMPTEN LASERAKTIVEN FESTKÖRPERN

Title (fr)
SYSTEME LASER COMPORTANT PLUSIEURS SOLIDES ACTIFS LASERS POMPES LONGITUDINALEMENT

Publication
EP 1891718 A1 20080227 (DE)

Application
EP 06754248 A 20060609

Priority
• EP 2006005528 W 20060609
• DE 102005028131 A 20050610

Abstract (en)
[origin: WO2006131385A1] The aim of the invention is to obtain the optimum possible power yield for a laser system comprising a guide assembly (10) for a laser radiation field, the latter (16) extending through said assembly. The assembly comprises at least one laser-active solid body (20), which is penetrated by the resonator radiation field (16), a pump radiation guide assembly (60), which splits the pump radiation (64) into a first and a second partial radiation field (82, 84) and which feeds the first partial radiation field (82) into the solid body (20) via one end face (24) and the second partial radiation field (84) via the other end face (26) in a longitudinal direction. To achieve this aim, the laser radiation field (16) penetrates at least two laser-active solid bodies (20) consisting of an identical material and positioned in succession along the radiation axis (18) of said field, the pump radiation guide assembly (60) is configured in such a way that it feeds the first partial radiation field (82) and the second partial radiation field (84) into each of the solid bodies (20) and the pump radiation guide assembly (60) is configured in such a way that the pump power that is fed into each of the two or more solid bodies (20) by the two partial radiation fields (82, 84) can be adjusted in such a way that the effects of the thermal lenses (130), which are generated by the pump power in each of the two or more solid bodies (20), on the laser radiation field (16) are essentially identical.

IPC 8 full level
H01S 3/0941 (2006.01); **H01S 3/23** (2006.01)

CPC (source: EP US)
H01S 3/07 (2013.01 - EP US); **H01S 3/09415** (2013.01 - EP US); **H01S 3/005** (2013.01 - EP US); **H01S 3/08072** (2013.01 - EP US); **H01S 3/0813** (2013.01 - EP US)

Citation (search report)
See references of WO 2006131385A1

Citation (examination)
• EP 1492205 A2 20041229 - FUJITSU LTD [JP]
• US 5446749 A 19950829 - NIGHAN JR WILLIAM L [US], et al

Cited by
GB2456053B; GB2456053A; US8315289B2

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 NL PL PT RO SE SI SK TR

DOCDB simple family (publication)
WO 2006131385 A1 20061214; DE 102005028131 A1 20061228; EP 1891718 A1 20080227; US 2008175296 A1 20080724; US 7542501 B2 20090602

DOCDB simple family (application)
EP 2006005528 W 20060609; DE 102005028131 A 20050610; EP 06754248 A 20060609; US 99973607 A 20071205