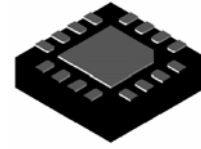


## 4-Channel LED Driver with Adaptive Charge Pump Current Source

### General Description

The CP2137 is optimized for white LED supplies in backlight color display applications. The device provides a constant current, set by an external resistor, for each LED. The supply voltage ranges from 2.7 V to 5.5 V and is ideally suited for all applications powered by a single LI-Ion battery cell. The CP2137 provides up to 30 mA per LED, for a total of 120 mA, for input voltages ranging from 3 V to 5.5 V. High efficiency is achieved by utilizing a 1x/1.5x adaptive fractional conversion technique in combination with very low dropout current sources. Only two external 1 $\mu$ F and two 0.1  $\mu$ F capacitors are required to build a complete small and low cost power supply solution.



QFN 3 $\times$ 3 16L

-40 $^{\circ}$ C ~ 85 $^{\circ}$ C

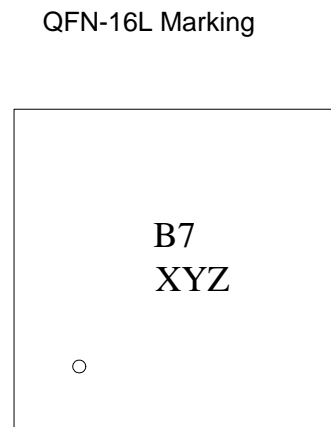
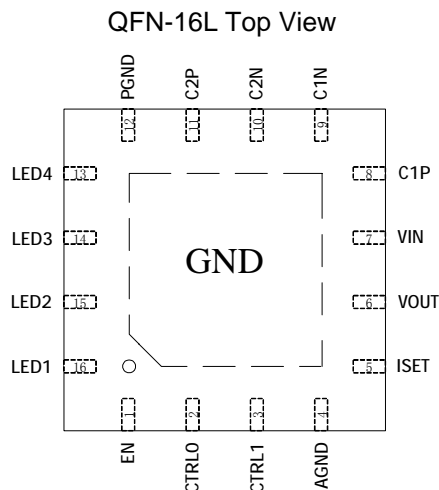
### Features

- Drives up to 4 LEDs at 30 mA Each
- Regulated Output Current With 0.5% Matching Over Temperature
- High Efficiency by Adaptive Mode Selection Between 1x and 1.5x Modes
- LED Brightness Control Through PWM Control Signal (0Hz~50KHz)
- Low Input Ripple and Low EMI
- Over-current and Over-temperature Protected
- Less than 0.1  $\mu$  A Quiescent Current In Shutdown Mode
- RoHS Compliant and 100% Lead (Pb)-Free

### Applications

- Cell phone
- Digital Camera
- MP3,PMP,PDA

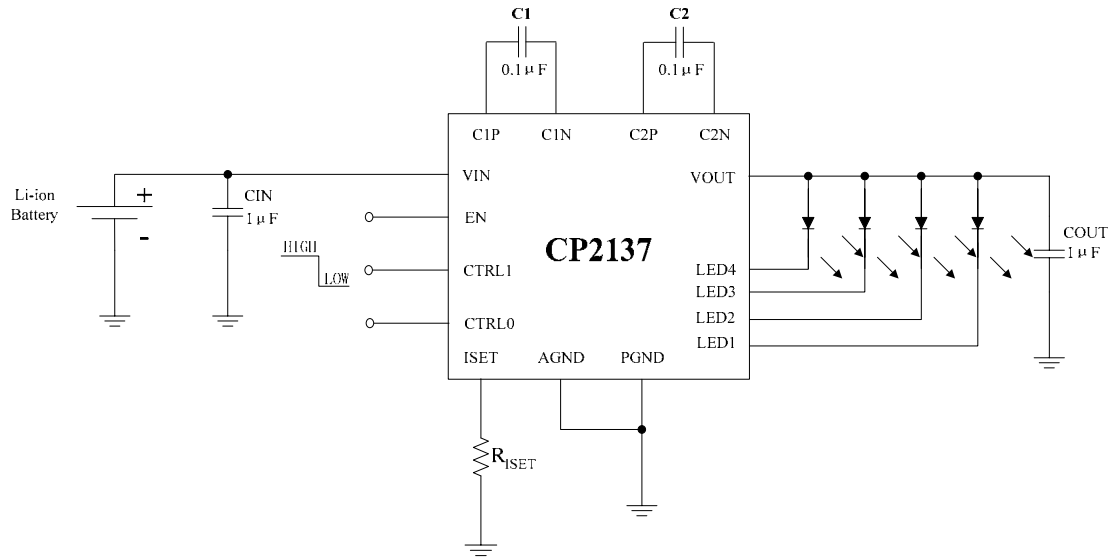
### Pin Configurations



XYZ - Manufacture Data Code  
B7 - CP2137LQ

**4-Channel LED Driver with Adaptive Charge Pump Current Source**

**Typical Application Circuit**



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