

Title (en)

Fluorescent lamp power supply and control circuit for wide range operation.

Title (de)

Vorschaltgerät mit grossen Wirkungsbereich für Leuchtstofflampen.

Title (fr)

Alimentation pour tube fluoescnt et circuit de contrÔle à grande plage de variation.

Publication

EP 0673184 A2 19950920 (EN)

Application

EP 95103762 A 19950315

Priority

US 21386594 A 19940316

Abstract (en)

A power supply and control circuit is provided for driving a fluorescent lamp from a low voltage DC power source such as a battery. A DC-to-AC inverter coupled to a switching regulator converts low DC voltage into a higher AC voltage for driving the fluorescent lamp. In one embodiment, the lamp is included in a feedback loop which includes a circuit for producing a feedback signal indicative of the magnitude of current conducted by the lamp. In another embodiment, the lamp is symmetrically driven by isolating the lamp from the driving circuitry and indirectly deriving the feedback signal. The feedback signal is applied to the switching regulator to produce in the lamp a regulated current and, hence, a regulated lamp intensity. The magnitude of the lamp current can be adjusted to enable the intensity of the fluorescent lamp to be smoothly and continuously varied (without "dead-spots" or "pop-on") over a chosen intensity range, including if desired, from substantially full OFF to full ON. When the lamp is symmetrically driven, the lamp is illuminated in a more uniform manner along the entire length of the tube. A method for driving a fluorescent lamp from a low voltage DC power source is also provided. <IMAGE>

IPC 1-7

H05B 41/392; **H05B 41/295**

IPC 8 full level

G02F 1/1335 (2006.01); **G02F 1/13357** (2006.01); **H05B 41/24** (2006.01); **H05B 41/282** (2006.01); **H05B 41/392** (2006.01)

CPC (source: EP)

H05B 41/2824 (2013.01); **H05B 41/3925** (2013.01)

Cited by

DE19733939A1; CN102448235A; EP1424879A1; ITBO20120672A1; EP2744306A1; US6351080B1; WO2008106745A1; WO0033618A3

Designated contracting state (EPC)

CH DE FR GB IT LI NL SE

DOCDB simple family (publication)

EP 0673184 A2 19950920; **EP 0673184 A3 19960828**; **EP 0673184 B1 20041027**; DE 69533681 D1 20041202; JP H0855691 A 19960227

DOCDB simple family (application)

EP 95103762 A 19950315; DE 69533681 T 19950315; JP 5766695 A 19950316