

Title (en)
METHOD FOR OPERATING A CIRCUIT ARRANGEMENT FOR A LIGHT-EMITTING DIODE FIELD FED WITH CONSTANT CURRENT,
COMPRISING FAULT DETECTION

Title (de)
VERFAHREN ZUM BETREIBEN EINER SCHALTUNGSANORDNUNG FÜR EIN KONSTANTSTROMGESPEISTES LEUCHTDIODENFELD, MIT
FEHLERERKENNUNG

Title (fr)
PROCÉDÉ PERMETTANT DE FAIRE FONCTIONNER UN CIRCUIT POUR UN RÉSEAU DE DIODES ÉLECTROLUMINESCENTES ALIMENTÉES
EN COURANT CONSTANT, AVEC DÉTECTION D'ERREURS

Publication
EP 2818027 B1 20160629 (DE)

Application
EP 13702013 A 20130128

Priority
• DE 102012101363 A 20120221
• EP 2013051534 W 20130128

Abstract (en)
[origin: WO2013124120A1] The present invention relates to a method for operating a circuit arrangement having a power source (I), - having a light-emitting diode field (1, 2, 3) in series to the power source (I), wherein the light-emitting diode field (1, 2, 3) comprises at least two series circuits (1, 2, 3) which comprise at least one light-emitting diode (D1, D2, D3) and a controllable switching element (S1, S2, S3), comprising a control and/or regulation means (C) for the light-emitting diode field (1, 2, 3) and - comprising a voltage sensor (V1), wherein the controllable switching elements and the power source (I) are actuated by the control and/or regulation means (C) in such a way that the control and/or regulation means (C) actuate the closing of the controllable switching element (S1, S2, S3) of at least one series circuit (1, 2, 3) of the light-emitting diode field (1, 2, 3) by a control pulse at the control input of the controllable switching element (S1, S2, S3) during a cycle period (Tcycle) for a pulse duration (T1, T2, T3) determined by the control and/or regulation means (C) and - that the control and/or regulation means (C) actuate the power source (I) shortly before or at the latest simultaneously with the end of a pulse duration (T1, T2, T3) such that the current is reduced, specifically by the amount of current through the series switching (1, 2, 3), the controllable switching element (S1, S2, S3) of which is actuated to open at the end of the pulse duration (T1, T2, T3) by the control and/or regulation means (C). During successive cycle periods (Tcycle), one of each of the controllable switching elements of the series circuits (1, 2, 3) is switched on alone by the control and/or regulation means (C) for a period of time referred to as a diagnosis time (Tdiag).

IPC 8 full level
H05B 44/00 (2022.01)

CPC (source: EP US)
H05B 45/46 (2020.01 - EP US); **H05B 45/48** (2020.01 - US); **H05B 45/50** (2020.01 - EP US)

Citation (examination)
DE 102005012625 A1 20060928 - INFINEON TECHNOLOGIES AG [DE]

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)
DE 102012101363 A1 20130822; CN 103472444 A 20131225; CN 103472444 B 20170915; EP 2818027 A1 20141231;
EP 2818027 B1 20160629; US 2015022112 A1 20150122; US 9295118 B2 20160322; WO 2013124120 A1 20130829

DOCDB simple family (application)
DE 102012101363 A 20120221; CN 201310051633 A 20130217; EP 13702013 A 20130128; EP 2013051534 W 20130128;
US 201314379466 A 20130128