

Title (en)
LED MODULE WITH PASSIVE LED

Title (de)
LED-MODUL MIT PASSIV-LED

Title (fr)
MODULE DEL AVEC DEL PASSIVE

Publication
EP 2561725 A1 20130227 (DE)

Application
EP 11715878 A 20110402

Priority
• DE 202010004874 U 20100411
• EP 2011001666 W 20110402

Abstract (en)
[origin: WO2011128030A1] The invention relates to an LED module (1) consisting of a plurality of LEDs (76 to 89) which are arranged on a printed circuit board (75) and which each have a so-called embedding with a lens (100 to 113), with which the respective LED (76 to 89) projects from the printed circuit board plane, wherein the LEDs (76 to 89) are in each case coupled to a light coupling-in element of a light guiding body and the respective luminous flux of the associated LEDs (76 to 89) is emitted from the LED module (1) towards the outside by means of the respectively associated light coupling-in element. In order to achieve a homogeneous external appearance, at least one passive LED (95, 96, 97) is provided on the printed circuit board (75) with respect to the LEDs (76 to 89), and said at least one passive LED can be activated upon failure of one of the LEDs (76 to 89). The luminous flux emitted by said passive LED (95, 96, 97) is radiated into the light coupling-in element (30, 31, 32, 33) of the respective LED (76 to 89) and emitted towards the outside via the light coupling-in element.

IPC 8 full level
H05B 44/00 (2022.01); **F21K 99/00** (2010.01); **F21V 23/06** (2006.01); **F21V 25/02** (2006.01); **F21V 5/00** (2006.01); **F21Y 101/02** (2006.01);
F21Y 105/00 (2006.01)

CPC (source: EP US)
F21K 9/00 (2013.01 - EP US); **F21V 5/007** (2013.01 - EP US); **F21V 23/06** (2013.01 - EP US); **H05B 45/58** (2020.01 - EP US);
F21V 25/02 (2013.01 - EP US); **F21Y 2105/10** (2016.07 - EP US); **F21Y 2115/10** (2016.07 - EP US)

Citation (search report)
See references of WO 2011128030A1

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

DOCDB simple family (publication)
DE 202010004874 U1 20100722; BR 112012026013 A2 20160628; EP 2561725 A1 20130227; EP 2561725 B1 20150429;
RU 2012147701 A 20140520; RU 2528559 C2 20140920; US 2013026508 A1 20130131; WO 2011128030 A1 20111020;
ZA 201207578 B 20130529

DOCDB simple family (application)
DE 202010004874 U 20100411; BR 112012026013 A 20110402; EP 11715878 A 20110402; EP 2011001666 W 20110402;
RU 2012147701 A 20110402; US 201113640389 A 20110402; ZA 201207578 A 20121008