

Title (en)
LIGHT DIFFUSION DEVICE

Title (de)
LICHTSTREUUNGSVORRICHTUNG

Title (fr)
DISPOSITIF DE DIFFUSION DE LUMIÈRE

Publication
EP 2917780 A4 20160413 (EN)

Application
EP 14853132 A 20140210

Priority
US 2014015573 W 20140210

Abstract (en)
[origin: WO2015119633A1] A light diffusion device is described that provides uniform light output from a surface. One embodiment uses a short ratio of device height to width of the surface. The diffusion device comprises a reflector with a light entry window, a reflective baffle, a novel shaped reflector, and a diffusion layer for light to exit through. Light travels primarily from the source to the baffle to the reflector, then to the diffusion layer. The reflector has a 3D diffuse reflector surface that is a typically evolved form near its center then smoothly morphs to a non-revolved, preformed shape near its corners. The diffusion device is free of refractive elements. In some embodiments the devices are placed adjacently, in an array, to form a tile or panel of programmable light sources. The baffle and reflector may be manufactured from a flat sheet. Multiple devices may have elements manufactured from monolithic material.

IPC 8 full level
G02F 1/13 (2006.01); **F21V 7/00** (2006.01); **F21V 13/10** (2006.01); **F21V 7/09** (2006.01); **F21Y 105/00** (2016.01); **F21Y 115/10** (2016.01)

CPC (source: EP US)
F21V 3/00 (2013.01 - EP); **F21V 7/0041** (2013.01 - EP); **F21V 7/0083** (2013.01 - EP); **F21V 7/04** (2013.01 - EP US); **F21V 7/09** (2013.01 - EP); **F21S 2/00** (2013.01 - EP US); **F21V 33/006** (2013.01 - EP); **F21Y 2105/00** (2013.01 - EP US); **F21Y 2115/10** (2016.07 - EP US)

Citation (search report)

- [X] EP 1496488 A1 20050112 - BOX KK [JP]
- [X] EP 2672174 A1 20131211 - HURST & SCHROEDER GMBH [DE]
- [X] EP 2187113 A1 20100519 - TOSHIBA LIGHTING & TECHNOLOGY [JP], et al
- [I] US 2007002565 A1 20070104 - HAN SANG H [KR], et al
- [A] US 2002039292 A1 20020404 - MATSUI HIROKAZU [JP]
- [A] US 2011128733 A1 20110602 - CHEN CHIN-CHUNG [TW], et al
- See references of WO 2015119633A1

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 2015119633 A1 20150813; CN 106030386 A 20161012; EP 2917780 A1 20150916; EP 2917780 A4 20160413

DOCDB simple family (application)
US 2014015573 W 20140210; CN 201480011438 A 20140210; EP 14853132 A 20140210