Preliminary PT6978A/C/L/H
Single Stage APFC Buck LED Driver

DESCRIPTION

The PT6978X is a single-stage buck controller that achieves high power factor and accurate current for LED lighting applications. Integrated 500V (or 650V) MOSFET to decrease physical volume.

The PT6978X integrates APFC function and the high PF value is achieved by constant on-time operation mode. The PT6978X works in Quasi-Resonant switching mode, it can reduce the switching losses and improve the EMI performance.

The multi-protection features of PT6978X greatly enhance the system reliability and safety. The PT6978X provides input over voltage protection, short LED protection, open LED protection, over temperature protection, cycle-by-cycle current limiting, etc.

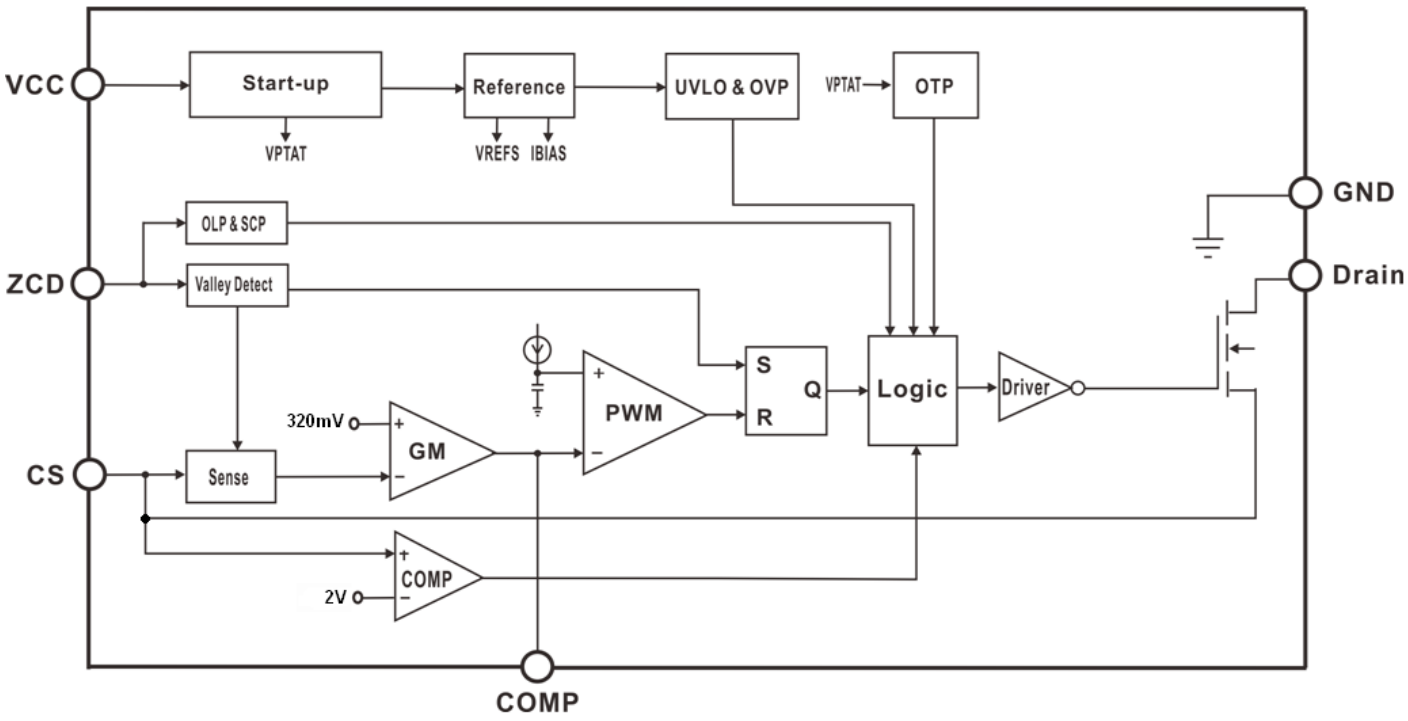
FEATURES

- Integrated 500V (650V) MOSFET.
- High PF≥0.9 with single stage conversion.
- Real-current control technique achieves accurate constant LED current.
- Quasi-Resonant switching mode to achieve low switching losses.
- ±3% output current accuracy.
- Excellent line regulation and load regulation.
- Low start-up current: 15μA typical.
- Reliable short LED and open LED protection.
- System auto-restart function.
- VCC over voltage protection.
- VCC under voltage protection (UVLO).
- Cycle by cycle current limiting.
- Over temperature protection (OTP).
- SOP8 package.
- DIP8 package.

