

## DESCRIPTION

The PT6917 is a primary side regulation single stage Flyback and PFC controller for offline LED dimming applications. It achieves high power factor and accurate constant LED current with single power stage for isolated lighting applications.

The PT6917 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 PT6917 integrates PFC function and the high PF value is achieved with constant on time operation. The PT6917 works in Quasi-Resonant switching mode to reduce the switching losses and improve the EMI performance.

The multi-protection features of PT6917 greatly enhance the system reliability and safety. The PT6917 provides input over voltage protection, short LED protection, open LED protection, over temperature protection, cycle-by-cycle current limiting.

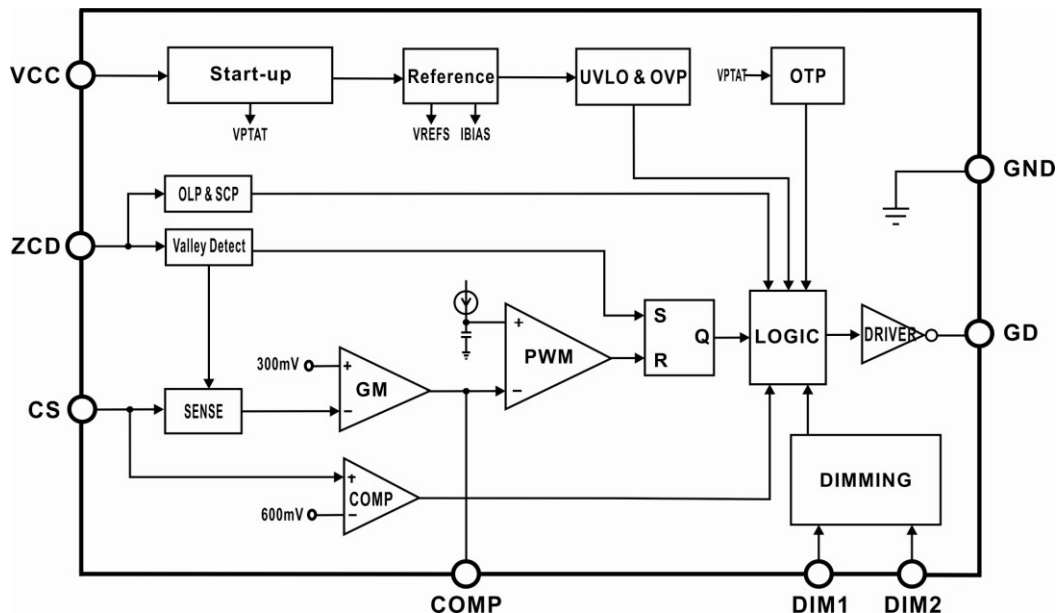
## FEATURES

- High PF>0.9 with single stage conversion
- Compatible with analog/PWM dimming modes
- 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
- $\pm 5\%$  output current accuracy
- Excellent line regulation and load regulation
- Reliable short LED and open LED protection
- System auto-restart function
- Low start-up current: 20 $\mu$ A typical
- VCC over voltage protection (OVP)
- VCC under voltage lockout (UVLO)
- Cycle by cycle primary side current limiting
- Over temperature protection (OTP)
- SOP-8 package

