



## Synchronous Boost Flash LED Driver and Dual 1.5A High Side Current Source with I<sup>2</sup>C Compatible Interface

### DESCRIPTION

The EUP2466 is a 2MHz or 4MHz fixed frequency, current mode synchronous boost converter with two current sources. The device is designed to operate up to 1.5A constant current.

An industry-standard I<sup>2</sup>C serial digital input is used to enable, disable and set the current for flash LED. The EUP2466 has four logic inputs including a hardware Flash Enable (STROBE), a Flash Interrupt input (TX), a hardware Torch Enable (TORCH/TEMP), Active High Enable (HWEN). In flash mode, the LED current source provides 128 target current levels from 10.9mA to 1.5A. The total LED current of EUP2466 can deliver is 1.5A ( $I_{LED1}+I_{LED2}$ ). The dual 128 level current sources provide the flexibility to adjust the current ratios between LED1 and LED2 (ex:  $I_{LED1}=1.5A$  and  $I_{LED2}=OFF$ ,  $I_{LED1}=OFF$  and  $I_{LED2}=1.5A$ , or a current configuration with a current less than 1.5A,  $I_{LED1}=700mA$  and  $I_{LED2}=300mA$ ). And also in torch mode, the programmable current ranges from 0.977mA to 179mA by 128 steps.

An over voltage protection feature keeps the output voltage below the OVP threshold in the case of an open LED and an output short circuit protection limits the output current during an output short to GND. NTC function is designed for temperature sensing and current scale back.

EUP2466 is available in a small 12-bump WCSP package.

### FEATUES

- 2.5V to 5.5V Input Supply Range
- 1.5A Total Allowed LED Current During Operation ( $I_{LED1}+I_{LED2}=1.5A$ )
- Up to 85% Efficiency
- 2MHz or 4MHz Fixed Switching Frequency
- I<sup>2</sup>C-Compatible Interface
  - 400-kHz Serial Transfer Rate
  - Flash/Torch/IR/Standby
  - Programmable Flash LED Current from 10.9mA to 1.5A
  - Programmable Torch LED Current from 0.977mA to 179mA
  - Programmable Flash Time-Out Timer
  - Programmable Current Ramp Timer
  - Programmable Input Voltage Flash Monitor (IVFM)
- True Load Disconnect
- Input Current Limit
- Output Over-Voltage, Short Circuit and Over-Temperature Protection
- NTC Monitoring
- 0.4mm Pitch, 12-Bump WCSP
- RoHS Compliant and 100% Lead(Pb)-Free Halogen-Free

### APPLICATIONS

- LED Photo Flash/Movie
- Smart phone
- Tablets

### Typical Application Circuit

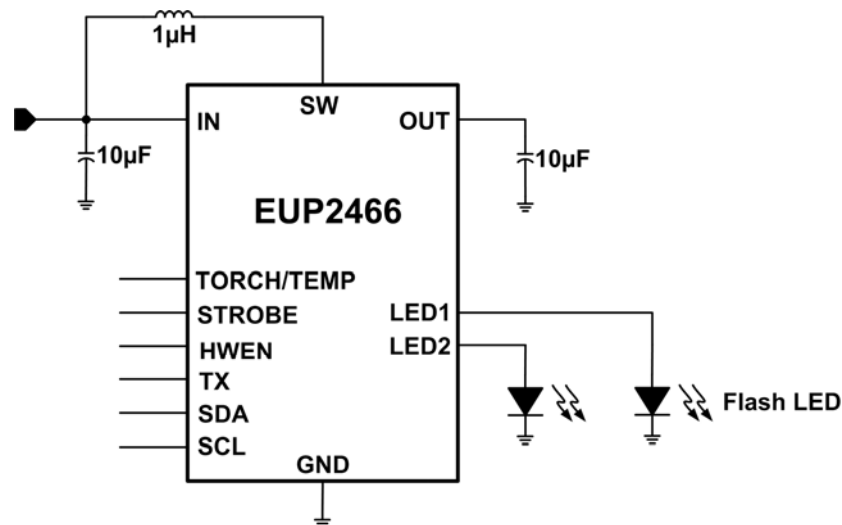


Figure 1. Typical Application