
Universal High Brightness LED Driver with Improved Current Regulation and EMI Performance

FEATURES

- Proprietary constant-current control
- Wide input range from 18V to 450V or 110VAC/220VAC
- Applications from a few mA to more than 1A Output
- up to hundreds of LEDs
- PWM Low-Frequency Dimming via Enable pin
- Linear Dimming via LD pin
- Frequency jittering for better EMI performance
- Programmable Over temp Protection (OTP)

APPLICATION

- AC/DC LED Driver applications
- RGB Backlighting LED Driver
- Signal and Decorative LED lighting

GENERAL DESCRIPTION

The PT4107 is a high voltage buck control IC for constant LED current regulation. It allows efficient operation of High Brightness (HB) LEDs from voltage sources ranging from 18VDC up to 450VDC or 110VAC/220VAC. The PT4107 controls an external MOSFET at fixed switching frequency from 25 kHz to 200 kHz. The frequency can be programmed using an external resistor. A proprietary peak current control method keeps constant average LED currents for wide input and output ranges. The output current can be programmed from a few milliamps up to more than 1A. The output current on one LED string also can be programmed to any value between zero and its maximum value by applying an external control voltage at the linear dimming control input of the PT4107. Moreover, PT4107 provides a low-frequency PWM dimming input that can accept an external control signal with duty ratio of 0-100% and a frequency of up to a few kilohertz.

Frequency jittering is used to reduce the EMI.

TYPICAL APPLICATIONS

