

Non-Isolated Buck APFC Offline LED Controller

FEATURES

- Active PFC for High PF and Low THD
- PF>0.9 with Universal Input
- Built-in HV Startup and IC Power Supply Circuit
- Quasi-Resonant for High Efficiency
- $\pm 1\%$ CC Regulation
- Very Low VDD Operation Current
- Excellent Line and Load Regulation
- LED Open/Short Protection
- Build in Protections:
 - Output Over Voltage Protection (OVP)
 - Cycle-by-Cycle Current Limiting (OCP)
 - Leading Edge Blanking (LEB)
 - LED Open/Short Protection
 - On-Chip Thermal Foldback (OTP)
- Available in SOP-8 Package

APPLICATIONS

- LED Lighting

GENERAL DESCRIPTION

KP106N is a highly integrated LED Controller with constant current (CC) control for LED lighting applications. The IC utilizes Quasi-Resonant (QR) Buck topology with active PFC control for high PF, low THD, and high efficiency.

KP106N integrates with high voltage startup and IC power supply circuit, which requires very few external components. Additionally, the system surge performance is also optimized in KP106N to pass 2.5kV surge level with minimum system cost. The IC senses the inductor current during the whole switching cycle, which can achieve high precision CC control with excellent line and load regulation.

KP106N integrates functions and protections of Under Voltage Lockout (UVLO), Cycle-by-cycle Current Limiting (OCP), Thermal Foldback (OTP), Output Over Voltage Protection (OVP), LED Open/Short Protection, etc.

TYPICAL APPLICATION CIRCUIT

