

### GENERAL DESCRIPTION

The IS31LT3515 is a current mode PWM controller designed to drive an external MOSFET for high current LED applications. With a current sense amplifier threshold of 250mV, the LED current is programmable with one external current sense resistor. The IS31LT3515 is ideal for boost or buck-boost operation. With 250kHz operating frequency (typical, and this frequency can be set up by external resistor), the external inductor and capacitors can be small while maintaining high efficiency.

Dimming can be either analog or PWM digital. Input DC voltage from LD pin for analog dimming. Input PWM signal from PWM pin can get either analog dimming or PWM dimming.

The IS31LT3515 is available in SOP-16 package and TSSOP-16 package.

## FEATURES

- Wide input voltage from 5V to 35V
- Boost or buck-boost operation
- Easy dimming: Analog, PWM or PWM converting to analog with an external capacitor
- Output over voltage protection (OVP)
- Internal soft start to avoid inrush current
- Current mode PWM with an 250kHz operating frequency (Typical, R<sub>SET</sub> = 150kΩ)
- Output short circuit protection
- VCC under voltage lock out and over temperature protection (OTP)

#### APPLICATIONS

- General industrial high power LED lighting
- Desk lights and room lighting, street lighting
- Display backlight



# TYPICAL APPLICATION CIRCUIT

Figure 1 Typical Application Circuit (Boost Configuration)



Advanced Information

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Figure 2 Typical Application Circuit (Buck-Boost Configuration)