(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
26 June 2014 (26.06.2014)

WIPO | PCT

(10) International Publication Number
WO 2014/096771 A1

(51) International Patent Classification:
H05B 33/08 (2006.01)

(21) International Application Number:
PCT/GB2013/053142

(22) International Filing Date:
27 November 2013 (27.11.2013)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
1223042.1 20 December 2012 (20.12.2012) GB

(71) Applicant: **ACCURIC LTD** [GB/GB]; 1 Conference Grove, Crowle, Worcester Worcestershire WR7 4SF (GB).

(72) Inventor: **BANNISTER, Dave**; 1 Conference Grove, Crowle, Worcester Worcestershire WR7 4SF (GB).

(74) Agent: **GILES, Ashley Simon**; HASELTINE LAKE LLP, 5th Floor, Lincoln House, 300 High Holborn, London, Greater London WC1V 7JH (GB).

(81) Designated States *(unless otherwise indicated, for every kind of national protection available)*: AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, JP, KE, KG, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States *(unless otherwise indicated, for every kind of regional protection available)*: ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG).

Published:

— *with international search report (Art. 21(3))*

(54) Title: LED DRIVER CIRCUIT USING FLYBACK CONVERTER TO REDUCE OBSERVABLE OPTICAL FLICKER BY REDUCING RECTIFIED AC MAINS RIPPLE

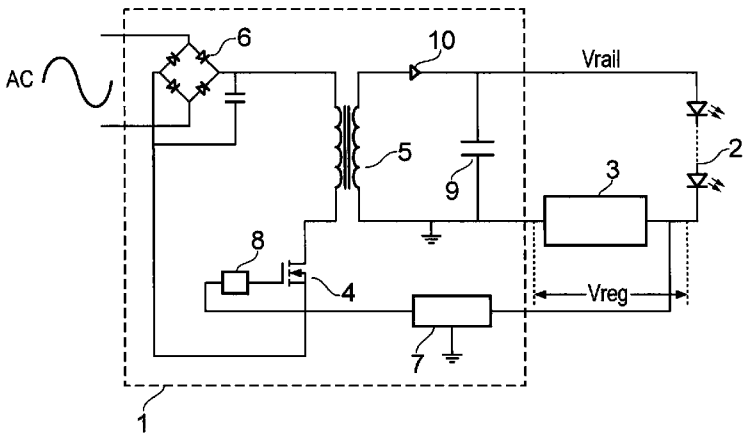


FIG. 5

(57) Abstract: The present application describes a driver circuit for supplying a drive current to an LED lighting scheme. In particular, the present invention relates to an AC input driver circuit operable in conjunction with a current regulator device which utilizes a plurality of Zener diodes connected in parallel combinations. The driver circuit comprises a feedback mechanism that is operable to maintain a constant voltage across the current regulator. Embodiments of the present invention seek to address LED ripple and, thus, optical flicker arising from an LED driver, connected at its input, to an AC supply.

WO 2014/096771 A1