



### Description

BP9916E is a high precision Buck constant current LED driver. The device operates in critical conduction mode and is suitable for 85Vac~265Vac universal input offline LED lighting.

The BP9916E integrates a 500V power MOSFET. With patent pending MOSFET driving technique, the operating current of the IC is as low as 200uA. It doesn't need the auxiliary winding for VCC supply. It can achieve excellent constant current performance with very few external components, so the system cost and size are minimized.

BP9916E utilizes patent pending current control method. It can achieve precise output current and excellent line regulation. The driver operates in critical conduction mode, the output current does not change with the inductance and output voltage.

The BP9916E offers rich protections to improve the system reliability, including LED short circuit protection, VCC under voltage protection and thermal regulation function.

### Features

- Internal 500V Power MOSFET
- Integrated HV JFET for VCC Power Supply
- Critical Conduction Mode Operation
- Low Operating Current
- $\pm 5\%$  LED Output Current Accuracy
- LED Short Protection
- VCC Under Voltage Protection
- Thermal Regulation Function
- Available in SOP8 Package

### Applications

- LED Candle Light
- LED Bulb
- Other LED Lighting

### Typical Application

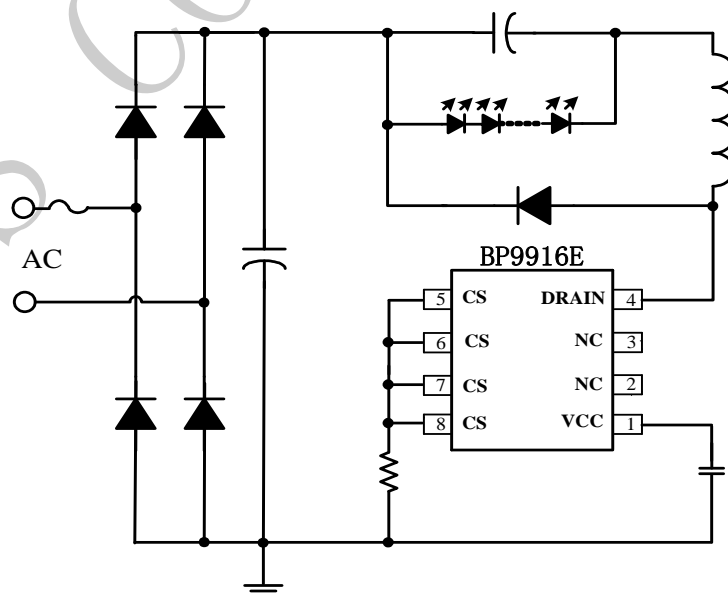


Figure 1. Typical application circuit for BP9916E



晶丰明源半导体

# BP9916E

Non-isolated Buck Offline LED Driver

## Ordering Information

Part Number	Package	Operating Temperature	Packing Method	Marking
BP9916E	SOP8	-40 °C to 105 °C	Tape 4,000 Pcs/Reel	BP9916E XXXXXY XYX

## Pin Configuration and Marking Information

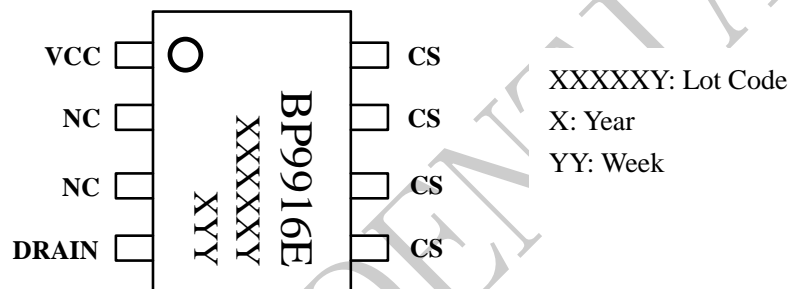


Figure 2. Pin configuration

## Pin Definition

Pin No.	Name	Description
1	VCC	Power Supply Pin.
2,3	NC	No Connection
4	DRAIN	Internal HV Power MOSFET Drain.
5,6,7,8	CS	IC GND Pin, also for Current Sense. Connect a sense resistor between this pin and power GND.