

### GENERAL DESCRIPTION

The PT4117B is a small package, high performance step-up DC/DC converter designed for driving up to 7 white LEDs in series with constant output current from a single cell Lithium Ion battery. Because the PT4117B directly regulates output current, it is ideal for driving light emitting diodes (LEDs) whose light intensity is proportional to the current passing through them, instead of the voltage across their terminals. A single external resistor sets the LED current, which can then be easily adjusted using either a DC voltage or a pulse width modulated (PWM) signal from 100Hz to 100 KHz. Its low 200mV feedback voltage reduces power loss and improves efficiency. The VOUT pin monitors the output voltage and turns off the converter if an over-voltage condition happens due to an open circuit condition. The PT4117B is available in SOT23-6 package.

### FEATURES

- VIN Operating Range: 2.5~6.0V
- Up to 92% Efficiency
- 1.2MHz Fixed Switching Frequency
- Low 200mV Feedback Voltage
- Output Over Voltage Protection
- VIN Under Voltage Lockout
- Internal Soft-Start
- SOT23-6 Package

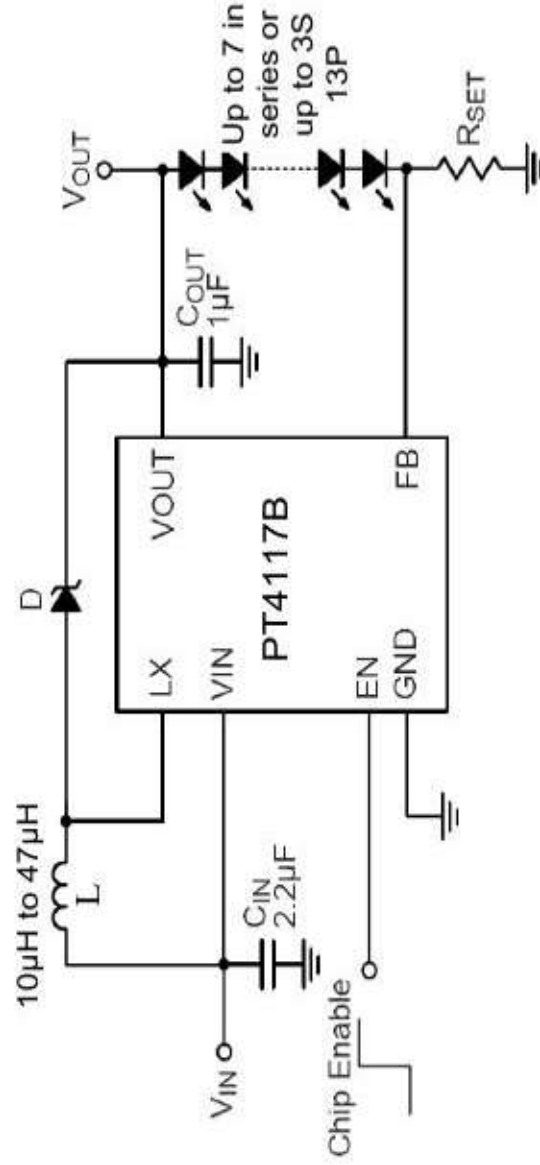
### APPLICATIONS

- Cell Phones
- Handheld Computers, PDAs and Smart Phones
- Digital Cameras
- Small LCD Displays and OLED

### ORDERING INFORMATION

PACKAGE	TEMPERATURE RANGE	ORDERING PART NUMBER	TRANSPORT MEDIA	MARKING
SOT23-6	-40 °C to 85 °C	PT4117BE23F	Tape and Reel 3000 units	4117B

