

Title (en)

IMPINGEMENT COOLING DEVICE FOR A LASER DISC AND ASSOCIATED LASER DISC MODULE

Title (de)

PRALLKÜHLVORRICHTUNG FÜR EINE LASERSCHEIBE UND ZUGEHÖRIGES LASERSCHEIBENMODUL

Title (fr)

DISPOSITIF DE REFROIDISSEMENT D'IMPACT POUR UN DISQUE LASER ET MODULE DE DISQUE LASER ASSOCIÉ

Publication

EP 3440748 A1 20190213 (DE)

Application

EP 17713274 A 20170323

Priority

- DE 102016205638 A 20160405
- EP 2017056992 W 20170323

Abstract (en)

[origin: WO2017174369A1] In an impingement cooling device (1) for a laser disc (2), having a, more particularly disc-shaped, carrier plate (3), on the front side (3a) of which the laser disc (2) can be secured, a supporting structure (4), on the front side of which the rear side (3b) of the carrier plate (3) is secured, and an impingement cooling arrangement (14) for cooling the carrier plate (3) by means of a cooling liquid (13), wherein the supporting structure (4) has a plurality of cooling liquid feed lines (11), from which the cooling liquid (13) emerges in the direction of the rear side (3b) of the carrier plate (3), in particular at right angles with respect to the rear side (3b) of the carrier plate (3), and a plurality of cooling liquid return lines (12), according to the invention provision is made for the feed and return lines (11, 12) to run parallel to one another in the longitudinal direction of the supporting structure (4), and for the supporting structure (4) to have, in its region adjoining the rear side (3b) of the carrier plate (3), a plurality of cutouts (8) or for the rear side (3b) of the carrier plate (3) to have a plurality of cutouts (8') open towards the supporting structure (4), wherein the cooling liquid feed lines (11) lead into the plurality of cutouts (8; 8') and the cooling liquid return lines (12) lead away from the plurality of cutouts (8; 8').

IPC 8 full level

H01S 3/04 (2006.01); **F21V 29/56** (2015.01); **F28D 7/12** (2006.01); **H01L 23/473** (2006.01); **H01S 3/06** (2006.01)

CPC (source: EP KR US)

H01L 23/4735 (2013.01 - KR); **H01S 3/0405** (2013.01 - EP KR US); **H01S 3/0407** (2013.01 - EP KR US); **H01S 3/042** (2013.01 - US); **H01S 3/0604** (2013.01 - EP KR US); **H01L 23/4735** (2013.01 - EP US)

Citation (search report)

See references of WO 2017174369A1

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 102016205638 A1 20171005; **DE 102016205638 B4 20190509**; CN 109075520 A 20181221; EP 3440748 A1 20190213; JP 2019511130 A 20190418; JP 6835870 B2 20210224; KR 102291295 B1 20210820; KR 20180128478 A 20181203; US 10727639 B2 20200728; US 11362475 B2 20220614; US 2019036291 A1 20190131; US 2020350738 A1 20201105; WO 2017174369 A1 20171012

DOCDB simple family (application)

DE 102016205638 A 20160405; CN 201780021959 A 20170323; EP 17713274 A 20170323; EP 2017056992 W 20170323; JP 2018552237 A 20170323; KR 20187031676 A 20170323; US 201816148269 A 20181001; US 202016935373 A 20200722