

DESCRIPTION

The PT6989 is a high precision buck LED Driver IC intended for PWM dimming products. The IC has a wide range input range which is 85V~265V and the default dimming state is three Level.

The PT6989 integrates high precision current detection and constant current circuit which can realize high precision LED constant current and excellent line voltage regulation. The PT6989 works in CRM mode, the LED current is constant with inductance and LED output voltage change, good load regulation.

The PT6989 integrates a 500V power MOSFET, uses the source driver architecture, with a low operating current, so the PT6989 doesn't need the auxiliary winding for sensing the output current and supplying the chip. It has a few external components, saves the cost of volume system.

The multi-protection features of PT6989 greatly enhance the system reliability and safety. The PT6989 provides CS resistance short-circuit protection, short LED protection, open LED protection, VIN under voltage protection, temperature intelligent control, etc.

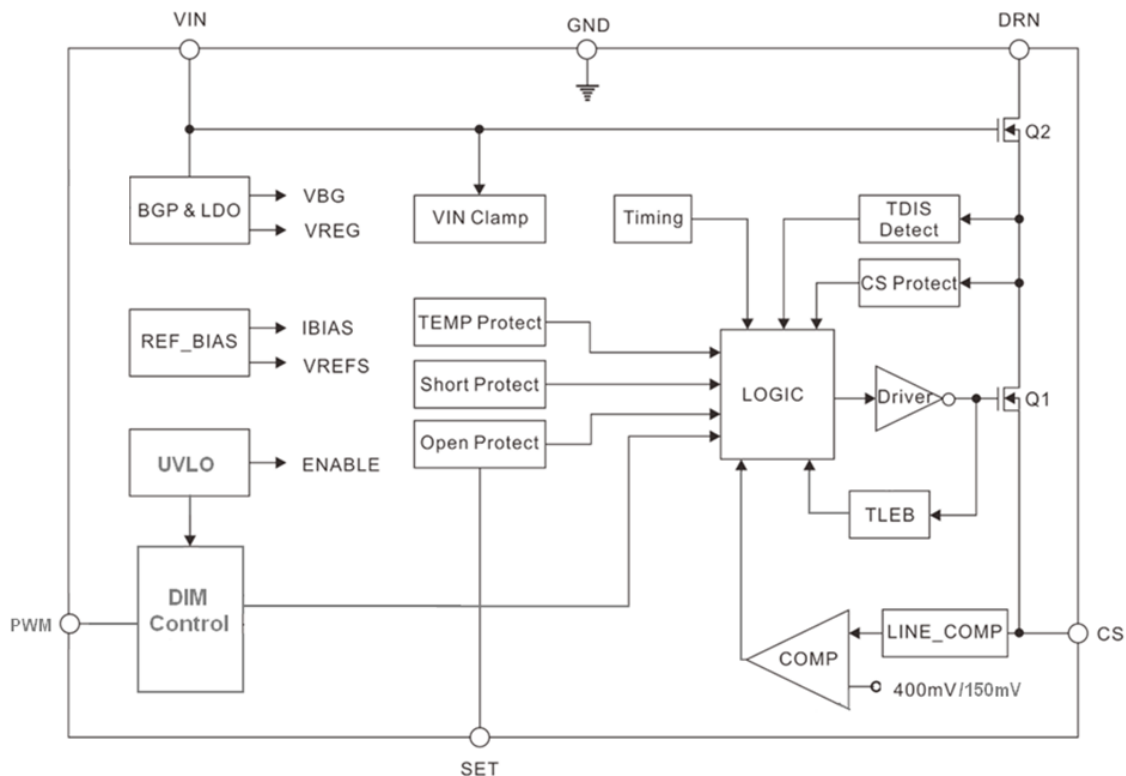
FEATURES

- Integrates 500V Power MOSFET
- PWM Dimming Function
- CRM Mode(rated light)
- No Auxiliary Winding for Sensing and Supplying
- Low Operating Current
- $\pm 5\%$ Output Current Accuracy
- LED Open/Short Circuit Protection
- CS Resistor Short Circuit Protection
- VIN Under Voltage Protection
- Temperature Intelligent Control
- System Auto-Restart Function
- SOP-8 Package

