

Title (en)

LINEAR LED ILLUMINATION DEVICE WITH IMPROVED COLOR MIXING

Title (de)

LINEARE LED-BELEUCHTUNGSVORRICHTUNG MIT VERBESSERTER FARBMISCHUNG

Title (fr)

DISPOSITIF LINÉAIRE D'ÉCLAIRAGE À DEL AVEC MÉLANGE DE COULEURS AMÉLIORÉ

Publication

EP 3875851 A1 20210908 (EN)

Application

EP 21152323 A 20141204

Priority

- US 201314097339 A 20131205
- US 201314097355 A 20131205
- EP 14825488 A 20141204
- US 2014068556 W 20141204

Abstract (en)

A linear multi-color LED illumination device that produces uniform color throughout the output light beam without using excessively large optics or optical losses is disclosed herein. Embodiments for improving color mixing in the linear illumination device include a shallow dome encapsulating a plurality of emission LEDs within an emitter module, a unique arrangement of a plurality of such emitter modules in a linear light form factor, and special reflectors designed to improve color mixing between the plurality of emitter modules. The illumination device further includes a light detector and optical feedback for maintaining precise and uniform color over time and/or with changes in temperature. The illumination device can include a rotational hinge allowing a power cable of the illumination device to enter and exit through a rotational axis of the hinge, but does not require special tools or an independent locking mechanism to secure in place.

IPC 8 full level

F21V 7/00 (2006.01); **F21V 7/04** (2006.01); **F21Y 103/10** (2016.01); **F21Y 113/17** (2016.01); **F21Y 115/10** (2016.01)

CPC (source: EP US)

F21V 7/0083 (2013.01 - EP US); **F21V 7/048** (2013.01 - EP); **F21Y 2103/10** (2016.07 - EP US); **F21Y 2113/17** (2016.07 - EP); **F21Y 2115/10** (2016.07 - EP US)

Citation (applicant)

- US 2010327764 A1 20101230 - KNAPP DAVID J [US]
- US 201313970944 A 20130820
- US 201313970964 A 20130820
- US 201313970990 A 20130820

Citation (search report)

- [XII] DE 102008016095 A1 20091001 - OSRAM OPTO SEMICONDUCTORS GMBH [DE]
- [XII] EP 2426405 A2 20120307 - PEGATRON CORP [TW]
- [A] DE 102008064397 A1 20100624 - TRIDONICATCO SCHWEIZ AG [CH]
- [A] WO 2006033031 A2 20060330 - KONINKL PHILIPS ELECTRONICS NV [NL], et al
- [A] US 6495964 B1 20021217 - MUTHU SUBRAMANIAN [US], et al
- [A] EP 2573451 A1 20130327 - LEDENGIN INC [US]

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)

WO 2015085062 A2 20150611; **WO 2015085062 A3 20150827**; **WO 2015085062 A4 20151001**; EP 3077721 A2 20161012; EP 3077721 B1 20210120; EP 3875851 A1 20210908

DOCDB simple family (application)

US 2014068556 W 20141204; EP 14825488 A 20141204; EP 21152323 A 20141204