

## Title (en)

Driver circuit for driving a lighting device and method for operating the same

## Title (de)

Treiberschaltung zum Antrieb einer Beleuchtungsvorrichtung und Betriebsverfahren dafür

## Title (fr)

Circuit de commande d'un dispositif d'éclairage et son procédé de fonctionnement

## Publication

**EP 2373124 A1 20111005 (EN)**

## Application

**EP 10158998 A 20100401**

## Priority

EP 10158998 A 20100401

## Abstract (en)

The invention provides a driver circuit for driving a lighting device, for being connected between a dimmed supply voltage and said lighting device. The driver circuit comprises a first bleeder resistor, which has a first end connected to a high-voltage terminal of the supply voltage, a second bleeder resistor, which has a first end connected to a low-voltage terminal of the supply voltage, a first semiconductor switching element connected between the second ends of the first and second bleeder resistors, and a second semiconductor switching element connected between the second end of the second bleeder resistor and the low-voltage terminal of the supply voltage. Under a further aspect, the invention provides a method for operating such a driver circuit. The method comprises detecting a predefined low-current phase of an input current of the driver circuit, the input current being below a predefined current threshold and the supply voltage being not below a predefined voltage threshold during the low-current phase. In a further step, upon detecting the low-current phase, a voltage drop across the second bleeder resistor is regulated during the low-current phase.

## IPC 8 full level

**H05B 44/00** (2022.01)

## CPC (source: EP US)

**H05B 45/10** (2020.01 - EP US); **H05B 45/14** (2020.01 - EP); **H05B 45/3575** (2020.01 - EP US)

## Citation (search report)

- [A] US 2008258647 A1 20081023 - SCIANNA CARLO [US]
- [A] US 2008224629 A1 20080918 - MELANSON JOHN L [US]
- [A] GB 2435724 A 20070905 - MOOD CONCEPTS LTD [GB], et al
- [A] JP 2009140631 A 20090625 - MATSUMURA DENKI SEISAKUSHO KK
- [AD] SSL2101 PRODUCT DATA SHEET: "SMPC IC for dimmable LED lighting", 28 August 2009, NXP SEMICONDUCTORS, Netherlands, pages: 1 - 22, XP002601664
- [A] AN10754 APPLICATION NOTE: "SSL2101 and SSL2102 dimmable mains LED driver", 16 October 2009, NXP SEMICONDUCTORS, Netherlands, pages: 1 - 36, XP002601665

## Cited by

CN106664766A; CN104584689A; EP2938164A3; US9402293B2; US9532416B2; CN109275230A; CN110536510A; EP3644691A1; EP3772871A1; EP2890220A1; CN104735860A; WO2018032511A1; US9565725B2; EP2608637B1; EP3772871B1

## Designated contracting state (EPC)

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 SE SI SK SM TR

## Designated extension state (EPC)

AL BA ME RS

## DOCDB simple family (publication)

**EP 2373124 A1 20111005; EP 2373124 B1 20131023**; EP 2554016 A1 20130206; WO 2011121113 A1 20111006

## DOCDB simple family (application)

**EP 10158998 A 20100401**; EP 11711592 A 20110401; EP 2011055108 W 20110401