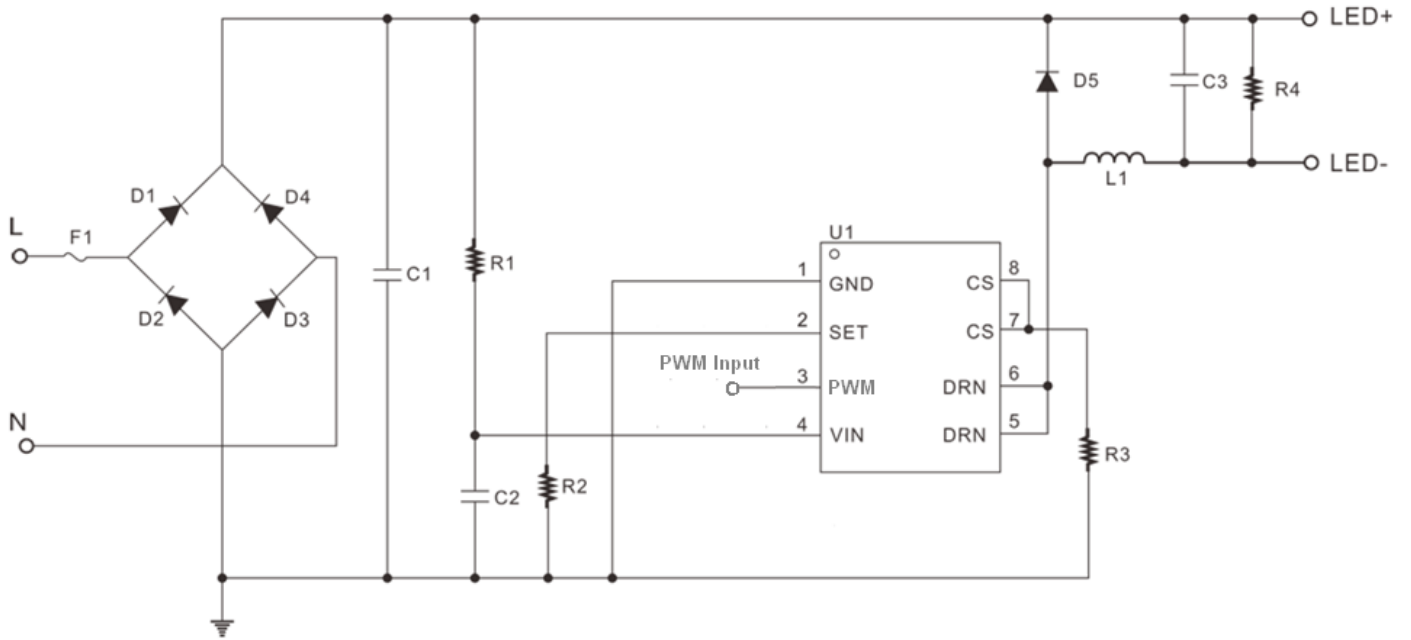
APPLICATIONS

- LED Bulb lamp · LED PAR lamp
- LED Tube lamp
- Other LED lighting

BLOCK DIAGRAM



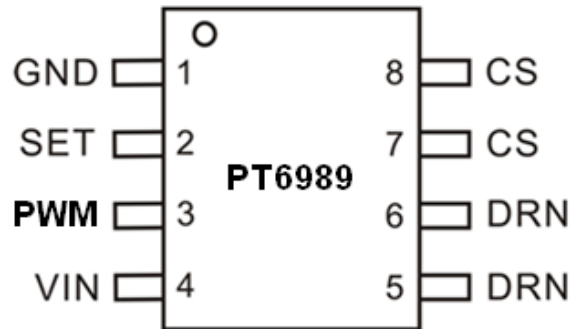
TYPICAL APPLICATION



ORDER INFORMATION

| Valid Part Number | Package Type | Top Code |
|-------------------|--------------|----------|
| PT6989-S | SOP8 | PT6989-S |
| PT6989-D | DIP8 | PT6989-D |

PIN CONFIGURATION



PIN DESCRIPTION

| Pin Name | Description | Pin No. |
|----------|--|---------|
| GND | Ground | 1 |
| SET | LED open-circuit voltage protection Settings, by connecting the resistance to the ground | 2 |
| PWM | PWM input PIN | 3 |
| VIN | Power supply pin | 4 |
| DRN | Power MOSFET Drain | 5, 6 |
| CS | Current sense pin, sense the inductor current while the switch is on-stage. | 7, 8 |

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.

Princeton Technology Corp.
2F, 233-1, Baociao Road,
Sindian Dist., New Taipei City 23145, Taiwan
Tel: 886-2-66296288
Fax: 886-2-29174598
<http://www.princeton.com.tw>