Title (en)

Voltage supply for Leds in lighting applications

Title (de)

Spannungsversorgung von LED's für Beleuchtungszwecke

Title (fr)

Alimentation en tension pour Leds dans le domaine de l' éclairage

Publication

EP 1185147 A1 20020306 (DE)

Application

EP 01106716 A 20010316

Priority

DE 10013216 A 20000317

Abstract (en)

[origin: DE10013216A1] The voltage supply has a constant current source with a transistor with control and output connections. A LED or LED arrangement is connected in series with an output connection. A control loop detects the voltage drop between the transistor output connections and/or between the output connection connected to the LED and the control connection and sets the supply voltage so the voltage drop corresponds to a value above the saturation voltage. The voltage supply has a constant current source (2) to which a supply voltage is applied and that contains a transistor (3) with a control connection and two output connections, whereby the light emitting diode (5) or LED arrangement is connected in series with a transistor output connection. A control loop (6) detects the voltage drop between the transistor output connections and/or between the output connection connected to the LED and the control connection and sets the supply voltage so that the voltage drop corresponds to a value above the transistor saturation voltage. Independent claims are also included for the following: an arrangement of light emitting diodes and a method of supplying voltage to a constant current source for at least one light emitting diode.

[origin: DE10013216A1] The voltage supply has a constant current source with a transistor with control and output connections. A LED or LED arrangement is connected in series with an output connection. A control loop detects the voltage drop between the transistor output connections and/or between the output connection connected to the LED and the control connection and sets the supply voltage so the voltage drop corresponds to a value above the saturation voltage. The voltage supply has a constant current source (2) to which a supply voltage is applied and that contains a transistor (3) with a control connection and two output connections, whereby the light emitting diode (5) or LED arrangement is connected in series with a transistor output connection. A control loop (6) detects the voltage drop between the transistor output connections and/or between the output connection connected to the LED and the control connection and sets the supply voltage so that the voltage drop corresponds to a value above the transistor saturation voltage. Independent claims are also included for the following: an arrangement of light emitting diodes and a method of supplying voltage to a constant current source for at least one light emitting diode.

Abstract (de)

Für die Ansteuerung von LED's (5) für Beleuchtungszwecke wird eine Konstantstromquelle (2) mit einem Transistor (3) verwendet. Damit der Transistor (3) den Strom durch die Leuchtdioden konstant halten kann, muß der Spannungsabfall zwischen Kollektor und Emitter des Transistors (3) größer als die Sättigungsspannung des Transistors (3) sein. Gemäß der Erfindung wird der Spannungsabfall zwischen dem Kollektor und dem Emitter des Transistors (3) und/oder dem Kollektor und der Basis des Transistors (3) (und entsprechend der FET-Transistoren) erfaßt und die Versorgungsspannung der Konstantstromquelle (2) derart geregelt, daß der erste Spannungsabfall am Transistor (3) einem Sollwert entspricht, der knapp oberhalb der Sättigungsspannung UCESAT des Transistors (3) liegt. <IMAGE>

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H05B 44/00 (2022.01)

CPC (source: EP US)

H05B 45/20 (2020.01 - EP US); H05B 45/37 (2020.01 - EP US)

Citation (search report)

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- [A] DE 19814745 A1 19991007 - APAG ELEKTRONIK AG [CH]
- [A] EP 0293921 A2 19881207 - MIYASAKA KATSUYUKI [JP], et al
- [A] US 5929617 A 19990727 - BROKAW A PAUL [US]
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