

Title (en)  
Switching LED driver circuit

Title (de)  
LED-Schalttreiberschaltung

Title (fr)  
Circuit de commutation de module d'attaque de diode électroluminescente

Publication  
**EP 2134144 A1 20091216 (EN)**

Application  
**EP 08010732 A 20080612**

Priority  
EP 08010732 A 20080612

Abstract (en)  
An LED driver circuit sequentially and repeatedly switches a plurality of LED arrays to result in blink with high frequency. A PWM generator outputs n series of high frequency periodic PWM signals. The period (T) and duty cycle (d) of each series of PWM signal are the same as each other, but pulse portions of the PWM signals sequentially follow over time, i.e.  $d=1/n$ . Each PWM signal is sent to a dimming constant current source for separately outputting a driving power with the same timing as the input PWM signals to one of the LED arrays, so that the LED arrays make a high frequency blink. The blink frequencies of each and overall LED arrays are  $1/T$  Hz and  $n/T$  Hz, respectively. The driving current of LEDs can be increased over a rated average forward current I AVG because they are not lit up continuously. By persistence of vision of the eye, a visual effect with continuity and high brightness can be obtained.

IPC 8 full level  
**H05B 33/08** (2006.01); **H05B 44/00** (2022.01)

CPC (source: EP US)  
**H05B 45/10** (2020.01 - EP US); **H05B 47/155** (2020.01 - EP US)

Citation (search report)

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CN114466478A; CN108650743A; WO2016095648A1; TWI581661B

Designated contracting state (EPC)  
DE FR GB

Designated extension state (EPC)  
AL BA MK RS

DOCDB simple family (publication)  
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