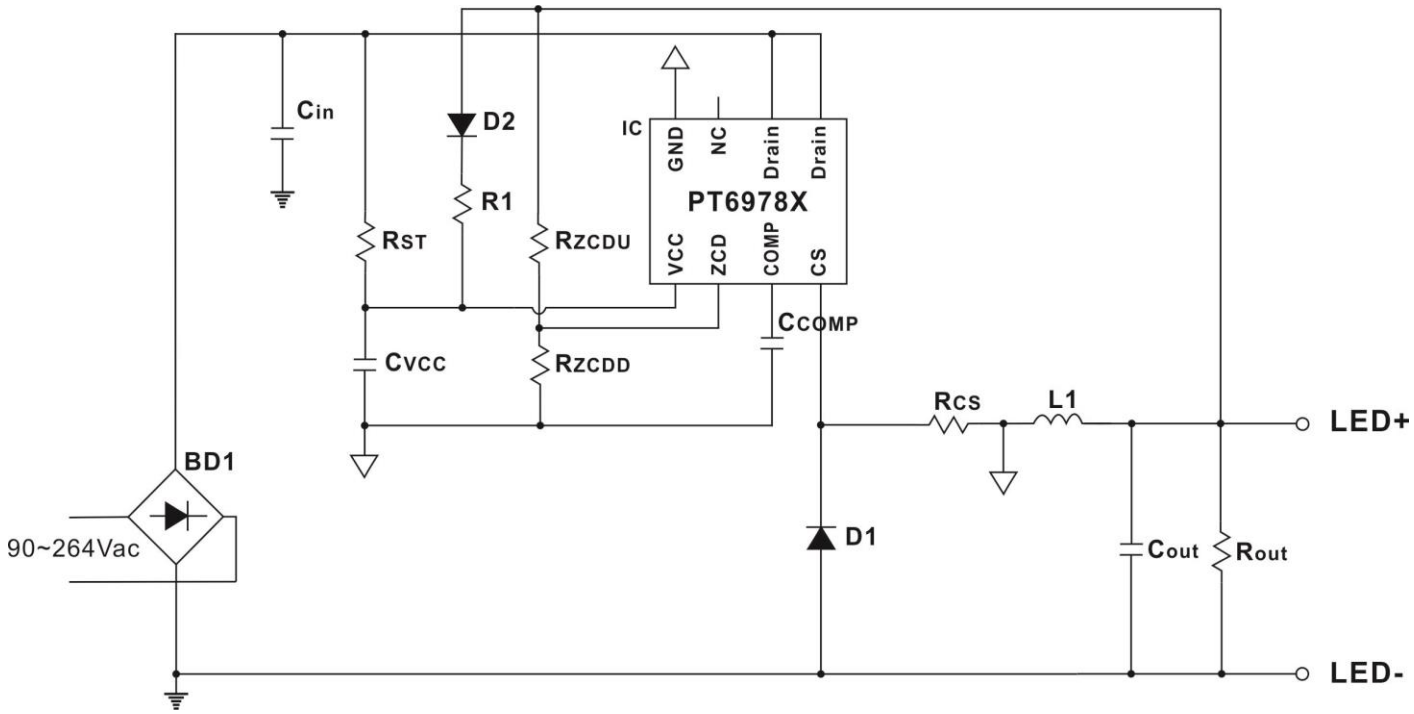
APPLICATIONS

- LED Bulb Lamp
- LED Tube
- Others Led Lighting

BLOCK DIAGRAM



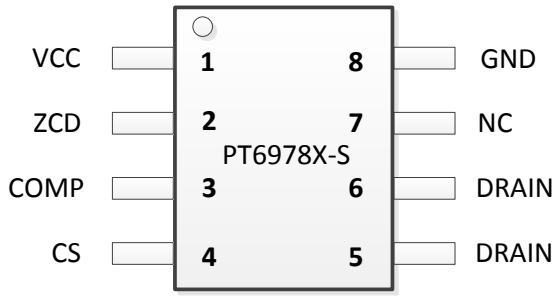
TYPICAL APPLICATION

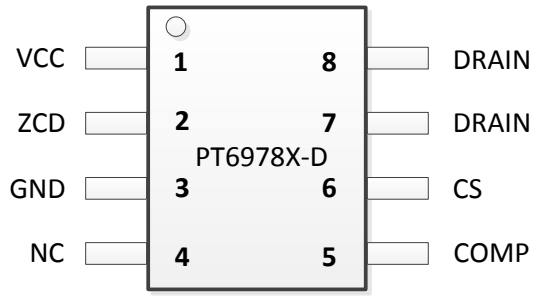


ORDER INFORMATION

Valid Part Number	Package Type	Power MOSFET	Top Code
PT6978A-S	8 Pins, SOP	500V/3A	PT6978A-S
PT6978A-D	8 Pins, DIP	500V/3A	PT6978A-D
PT6978C-S	8 Pins, SOP	500V/2A	PT6978C-S
PT6978L-S	8 Pins, SOP	650V/2A	PT6978L-S
PT6978H-D	8 Pins, DIP	650V/4A	PT6978H-D

PIN CONFIGURATION





PIN DESCRIPTION

Pin Name	Description	Pin No.	
		SOP-8	DIP-8
VCC	Power supply pin.	1	1
ZCD	Inductor current zero-crossing detection pin. This pin also provides over voltage protection.	2	2
COMP	Loop compensation pin.	3	5
CS	Current sense pin. Connect the sense resistor between this pin and the GND pin.	4	6
DRAIN	Drain of the internal power MOSFET.	5/6	7/8
GND	IC Ground.	8	3
NC	No connect.	7	4

IMPORTANT NOTICE

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