

Title (en)
LED MODULE HAVING A DOUBLE DIFFUSER

Title (de)
LED-MODUL MIT DOPPELDIFFUSOR

Title (fr)
MODULE À DEL À DOUBLE DIFFUSEUR

Publication
EP 2556286 B1 20181017 (DE)

Application
EP 11712252 A 20110405

Priority

- DE 102010029593 A 20100601
- DE 102010003800 A 20100409
- EP 2011055251 W 20110405

Abstract (en)
[origin: WO2011124565A1] The invention relates to a LED module (7) which comprises: at least one LED chip (20, 21) mounted on a substrate, a first diffuser element (10) which scatters the light from the at least one LED chip (20, 21) diffusely, and a second diffuser element (8) which when viewed in the light beam direction is outside the first diffuser element (10) and is separated therefrom, preferably forming an air gap.

IPC 8 full level
F21K 9/232 (2016.01); **F21V 3/00** (2015.01); **F21V 5/00** (2018.01); **F21Y 115/10** (2016.01)

CPC (source: EP US)
F21K 9/232 (2016.07 - EP US); **F21V 5/008** (2013.01 - EP US); **F21V 5/10** (2018.01 - EP US); **F21V 3/00** (2013.01 - EP US); **F21Y 2115/10** (2016.07 - EP US)

Citation (examination)

- WO 2010141617 A1 20101209 - BRIDGELUX INC [US], et al
- US 2009086492 A1 20090402 - MEYER WILLIAM E [US]
- EP 1418630 A1 20040512 - MATSUSHITA ELECTRIC IND CO LTD [JP]

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 102010029593 A1 20111013; CN 102893073 A 20130123; CN 102893073 B 20180213; EP 2556286 A1 20130213; EP 2556286 B1 20181017; TW 201207318 A 20120216; TW I464347 B 20141211; US 2013039060 A1 20130214; US 9057497 B2 20150616; WO 2011124565 A1 20111013

DOCDB simple family (application)
DE 102010029593 A 20100601; CN 201180024257 A 20110405; EP 11712252 A 20110405; EP 2011055251 W 20110405; TW 100112309 A 20110408; US 201113639941 A 20110405