Title (en)

LASER COMPONENT AND METHOD FOR PRODUCING A LASER COMPONENT

Title (de)

LASERBAUELEMENT UND VERFAHREN ZUM HERSTELLEN EINES LASERBAUELEMENTS

Title (fr)

COMPOSANT LASER ET PROCÉDÉ DE FABRICATION D'UN COMPOSANT LASER

Publication

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Application

EP 14750753 A 20140814

Priority

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Abstract (en)

[origin: WO2015024864A1] The invention relates to a laser component (500) comprising an edge-emitting first laser chip (100). Said edge-emitting first laser chip has a top side (101), a bottom side (102), an end face (103), and a lateral surface (104, 105). An emission region (131) is formed on the end face. The lateral surface is oriented perpendicularly to the top side and to the end face. A first metallization (170) is arranged on the top side. A step is formed on the lateral surface, by means of which step a part of the lateral surface adjacent to the top side is recessed. A passivation layer (160) is arranged in the recessed part of the lateral surface. The laser chip is arranged on a carrier (400), which is composed of diamond, for example. The lateral surface (104) of the first laser chip (100) faces a surface of the carrier (400). A first solder contact (410) arranged on the surface of the carrier is connected to the first metallization (170) in an electrically conductive manner. By means of the electrical connection of the first metallization (170) of the first laser chip (100) to the first metallization of the third laser chip (300) and by means of SMD mounting by means of solder contacts (410, 420, 430), a laser component having high power, improved cooling, and no disturbing interferences can be provided, because the two emission regions (131) are located only at most 20 µm from each other (501).

IPC 8 full level

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Citation (search report)

See references of WO 2015024864A1

Citation (examination)

- US 2008191365 A1 20080814 - UEDA MAKOTO [JP], et al
- US 2010219419 A1 20100902 - HATA MASAYUKI [JP], et al

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