

Title (en)
LED LIGHTING

Title (de)
LED-BELEUCHTUNG

Title (fr)
ÉCLAIRAGE À DIODES ÉLECTROLUMINESCENTES

Publication
EP 3488147 A1 20190529 (EN)

Application
EP 17832026 A 20170921

Priority
• US 201615215964 A 20160721
• US 2017052632 W 20170921

Abstract (en)
[origin: WO2018018052A1] Apparatus and associated methods relate to development of a LED system with high thermal dissipation power relative to the system weight by the inclusion of open regions. The open regions reduce the weight of the optical system while improving airflow. Associated optics are described to efficiently and evenly distribute the light from an LED by tailoring the optical distribution. In addition, circuitry and methods are described to allow for the LED system to operate with existing power sources such as ballast or offline AC voltage sources or both.

IPC 8 full level
F21V 29/71 (2015.01); **F21V 29/77** (2015.01); **F21V 29/83** (2015.01)

CPC (source: EP US)
F21K 9/233 (2016.07 - EP); **F21K 9/235** (2016.07 - US); **F21K 9/238** (2016.07 - US); **F21K 9/65** (2016.07 - US); **F21K 9/68** (2016.07 - US); **F21V 3/00** (2013.01 - US); **F21V 23/003** (2013.01 - US); **F21V 23/005** (2013.01 - US); **F21V 29/713** (2015.01 - US); **F21V 29/75** (2015.01 - US); **F21V 29/763** (2015.01 - EP US); **F21V 29/773** (2015.01 - EP US); **F21V 29/80** (2015.01 - US); **F21V 29/81** (2015.01 - EP US); **F21V 29/83** (2015.01 - EP US); **H05B 45/10** (2020.01 - EP US); **H05B 45/3725** (2020.01 - EP US); **H05B 45/395** (2020.01 - EP US); **H05B 45/44** (2020.01 - US); **H05B 45/56** (2020.01 - US); **F21V 5/007** (2013.01 - EP); **F21V 7/0083** (2013.01 - EP); **F21Y 2103/33** (2016.07 - EP); **F21Y 2115/10** (2016.07 - EP US); **H05B 45/18** (2020.01 - EP US); **H05B 45/56** (2020.01 - EP); **Y02B 20/30** (2013.01 - EP)

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)
WO 2018018052 A1 20180125; **WO 2018018052 A8 20191031**; EP 3488147 A1 20190529; EP 3488147 A4 20200617; JP 2019532457 A 20191107; JP 6710315 B2 20200617

DOCDB simple family (application)
US 2017052632 W 20170921; EP 17832026 A 20170921; JP 2019503405 A 20170921