### TYPICAL APPLICATIONS



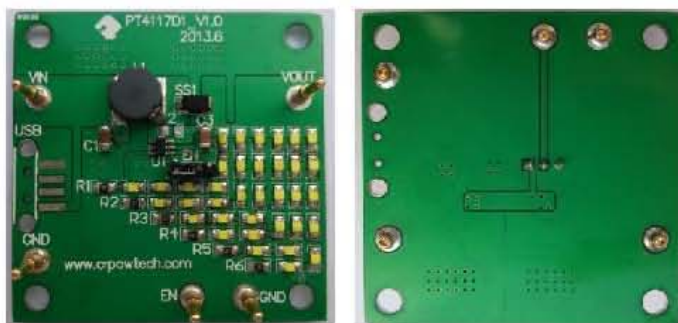
# 一款小尺寸，高性能的升压白光LED驱动器产品

## PT4117

### 产品简介

PT4117是一款小尺寸，高性能的升压白光LED驱动器，通过单节锂电池的供电能够驱动10颗串联的白光LED。它通过一个外部的电阻设定LED电流；100mV的低反馈电压可以减少其能量损耗，从而提高效率；带有输入欠压和输出过压保护功能。

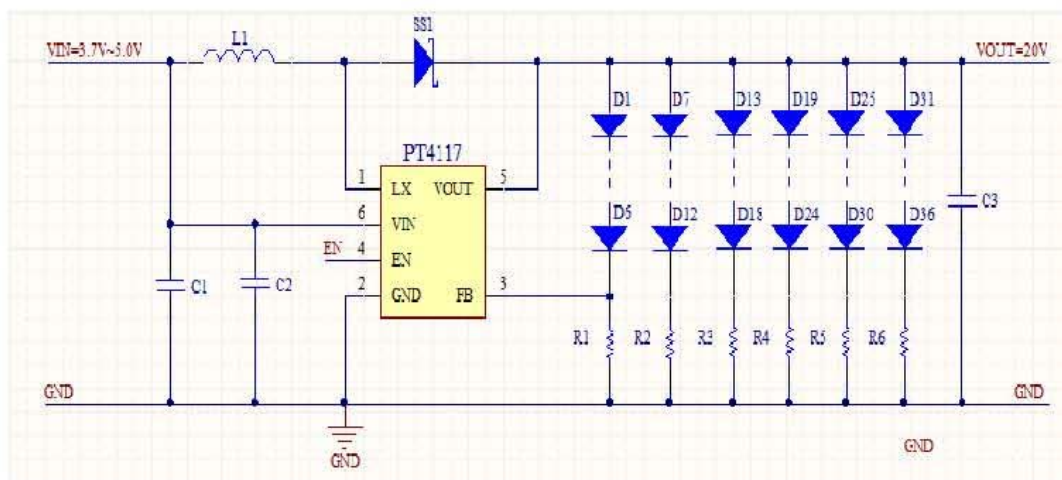
### 产品和Demo-Board性能



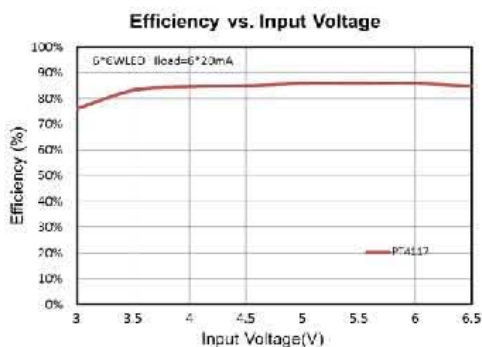
- 宽范围输入电压:3.7-5V
- 高达86%的效率
- 振荡频率：1.2MHz
- 100mV的低反馈电压
- 输出过压保护
- 输入欠压保护
- 内置软启动
- 采用小巧的 SOT23-6封装

### Demo-Board的规格

供电3.7VDC ~ 5V输入，输出为20V(6\*6WLED)转换器 (20V/120mA)



### 典型转换效率



### 元件列表

Item	Reference	Value	Quantity	Description
1	C1	4.7uF	1	CAP SMD 16V 4.7uF K X7R 1206
2	C2	NC	0	
3	C3	4.7uF	1	CAP SMD 25V 4.7uF K X7R 1206
3	L1	15uH	1	Inductor SMD 15uH
4	SS1	SS24	1	DIO SMD 2A 40V DO-214AA
5	R1,R2,R3, R4,R5,R6	5.1ohm	6	RES SMD 1/8W 5.1ohm J 0805
6	D1~D36	LED	36	白光 SMD LED
7	EN		1	插针
8	U1	PT4117	1	IC POWTECH PT4117 SOT23-6