

DESCRIPTION

The PT6919 is a primary side regulation single stage Flyback and PFC controller for offline LED lighting. It achieves high power factor and accurate constant LED current with single-power-stage for isolated lighting applications.

The PT6919 provides accurate LED current control from primary-side information. Eliminating the secondary-side feedback components and the opto-coupler significantly simplifies the LED lighting system design.

The PT6919 integrates PFC function and the high PF value is achieved with constant on-time operation. The PT6919 works in Quasi-Resonant switching mode to reduce the switching losses and improve the EMI performance.

The multi-protection features of PT6919 greatly enhance the system reliability and safety. The PT6919 provides input over voltage protection, short LED protection, open LED protection, over temperature protection, cycle-by-cycle current limiting, etc.

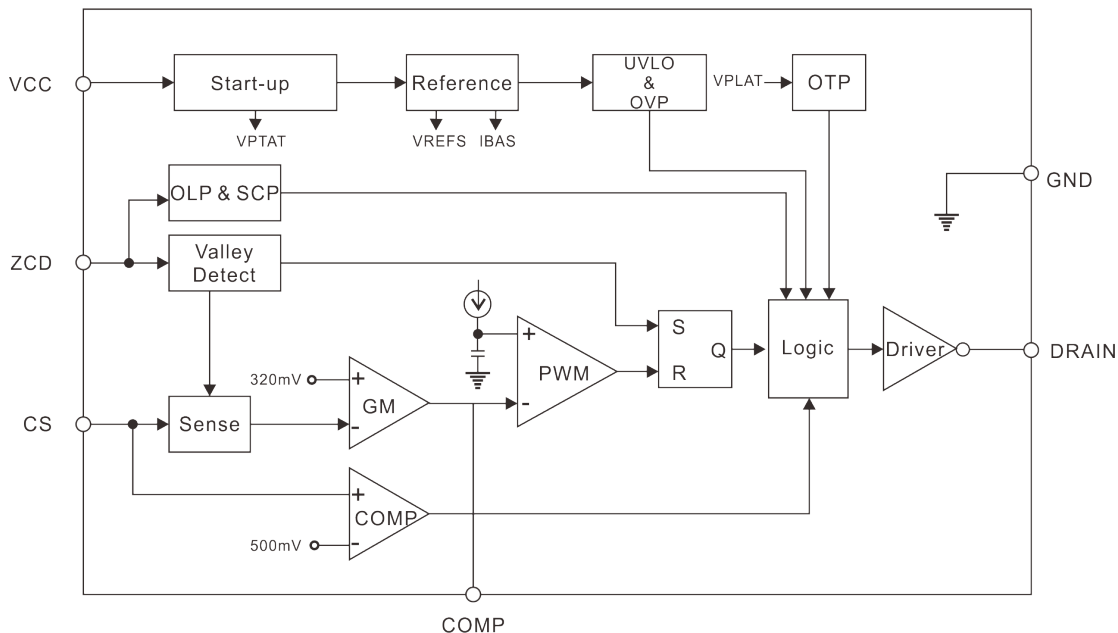
APPLICATIONS

- LED bulb lamp.
- LED tube lamp.
- LED PAR lamp.
- Other LED lighting.

