Flash LED Driver with 700mA Charge Pump

Features

- **Independent flash/torch/shutdown modes**
- **Up to 700mA drive current**
- **Flash timeout protection**
- **Torch mode set to 20% of flash current**
- **1X/2X mode for torch mode to maximize efficiency**
- **Wide input voltage range from 3V to 5.5V**
- **<1μA shutdown current**
- **Input/Output over-voltage protection**
- **Short-circuit protection**
- **Over-temperature protection**
- **Tiny TDFN3X3-10 package**

Applications

- **Cellular camera phone**
- **Digital still camera**
- **PDA camera**
- **Camcorder torch lamp**

General Description

The G5916 is a charge pump for high-current white LED driving used in camera flash applications. The architecture of two bucket capacitors is used to decrease the output ripple and provides low EMI solution compared to inductive DC-DC regulators.

The G5916 has independent flash/torch/shutdown modes. The G5916 is capable to output 500mA of regulated current in flash mode for the duration greater than 500ms. While driving 700mA output current, the reduced duration is limit by G5916's over-temperature protection. There is a one second safety timer in this mode to avoid LED damage caused by overheat. The G5916 can outputs 20% of flash mode current continuously in torch mode. The flash mode has priority over the torch mode.
A resistor connected to ISET pin, which is in series with the LED, is to set the current. The ISET voltage is 250mV and 50mV in flash and torch mode respectively.

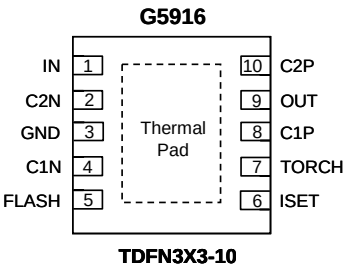
The G5916 is available in tiny 10-pin 3x3mm TDFN package.

Ordering Information

ORDER NUMBER	MARKING	TEMP. RANGE	PACKAGE (Green)
G5916RE1U	5916	-40°C to 85°C	TDFN3X3-10

Note: RE: TDFN3X3-10
1: Bonding Code
U: Tape & Reel

Pin Configuration



Note: Recommend connecting the Thermal Pad to the Ground for excellent power dissipation.

Typical Application Circuit