

Title (en)  
LED APPARATUS

Title (de)  
LED-VORRICHTUNG

Title (fr)  
APPAREIL À DEL

Publication  
**EP 3447360 A1 20190227 (EN)**

Application  
**EP 17187680 A 20170824**

Priority  
EP 17187680 A 20170824

Abstract (en)  
A LED apparatus has a LED plate, a lens plate, a cup body, a driver plate and two metal pins. The lens plate has a central lens and a plurality of micro optical structures. The cup body has a dome portion, a tube portion and a bottom portion. The dome portion and the tube portion are manufactured together as a single body. A portion of light emitting from the LED plate runs through the central lens of the lens plate to form a focus light beam and another portion of light emitting from the LED modules running through the plurality of micro optical structures to form soft light. Two input terminals of the driver plate are inserted into the two metal pins.

IPC 8 full level  
**F21K 9/233** (2016.01); **F21K 9/69** (2016.01); **F21V 29/70** (2015.01); **F21V 5/00** (2018.01); **F21Y 115/10** (2016.01)

CPC (source: EP)  
**F21K 9/233** (2016.08); **F21K 9/69** (2016.08); **F21V 29/70** (2015.01); **F21V 5/002** (2013.01); **F21Y 2115/10** (2016.08)

Citation (search report)

- [X1] WO 2016131378 A1 20160825 - ZHEJIANG SHENGHUI LIGHTING CO [CN]
- [X1] CN 202691707 U 20130123 - DONGGUAN KEJIAN U LIGHTING & ELECTRIC APPLIANCE CO LTD
- [I] US 2017205064 A1 20170720 - LIAO XUANRUI [CN], et al
- [I] US 2011317428 A1 20111229 - PAIK DONGKI [KR], et al
- [A] US 2013141908 A1 20130606 - RODRIGUEZ EDWARD [US], et al
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Citation (examination)

- US 2014168968 A1 20140619 - STREPPPEL HENRIKE [DE], et al
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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)  
**EP 3447360 A1 20190227**

DOCDB simple family (application)  
**EP 17187680 A 20170824**