Description

The BP1618 is a two-string step-up LED driver for wide input/output voltage range with a boost power switch integrated inside. The BP1618 employs peak current mode, fixed frequency architecture to provide robust operation with minimum 3V input supply. The switching frequency is programmable by an external frequency setting resistor.

The output current is set through external current sensing resistors and the tolerance is within ± 3%. The BP1618 receives PWM signal via PWM1/PWM2 directly and regulate output current without any flicker. The minimum dimming level is 1% to achieve accurate colour temperature control.

The BP1618 has multiple protections, including cycle-by-cycle over current protection, input under voltage protection, output over voltage protection, thermal regulation, etc.

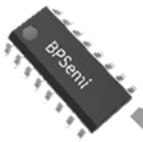
BP1618 is available in ESOP-16 package.

Features

- Input voltage as low as 3V
- Step-up and linear constant current control
- Built-in power MOSFET
- ± 3% Output current accuracy
- PWM dimming signal, with minimum dimming level of 1%
- Stable light output without flicker
- Built-in soft start
- Cycle-by-Cycle Over Current Protection
- Input Under Voltage Protection
- Output Over Voltage Protection
- Thermal regulation
- ESOP-16 package for thermal improvement

Applications

- Dimmable CCT LED Table Lamp
- Smart Dimmable LED Bed lamp



Typical Application

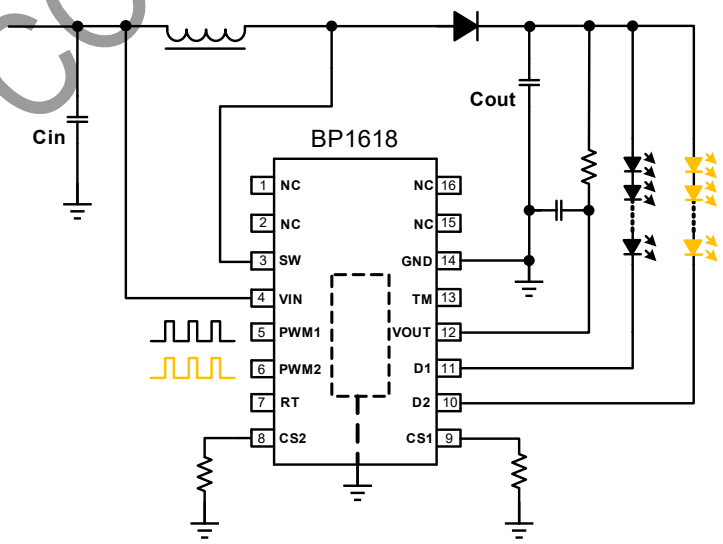
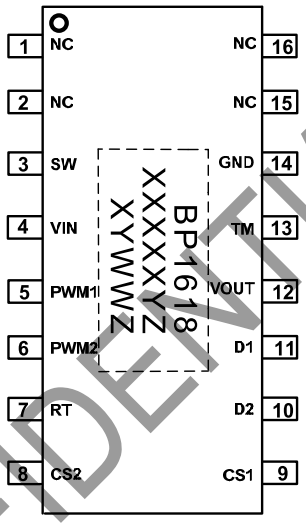


Figure 1. Typical Application Circuit for BP1618

Ordering Information

Part Number	Package	Package Method	Marking
BP1618	ESOP-16	Tape 3000 pcs/Reel	BP1618 XXXXXYZ XYWWZ

Pin Configuration and Marking Information



BP1618: Part Number
XXXXXY: Lot Code
XY: Sign
WW: Week
Z: Reserved

Figure 2 Pin Configuration

Pin Description

Pin Number	Name	Description
1,2,15,16	NC	Not Connected
3	SW	Switch node of Boost converter. Keeping the connection on the PCB board as short as possible.
4	VIN	Power Input Pin. Connecting a ceramic capacitor between the pin and the ground.
5，6	PWM1, PWM2	PWM Dimming Signal Input. Internally pulled down by default.
7	RT	Switch Frequency Setting Pin. Internal pull-up current is 15μA.

Pin Number	Name	Description
8,9	CS1,CS2	Connect current sensing resistor between CS1/CS2 and GND.
10,11	D1,D2	Current sink for LED1, LED2. Connect to the cathode of LED strings.
12	VOUT	Output of Boost converter. Connect to the anode of LED string.
13	TM	Test Mode Pin
14	GND	IC Ground
Substrate	NC	Not Connected

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