## APPLICATIONS

- LED tube lamp
- LED PAR lamp
- LED ceiling lamp
- Other LED lighting

## BLOCK DIAGRAM



# APPLICATION CIRCUIT

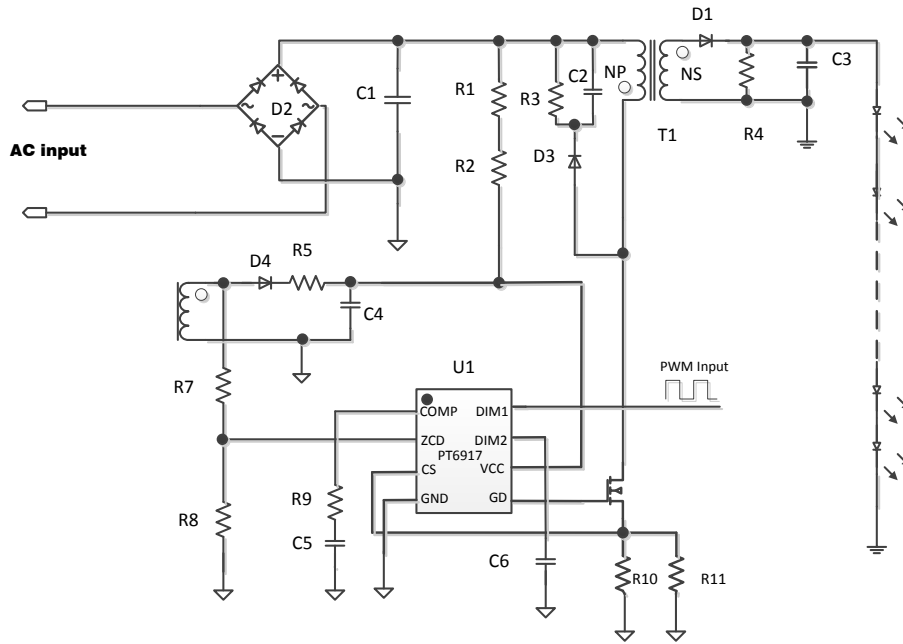


Fig1: PWM Input Dimming

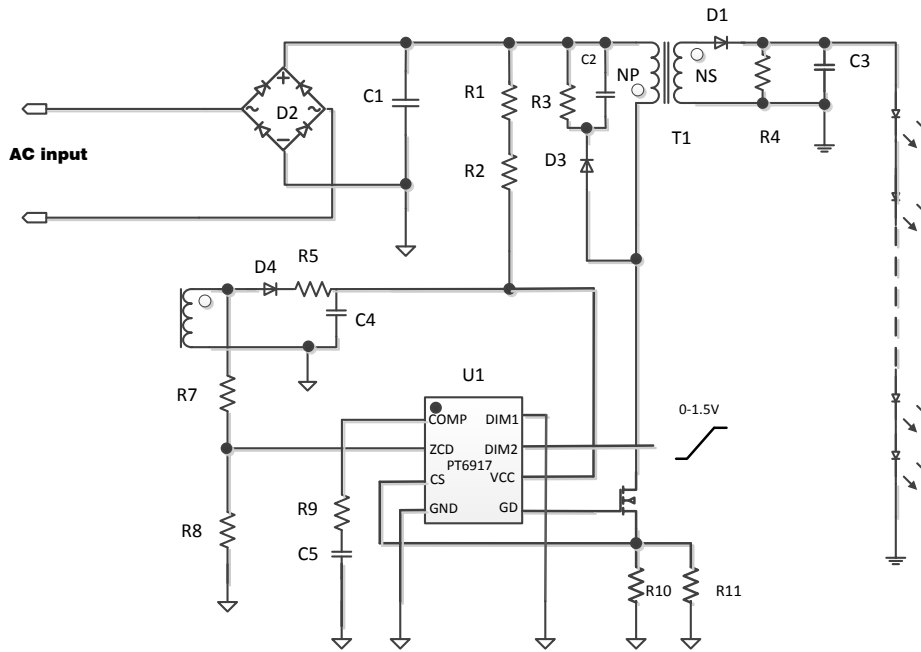


Fig2: Analog Input Dimming

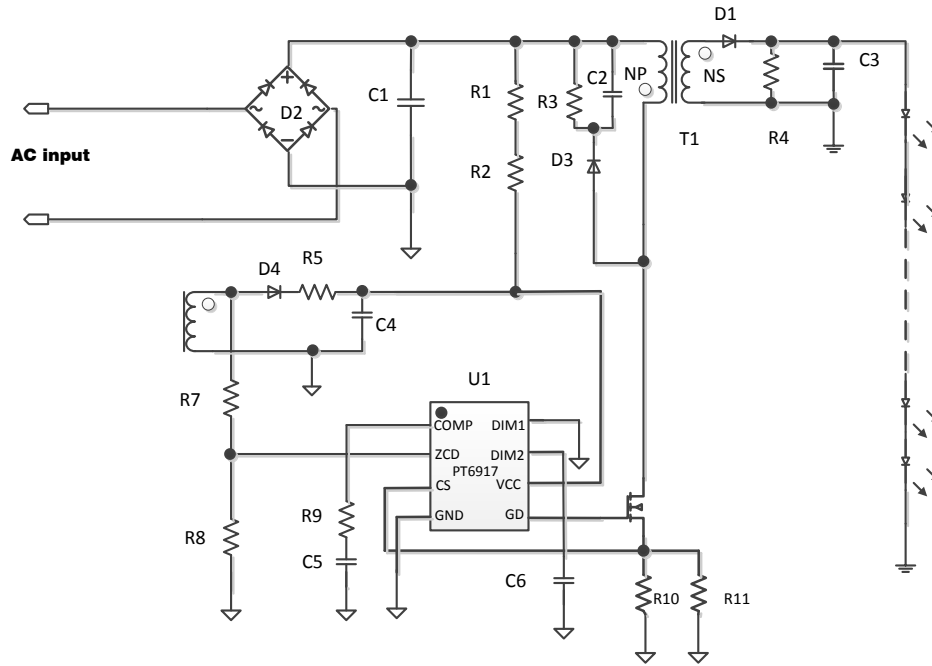
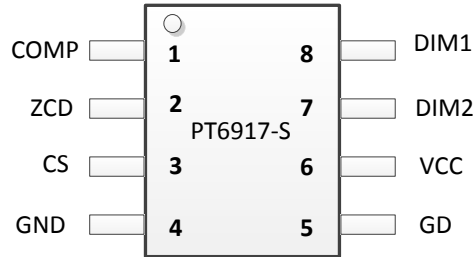


Fig3: Non-Dimming

## ORDER INFORMATION

Valid Part Number	Package Type	Top Code
PT6917-S	8-PIN, SOP	PT6917-S

## PIN CONFIGURATION



## PIN DESCRIPTION

Pin Name	Description	Pin No.
COMP	Loop compensation pin.	1
ZCD	Inductor current zero-crossing detection pin. This pin also provides over voltage protection (OVP) and line regulation modification function.	2
CS	Current sense pin. Sense the inductor current when the switch is turned on.	3
GND	IC Ground.	4
GD	Gate driver pin. Connect to the gate of power MOSFET.	5
VCC	Power supply pin.	6
DIM2	Analog dimming input pin, also Enable/Disable pin.	7
DIM1	PWM dimming input pin. Must be connected to GND if DIM1 is not for dimming.	8

## **IMPORTANT NOTICE**

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