

Title (en)
LED MODULE AND PRODUCTION METHOD

Title (de)
LED-MODUL UND HERSTELLUNGSVERFAHREN

Title (fr)
MODULE À DEL ET SON PROCÉDÉ DE FABRICATION

Publication
EP 2332186 A1 20110615 (DE)

Application
EP 09744315 A 20090826

Priority
• DE 2009001207 W 20090826
• DE 102008049535 A 20080929

Abstract (en)
[origin: WO2010034277A1] At least one layer stack (1) of a substrate-less LED is arranged on a top of a substrate (4). Contact surfaces are located on a side surface (14) of the substrate (4) which adjoins the top. Connections of the LED are connected to the contact surface by connecting lines (10, 20). The contact surfaces can in particular be formed by conductor layers (6) in solder fillets (5) on vertical edges of the substrate (4). For production, through-platings can be formed in a wafer provided with LEDs at the top, which after separating the wafer form metalized solder fillets on lateral edges of the substrate (4).

IPC 8 full level
H01L 33/48 (2010.01); **H01L 33/62** (2010.01)

CPC (source: EP KR US)
H01L 33/48 (2013.01 - KR); **H01L 33/486** (2013.01 - EP US); **H01L 33/62** (2013.01 - EP KR US); **H01L 25/0753** (2013.01 - EP US); **H01L 25/0756** (2013.01 - EP US); **H01L 2924/0002** (2013.01 - EP US); **H05K 3/3442** (2013.01 - EP US)

Citation (search report)
See references of WO 2010034277A1

Citation (examination)
• JP 2003204081 A 20030718 - ROHM CO LTD
• JP 2002368279 A 20021220 - SHARP KK
• US 2004227235 A1 20041118 - HASHIMOTO NOBUAKI [JP]

Designated contracting state (EPC)
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 SE SI SK SM TR

Designated extension state (EPC)
AL BA RS

DOCDB simple family (publication)
WO 2010034277 A1 20100401; CN 102165612 A 20110824; DE 102008049535 A1 20100408; EP 2332186 A1 20110615; JP 2012504318 A 20120216; JP 5717636 B2 20150513; KR 20110070975 A 20110627; TW 201013999 A 20100401; US 2011227103 A1 20110922

DOCDB simple family (application)
DE 2009001207 W 20090826; CN 200980138521 A 20090826; DE 102008049535 A 20080929; EP 09744315 A 20090826; JP 2011528180 A 20090826; KR 20117003394 A 20090826; TW 98130158 A 20090908; US 200913121017 A 20090826