Product Overview

FL7733: Primary-Side-Regulated LED Driver with Power Factor Correction

For complete documentation, see the data sheet.

This highly integrated PWM controller with advanced Primary-Side Regulation (PSR) technique provides features to enhance the performance of low-to-mid-power LED lighting converter. The FL7733 LED driver is designed with minimum system components while LED current is accurately controlled by Fairchild’s TRUECURRENT® technique and improved feedback loop control. Constant Current (CC) tolerance less than ±1% over the universal line voltage range meets the requirement of highly reliable LED brightness management. By minimizing turn-on time fluctuation, high power factor, and low THD; <10% THD over the universal line range can be obtained. An integrated high-voltage startup circuit implements fast startup and high system efficiency. During startup, adaptive feedback loop control anticipates the steady-state condition and sets initial feedback condition close to the steady state to ensure no overshoot or undershoot of LED current. The FL7733 provides powerful protections, such as LED short / open, output diode short, sensing resistor short / open, and over-temperature for high system reliability. The FL7733 controller is available in an 8-pin Small-Outline Package (SOP).

Features

- High Performance
- Cost-Effective Solution without Requiring Input Bulk Capacitor and Secondary Feedback Circuitry
- Power Factor Correction
- THD <10% Over Universal Line Range
- Constant Current Tolerance:
  - < ±1% Over Universal Line Voltage Variation
  - < ±1% by 50% - 100% Load Voltage Variation
  - < ±1% by ±20% Magnetizing Inductance Variation
- High-Voltage Startup with VDD Regulation
- Adaptive Feedback Loop Control for Startup without Overshoot

High Reliability

For more features, see the data sheet

Applications

- Lighting

For more information please contact your local sales support at www.onsemi.com.

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