

## General Description

The ET9364 is a high performance white LED driver. It integrates current sources and automatic mode selection charge pump. The part maintains the high efficiency by utilizing an x1/x1.5 fractional charge pump and low dropout current sources. The small equivalent x1 mode open loop resistance and ultra-low dropout voltage of current source extend the operating time of x1 mode and optimize the efficiency of Li-ion battery in white LED applications.

The ET9364 supports up to 4 white LEDs and regulates a constant current for uniform intensity. The part implements a 4-bit DAC for brightness control. Users can easily configure the LED current from 1.5mA to 25mA by a serial pulse. The dimming of white LEDs current can be achieved by applying a pulse signal to the EN pin. There are totally 16 steps of current could be set by users. The operating voltage range is 2.8V to 5.0V. Internal soft start circuitry effectively reduces the in-rush current while both start-up and mode transition. The load is disconnected from VIN while shutdown and the shutdown current is less than 1 $\mu$ A. ET9364 is available in a WQFN 3x3-16L package.

## Features

- 85% Average Efficiency Over Battery Life
- Support Up to 4 White LEDs
- 80mV Typical Current Source Dropout
- 1% Typical LED Current Accuracy
- 0.7% Typical LED Current Matching
- Soft Start Function
- Auto Charge Pump Mode Selection
- 250kHz Fixed Frequency Oscillator
- Output Over Voltage Protection
- 16-Step Brightness Control
- Low Input Noise & EMI
- Low 0.3 $\mu$ A Shutdown Current
- RoHS Compliant and 100% Lead (Pb)-Free

## Applications

- Mobile Phone, DSC, MP3
- White LED Backlighting
- LCD Display Supply

## Pin Configuration

