

Title (en)

Apparatus and method for producing light of a predetermined spectrum with at least four light sources of different colours

Title (de)

Vorrichtung und Verfahren zur Erzeugung von Licht eines vorgegebenen Spektrums mit mindestens vier verschiedenfarbigen Lichtquellen

Title (fr)

Dispositif et procédé permettant de produire de la lumière d'un spectre déterminé à l'aide d'au moins quatre sources lumineuses de différentes couleurs

Publication

EP 2701464 A3 20150708 (DE)

Application

EP 13181122 A 20130821

Priority

DE 102012107706 A 20120822

Abstract (en)

[origin: EP2701464A2] The device (10) has a lighting unit (12) comprising semiconductor-based light sources (14) i.e. LEDs, with different color spectra, and a sensor (16) for determination of spectral power distribution. An optimization unit (18) uses an optimization algorithm and maximizes coefficient of weighted sensor values as an optimization goal. The optimization unit computes the coefficient of weighted sensor values from individual control data of the light sources. An error between preset and measured spectral power distribution is smaller than a threshold value by considering an auxiliary condition. The sensor is a red, green and blue sensor and a XYZ sensor. The optimization algorithm is implemented in an international commission on illumination (CIE) standardized X, Y, Z color space. An independent claim is also included for a method for operating a lighting device.

IPC 8 full level

H05B 44/00 (2022.01)

CPC (source: EP US)

H05B 45/10 (2020.01 - EP US); **H05B 45/22** (2020.01 - EP US); **H05B 45/24** (2020.01 - US); **H05B 47/105** (2020.01 - EP US)

Citation (search report)

- [XYI] DE 102008050818 A1 20090416 - AVAGO TECH ECBU IP SG PTE LTD [SG]
- [XDYI] DE 102007044556 A1 20090312 - ARNOLD & RICHTER KG [DE]
- [XYI] WO 2010122312 A1 20101028 - PHOTONSTAR LED LTD [GB], et al
- [Y] US 2008013314 A1 20080117 - ASHDOWN IAN [CA], et al

Cited by

CN110235523A

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 2701464 A2 20140226; EP 2701464 A3 20150708; EP 2701464 B1 20190123; DE 102012107706 A1 20140227; US 2014055038 A1 20140227; US 2017034890 A1 20170202; US 9565723 B2 20170207; US 9980327 B2 20180522

DOCDB simple family (application)

EP 13181122 A 20130821; DE 102012107706 A 20120822; US 201313972254 A 20130821; US 201615290542 A 20161011