

Non-Isolated BuckBoost APFC Offline LED Power Switch

FEATURES

- Proprietary Active PFC for High PF and Low THD
- $PF > 0.95$ and $THD < 15\%$ with Universal Input
- Built-in HV Startup and IC Power Supply Circuit
- Internal 650V Power MOSFET
- Quasi-Resonant for High Efficiency
- $\pm 3\%$ CC Regulation
- Very Low VDD Operation Current
- Excellent Line and Load Regulation
- LED Open/Short Protection
- Built-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-7 Package

GENERAL DESCRIPTION

KP116X is a highly integrated LED power switch with constant current (CC) control for LED lighting applications. The IC utilizes Quasi-Resonant (QR) BuckBoost topology with active PFC control for high PF, low THD, and high efficiency.

KP116X integrates 650V power MOSFET with high voltage startup and IC power supply circuit, which requires very few external components. The IC senses the inductor current during freewheeling period, which can achieve high precision CC control with excellent line and load regulation.

KP116X 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.

APPLICATIONS

- T5/T8 LED Tube
- High PF LED Bulb

TYPICAL APPLICATION CIRCUIT

