LED Driver with Average-Mode Constant Current Control

Halogen Free

General Description

The FP7176 is an average current mode control LED driver IC operating in a constant off-time mode. FP7176 does not produce a peak-to-average error, and therefore greatly improves accuracy, line and load regulation of the LED current without any need for loop compensation or high-side current sensing. The output LED current accuracy is ±2%.

The FP7176 can be powered from an 8.0 - 450V supply. A PWM dimming input is provided that accepts an external control TTL compatible signal. The output current can be programmed by an internal 277mV reference, or controlled externally through a 0 - 1.5V dimming input.

Features

- Fast average current control
- Internal 8 to 450V linear regulator
- Programmable constant off-time switching
- Linear and PWM dimming capability
- Output short circuit protection with skip mode
- Requires few external components for operation

Applications

- DC/DC or AC/DC LED driver applications
- LED street lighting
- Back lighting of flat panel displays
- General purpose constant current source
- Signage and decorative LED lighting
- Chargers

Typical Application Circuit