

## General Description

The TCS5204 series is a step-up converter designed for driving up to 10 white LEDs or up to 35V output voltage from a single cell Lithium-Ion battery. The device features integrated overvoltage protection and feedback voltage is regulated to 200mV to 250mV. Low feedback voltage helps to reduce power loss and improve efficiency. Customers can choose different FB voltages according to their application. Optimized operation frequency can meet the requirement of small LC filters value and low operation current with high efficiency. Internal soft start function can reduce the inrush current. Both SOT23-6 package type provides the best solution for PCB space saving and total BOM cost.

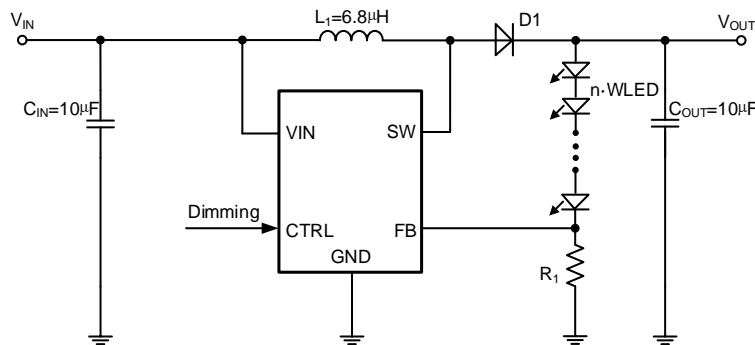
## Features

2.5V to 5.5V Input Voltage	Internal 37V Over Voltage Protection
Up to 35V Output Voltage	Internal Compensation
1.2MHz Fixed Switching Frequency	Thermal Shutdown
0.2/0.25V Feedback Voltage	Driving Up to 10 White LEDs
Internal 4A Switch Current Limit	Dimming with wide Frequency Range
Support Analog and PWM Dimming Mode	Available in SOT23-6 package

## Applications

Camera Flash White LED	PDA LED back light
Digital still cameras	LCD Bias Supply

## Typical Application Circuit



Typical White LED Application Circuit

Following table shows the selection of resistors for a given LED current.

$I_{LED}$ (mA)	$R_1$ ( $\Omega$ ) For TCS5204	$R_1$ ( $\Omega$ ) For TCS5204A
1	200	250
50	4	5
100	2	2.5
150	1.33	1.66
200	1	1.25