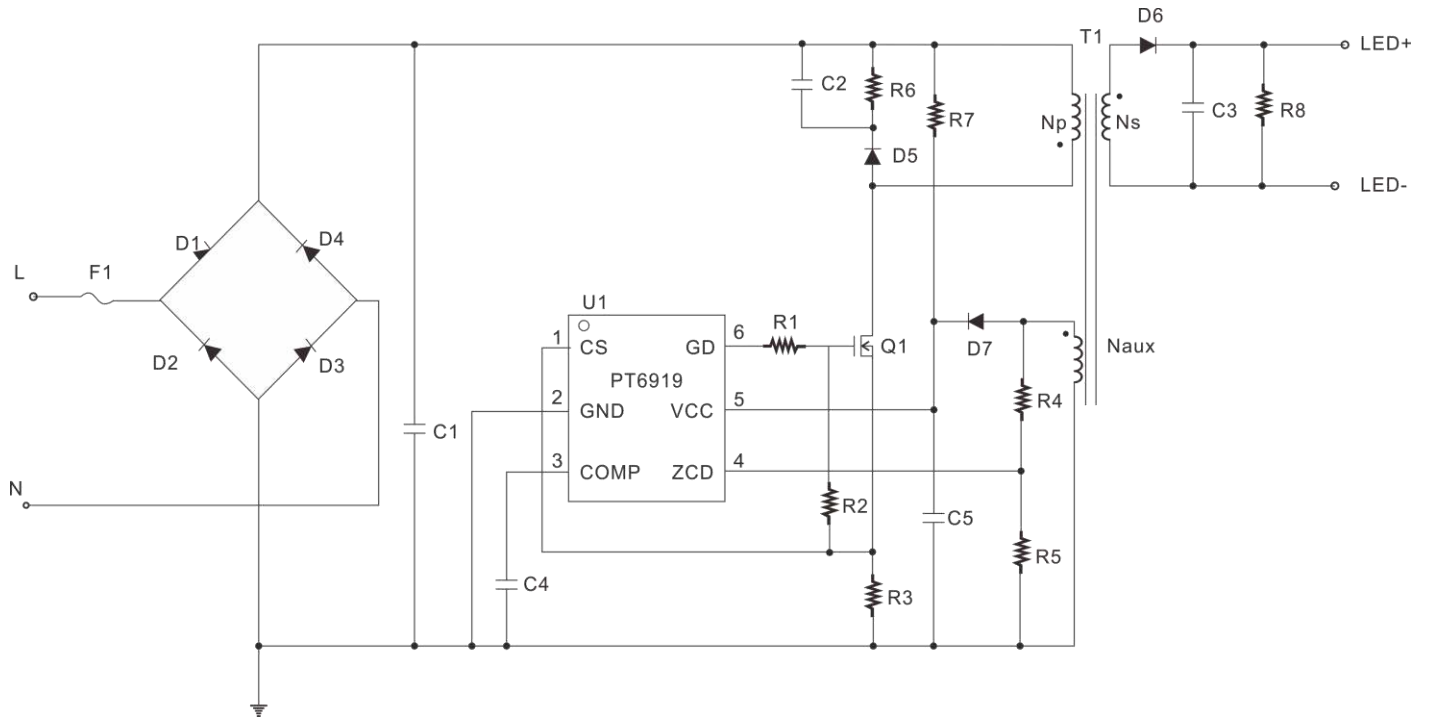
FEATURES

- High PF > 0.9 with single stage conversion.
- Real-current control technique achieves accurate constant LED current.
- Primary Side Regulation eliminates secondary feedback circuit.
- Quasi-Resonant switching mode to achieve low switching losses.
- 0.3V primary current sense reference voltage leads to a lower conduction loss.
- $\pm 3\%$ output current accuracy.
- Excellent line regulation and load regulation.
- Reliable short LED and open LED protection.
- System auto-restart function.
- Low start-up current: 15 μ A typical.
- VCC over voltage protection (OVP).
- VCC under voltage lockout (UVLO).
- Cycle by cycle primary side current limiting.
- Over temperature protection (OTP).
- SOT23-6 package.

BLOCK DIAGRAM



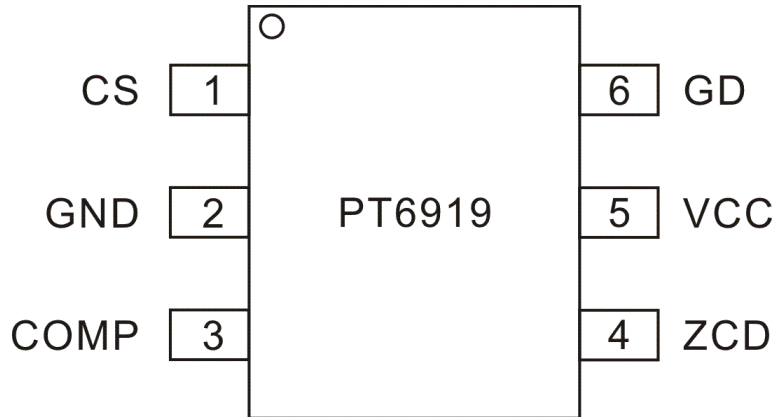
TYPICAL APPLICATION



ORDER INFORMATION

Valid Part Number	Package Type	Top Code
PT6919	SOT23-6	PT6919

PIN CONFIGURATION



PIN DESCRIPTION

Pin Name	Description	Pin No.
CS	Current sense pin. Sense the primary side current when the switch is turned on.	1
GND	IC Ground.	2
COMP	Loop compensation pin.	3
ZCD	Inductor current zero-crossing detection pin. This pin also provides over voltage protection (OVP), short circuit protection (SCP) and line regulation modification function.	4
VCC	Power supply pin.	5
GD	Gate driver pin. Connect to the gate of primary power MOSFET.	6

IMPORTANT NOTICE

Princeton Technology Corporation (PTC) reserves the right to make corrections, modifications, enhancements, improvements, and other changes to its products and to discontinue any product without notice at any time.

PTC cannot assume responsibility for use of any circuitry other than circuitry entirely embodied in a PTC product. No circuit patent licenses are implied.

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