

GENERAL DESCRIPTION

The BP1371 is a continuous conduction mode inductive step-down converter, designed for driving single or multiple series connected LEDs efficiently from a voltage source higher than the total LEDs chain voltage. With few outside components, BP1371 provides a high price performance ratio solution on the following applications: MR16 LEDs cup lighting, LEDs stage lighting, LEDs automotive lighting, LEDs solar lighting and LEDs Street lighting. The device operates from an input supply between 5V and 30V and the nominal average output current is set by an external resistant. The device provides an externally adjustable output current of up to 750mA for a single LED. Using the patent technology, the constant current of LED can be up to $\pm 3\%$. A dedicated DIM pin accepts either a DC voltage (0.5V~2.5V) dimming or a wide range of pulsed dimming. Applying a voltage of 0.3V or lower to the DIM pin turns the output off and switches the device into a low current standby state.

BP1371 has a build-in power switch, based on different input voltage, BP1371 can drive several 1W or 3W LEDs. The device has the function of thermal shutdown protection and LED short-circuit/open-circuit protection.

The BP1371 is available in SOT89-5 packages.

TYPICAL APPLICATION CIRCUIT

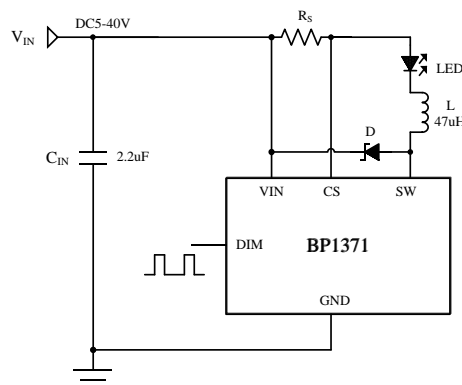


Figure 1. Typical Application Circuit

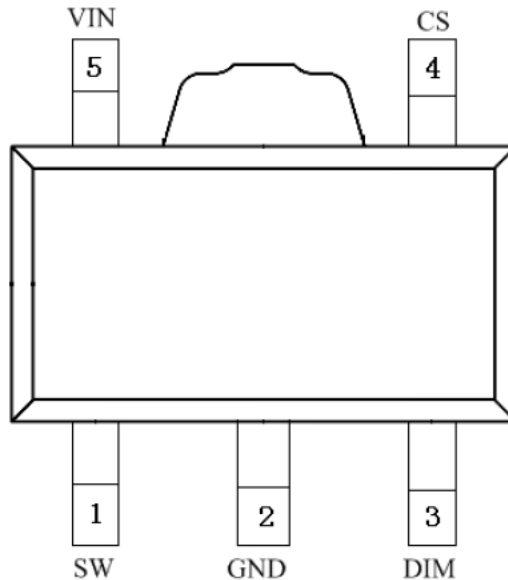
APPLICATIONS

- Low voltage halogen replacement MR16/11 LEDs
- Automotive LED lighting
- LED stage lighting
- Solar LED lighting
- LED signal lighting
- LED Street lighting

FEATURES

- Simple low parts count
- Wide input voltage range: 5V to 40V
- Typical $\pm 3\%$ output current accuracy
- LED open-circuit protection
- LED short-circuit protection
- Up to 1.2A output current
- Single pin on/off and brightness control using DC voltage or PWM
- High efficiency (up to 97%)
- Adjustable Constant LED Current

PIN ASSIGNMENT



PIN DESCRIPTIONS

PIN No.	PIN NAMES	DESCRIPTION
1	SW	Switch Output. SW is the drain of the internal N-Channel MOSFET switch.
2	GND	Signal and power ground. Connect directly to ground plane.
3	DIM	Enable switch, analog and PWM dimming input.
4	CS	Current sense input, sampling resistant contacts between CS and VIN
5	VIN	Input Supply Pin. Must be locally bypassed.

ORDERING INFORMATION

PACKAGE	TEMPERATURE RANGE	ORDERING PART NUMBER	TRANSPORT MEDIA	MARKING
SOT89-5	-40 °C to 85 °C	BP1371	Tape and Reel 4,000 units	BP1371 XYY

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