

Title (en)
Lighting control device

Title (de)
Vorrichtung zur Beleuchtungssteuerung

Title (fr)
Dispositif de commande d'éclairage

Publication
EP 1079667 A3 20031112 (EN)

Application
EP 00306085 A 20000717

Priority
• GB 9919608 A 19990819
• GB 9927366 A 19991120
• GB 0000168 A 20000106

Abstract (en)
[origin: EP1079667A2] A lighting device and control means therefor is disclosed. The lighting device consists of a plurality of White LEDs (WLEDs) provided in separate chains all connected parallel. A small number of WLEDs is connected in series in each chain, and a number of such chains are wired together in parallel between a pair of voltage lines from which current is drawn. Current measurement and adjusting means is provided firstly between a high voltage line and all the parallelly connected chains, and secondly in each chain. Each current measurement and adjusting means is controlled ideally by a microprocessor which monitors both the total current drawn by all the chains together and also the individual currents flowing in each chain. WLEDs have a tendency to fail when subjected to sudden current increases, and also when operating at extreme temperatures as temperature affects the operating characteristics of diodes in general. It cannot however accurately be predicted whether a particular WLED will fail in open or closed circuit and the invention provides a means of mitigating the effect of failure of one WLED on those which remain functioning in the circuit. The control means immediately increases or reduces the total current flow to all the chains depending on whether a WLEDs fails in short or open circuit. The control means also detects operating temperature and user light intensity requirement and adjusts various currents accordingly.
<IMAGE>

IPC 1-7
H05B 33/08; **B60Q 3/00**

CPC (source: EP US)
H05B 45/54 (2020.01 - EP US); **H05B 45/56** (2020.01 - EP US); **H05B 45/345** (2020.01 - EP US)

Citation (search report)
• [Y] DE 9002812 U1 19900607
• [Y] WO 9859015 A1 19981230 - UNIV CALIFORNIA UNIVERSITY OF [US], et al
• [Y] EP 0716485 A1 19960612 - HUGHES AIRCRAFT CO [US]
• [A] US 5884125 A 19990316 - TANIGUCHI HIDEO [JP], et al
• [A] US 5783909 A 19980721 - HOCHSTEIN PETER A [US]
• [YA] WO 9849872 A1 19981105 - SIGNAL HOUSE LIMITED [GB], et al
• [AD] GB 2317241 A 19980318 - SCHOTT FIBRE OPTICS [GB]
• [A] US 5663719 A 19970902 - DEESE RAYMOND E [US], et al
• [A] WO 9853646 A1 19981126 - SCHMIDT GREGORY W [US]
• [A] FR 2631102 A1 19891110 - CIT ALCATEL [FR]
• [A] SHERMAN L: "LOGIC POWER DRIVES HIGH-INTENSITY LEDS", ELECTRONIC DESIGN, PENTON PUBLISHING, CLEVELAND, OH, US, vol. 45, no. 23, 23 October 1997 (1997-10-23), pages 142,144, XP000752929, ISSN: 0013-4872

Cited by
DE102009018428A1; EP1871145A1; US7675245B2; DE10121380A1; DE102005047610B4; EP1145904A3; RU203675U1; EP1286571A3; DE102004034359B3; GB2374715A; GB2374715B; EP1965609A3; DE10324609A1; DE10324609B4; DE102006032247A1; DE102006032247B4; EP1684001A1; US8994279B2; US7327051B2; US7482765B2; US7414370B2; US8446100B2; WO2005079121A3; WO2008086050A3; WO2007092355A1; WO2015094387A1; US9155156B2; US8274238B2; US9144126B2; WO2007036281A1; WO2010121806A1; WO2007077007A1; WO03061347A1; US7262752B2; US8487545B2; US8692482B2; US9337727B2; US7999487B2; US8101897B2; US8957607B2; US9265104B2; US9277608B2; US8169161B2; US8653756B2; US9007000B2; US9320094B2

Designated contracting state (EPC)
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

DOCDB simple family (publication)
EP 1079667 A2 20010228; **EP 1079667 A3 20031112**; **EP 1079667 B1 20060906**; AT E339077 T1 20060915; DE 60030516 D1 20061019; DE 60030516 T2 20070606; ES 2265871 T3 20070301

DOCDB simple family (application)
EP 00306085 A 20000717; AT 00306085 T 20000717; DE 60030516 T 20000717; ES 00306085 T 20000717