

Title (en)
ILLUMINATION DEVICES COMPRISING WHITE LIGHT EMITTING DIODES AND DIODE ARRAYS AND METHOD AND APPARATUS FOR MAKING THEM

Title (de)
BELEUCHTUNGSVORRICHTUNG MIT WEISSES LICHT EMITTIERENDEN DIODEN UND DIODENANORDNUNGEN UND VERFAHREN UND VORRICHTUNG ZU DEREN HERSTELLUNG

Title (fr)
DISPOSITIFS D'ÉCLAIRAGE COMPRENANT DES DIODES ET DES RÉSEAUX À DIODES ÉLECTROLUMINESCENTES BLANCHES, AINSI QUE PROCÉDÉ ET APPAREIL PERMETTANT DE FABRIQUER CES DISPOSITIFS

Publication
EP 1899435 A4 20100602 (EN)

Application
EP 05769328 A 20050701

Priority
US 2005023360 W 20050701

Abstract (en)
[origin: WO2007005013A1] In accordance with the invention, an illumination device comprises a substrate (103) having a surface and a cavity in the surface. At least one light emitting diode ("LED") is mounted within the cavity (104), and a monolayer comprising phosphor particles overlies the LED. The phosphor monolayer (106) is adhered to the LED by a monolayer of transparent adhesive material (105). An optional optical thick layer of transparent material overlies the phosphor monolayer to encapsulate the LED and optionally to form a lens. Methods and apparatus for efficiently making the devices are disclosed.

IPC 8 full level
C09K 11/56 (2006.01); **C09K 11/62** (2006.01); **H01L 27/15** (2006.01); **H01L 33/00** (2010.01); **H01L 33/50** (2010.01); **H01L 33/62** (2010.01)

CPC (source: EP US)
C09K 11/7774 (2013.01 - EP US); **H01L 33/507** (2013.01 - EP); **H01L 33/62** (2013.01 - EP); **H01L 2224/45124** (2013.01 - EP); **H01L 2224/48091** (2013.01 - EP); **H01L 2224/48137** (2013.01 - EP); **H01L 2224/48472** (2013.01 - EP); **H01L 2224/73265** (2013.01 - EP); **H01L 2224/8592** (2013.01 - EP); **H01L 2924/01004** (2013.01 - EP); **H01L 2924/01021** (2013.01 - EP); **H01L 2924/01057** (2013.01 - EP); **H01L 2924/01063** (2013.01 - EP); **H01L 2924/01077** (2013.01 - EP); **H01L 2924/01079** (2013.01 - EP); **H01L 2924/09701** (2013.01 - EP); **H01L 2933/0041** (2013.01 - EP); **Y02B 20/00** (2013.01 - EP)

Citation (search report)

- [X1] JP H1131845 A 19990202 - NICHIA KAGAKU KOGYO KK
- [XAI] US 2002187571 A1 20021212 - COLLINS WILLIAM DAVID [US], et al
- [XAI] US 2003080341 A1 20030501 - SAKANO KENSHO [JP], et al
- See references of WO 2007005013A1

Cited by
GB2484332A

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 2007005013 A1 20070111; EP 1899435 A1 20080319; EP 1899435 A4 20100602; JP 2008545269 A 20081211; KR 101203672 B1 20121123; KR 20080090379 A 20081008; TW 200703710 A 20070116

DOCDB simple family (application)
US 2005023360 W 20050701; EP 05769328 A 20050701; JP 2008519247 A 20050701; KR 20087002836 A 20050701; TW 94126795 A 20050808