Title (en)
  Failure detection of LEDs

Title (de)
  Fehlererkennung von LEDs

Title (fr)
  Détection de défaillances de DEL

Publication
  EP 2362711 A1 20110831 (EN)

Application
  EP 10154657 A 20100225

Priority
  EP 10154657 A 20100225

Abstract (en)
  An electrical circuit (1) for powering a plurality of LEDs, with a function for indicating an LED failure, is characterized in that the electrical circuit (1) comprises N legs (3, 4) connected in parallel, with N#¥2, and with each leg (3, 4) comprising several LEDs and a leg resistor (R1, R2) connected in series with the LEDs, wherein the leg resistors (R1, R2) of the legs (3, 4) have basically the same resistance, and wherein the resistance of each leg (3, 4) is basically the same during normal operation, that the legs (3, 4) are connected to a common shunt resistor (R3), that the electrical circuit (1) comprises an amplifier unit (5) amplifying a voltage at the shunt resistor (R3) with an amplification factor AF into an amplified voltage, that the electrical circuit (1) comprises a comparator unit (6, 7, 17, 18) for each leg (3, 4), wherein the comparator units (6, 7, 17, 18) each comprise a comparator (6a, 7a, 17a, 18a) which compares the voltage at the respective leg resistor (R1, R2) with the amplified voltage, and that the outputs (6b, 7b, 17b, 18b) of the comparator units (6, 7, 17, 18) are connected at a common signal output unit (10). The invention provides an electrical circuit for powering LEDs which is simple in design, and which may power and monitor a larger number of LEDs.

IPC 8 full level
  H05B 44/00 (2022.01)

CPC (source: EP US)
  H05B 45/52 (2020.01 - EP US)

Citation (search report)
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