

Title (en)  
DEVICE FOR HOMOGENIZING LASER RADIATION

Title (de)  
VORRICHTUNG ZUR HOMOGENISIERUNG VON LASERSTRAHLUNG

Title (fr)  
DISPOSITIF D'HOMOGENÉISATION D'UN FAISCEAU LASER

Publication  
**EP 2972562 A1 20160120 (DE)**

Application  
**EP 14707789 A 20140304**

Priority  
• DE 102013102553 A 20130313  
• EP 2014054164 W 20140304

Abstract (en)  
[origin: WO2014139835A1] The invention relates to a device for homogenizing laser radiation (100), said device comprising: a first lens array (1) with a first optically functional boundary surface (10), through which the laser radiation (100) can penetrate the first lens array (1) and with a second optically functional boundary surface (11), through which the laser radiation (100) can exit the lens array (1), at least one of the two optically functional boundary surfaces (10, 11) comprising a plurality of lens means (3) designed to sub-divide the laser radiation (100) into a plurality of sub-beams (101, 102, 103); and a second lens array (2) positioned in the beam path behind the first lens array (1), said array having a first optically functional boundary surface (20), through which the sub-beams (101, 102, 103) can penetrate the second lens array (2), at least one of the two optically functional boundary surfaces (20, 21) having a plurality of lens means (4) which can refract the sub-beams (101, 102, 103) and the lens means (3) of the first lens array (1) being designed such that they can sub-divide the laser radiation (100) into a plurality of sub-beams (101, 102, 103) and form the latter in such a way that the sub-beams (101, 102, 103) illuminate the lens means (4) of the second lens array (2) in a substantially homogeneous manner.

IPC 8 full level  
**G02B 27/09** (2006.01)

CPC (source: EP US)  
**G02B 27/0927** (2013.01 - EP US); **G02B 27/0961** (2013.01 - EP US); **G02B 27/0966** (2013.01 - EP US); **G02B 27/123** (2013.01 - US)

Citation (search report)  
See references of WO 2014139835A1

Citation (examination)  
WO 2006066706 A2 20060629 - ZEISS CARL LASER OPTICS GMBH [DE], et al

Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)  
BA ME

DOCDB simple family (publication)  
**DE 102013102553 A1 20140918; DE 102013102553 B4 20201203**; CN 105143962 A 20151209; CN 105143962 B 20190305; EP 2972562 A1 20160120; JP 2016512614 A 20160428; JP 6467353 B2 20190213; KR 20150143436 A 20151223; US 10025108 B2 20180717; US 2016011426 A1 20160114; WO 2014139835 A1 20140918

DOCDB simple family (application)  
**DE 102013102553 A 20130313**; CN 201480022572 A 20140304; EP 14707789 A 20140304; EP 2014054164 W 20140304; JP 2015562022 A 20140304; KR 20157024995 A 20140304; US 201414773458 A 20140304