

Flash LED Driver IC

High Efficiency Synchronous Boost Converter, 1.5A Flash LED Drivers With PWM Dimming**AS6585****● General Description**

The AS6585 is a 3MHz fixedfrequency synchronous boostconverter, optimized for 0.75A/ch, total 1.5A flash current output LED driver with PWM dimming function, for distance dimming camera flash LED application and maximum 800mA movie mode applications using high-current white LEDs in all single cell Li-ion powered products. An adaptive regulationmethod ensures the current for each LED remains inregulation and maximizes efficiency.

Two simple logic control inputs (ENM and ENF) enable and disable flashand movie mode operation of the AS6585. The movie-modeand flash-mode current levels are independently fixedby two separate resistors (RSETM and RSETF).

For flash mode, a defaulttimer 800mS can be used either to terminate a flash event or asa safety flashtimer. One or two LEDs can beconnected to the AS6585; in the case of two LEDs theoutput current is matched between each diode. The real LED current at flash mode and movie/torch mode can be programmed by external PWM signal at ENM pin.

The AS6585 integrate an intelligent flash current control mode: during flash current turn-on the input voltage falls below the flash mode VIN Monitor threshold, the flash current is stopped at the level that the current ramp had risen to, at the time of the VIN Flash Monitor events.

The AS6585 contain a thermal management system toprotect the device; a internal over-voltage protection (OVP) circuitry prevents damaged to the AS6585 from open LED or open circuit conditions; and a cycle-by-cycle current limit prevents damage to the AS6585. Built-in circuitry prevents excessive inrushcurrent during start-up. The shutdown feature reducesquiescent current to less than 1.0 μ A.

The 3MHz switching frequency allow for the use of tiny, low profile (0.47 μ H or 1.0 μ H) inductors and 4.7 μ F ceramic capacitors. The device is available in 14-pin 2mmX3mm DFNpackageand is rated over the -40°C to 85°C.

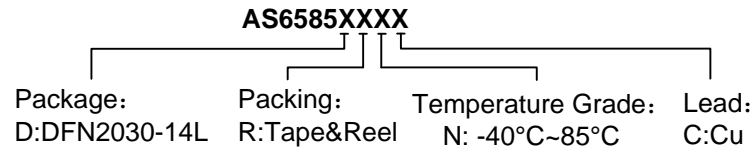
● Features

- Input VoltageRange: 2.7V to 5.0V
- Power On Flash Mode Spurious Triggering Suppress
- Up to 3.0MHz Switching Frequency for Smaller Inductor Using
- Output Current Soft-Start
- Optimize Flash Current During Low Battery
- Intelligent Flash Current Control
- Drives up to 1.5A Output Current (0.75A per Channel)
- High Efficiency PWM BoostConverter
- Up to 97% Efficiency with Small Inductor
- Under Voltage Lock-Out
- Over-Temperature Protection
- Over Voltage (Open LED) Protection
- LED Short Circuit Protection
- Flash Mode and Movie/Torch Mode LED Current can be Programmed via PWM Signal at ENM pin
- Flash Mode PWM Dimming Frequency: 1kHz to 1MHz
- 800mS Flash Timer Control
- Cycle by Cycle Current Limit
- Separate Hardware Flash and Movie Enable
- Set Flash/Movie Currents
 - Flash Mode Current: 0.75A/Ch
 - Movie Mode Current: 0.40A/Ch
- Two Resistors Set Flash and Movie Current Independently
- Small Solution Size
- Less than 1 μ A Shutdown Current
- RoHS and Green Compliant
- 14- pin, 2mm X 3mm DFN Packages
- -40°C to +85 °C Temperature Range

● Applications

- Camera Flashes and Movies
- Cell Phones or Smart Phones
- PDAs and Digital Camera
- White LED Biasing
- Mobil Handsets
- Tablet PCs and Laptops/Netbooks
- Camcorder Video Light (Movie Light)

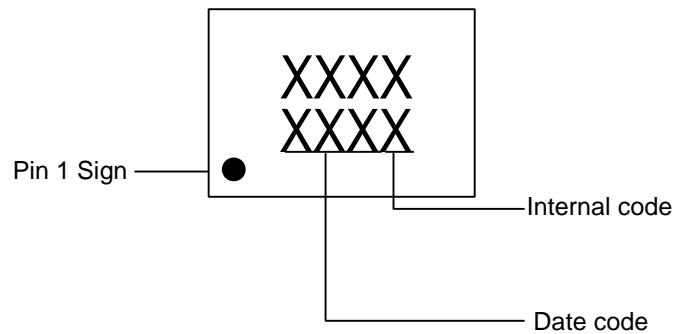
Ordering Information



Part Number	Driver Capability	Package Type	Package Qty	Temperature	Eco Plan	Lead
AS6585DRNC	1.5A	DFN2030-14L	7-in reel3000pcs/reel	-40~85℃	Green	Cu

Marking Information

DFN2030-14L



Typical Application Circuit

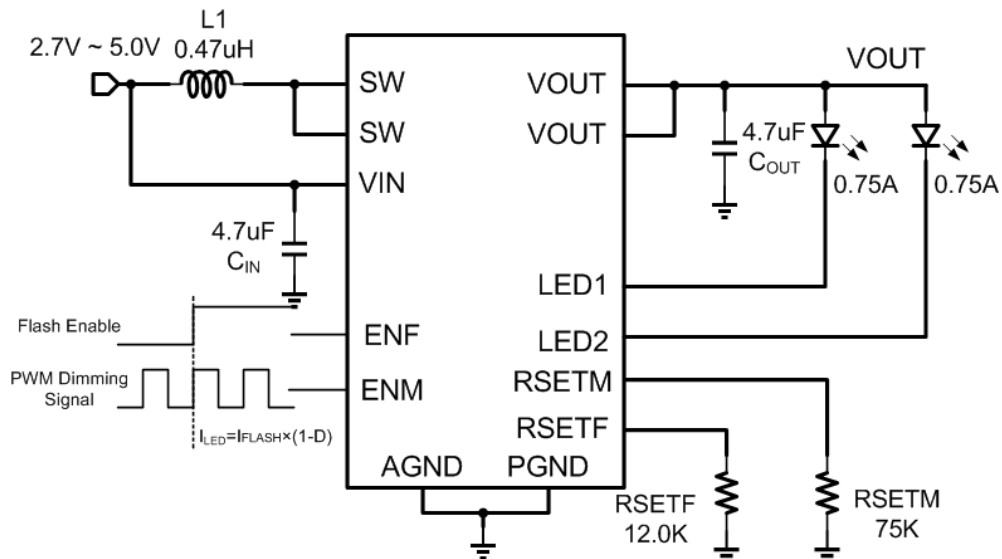
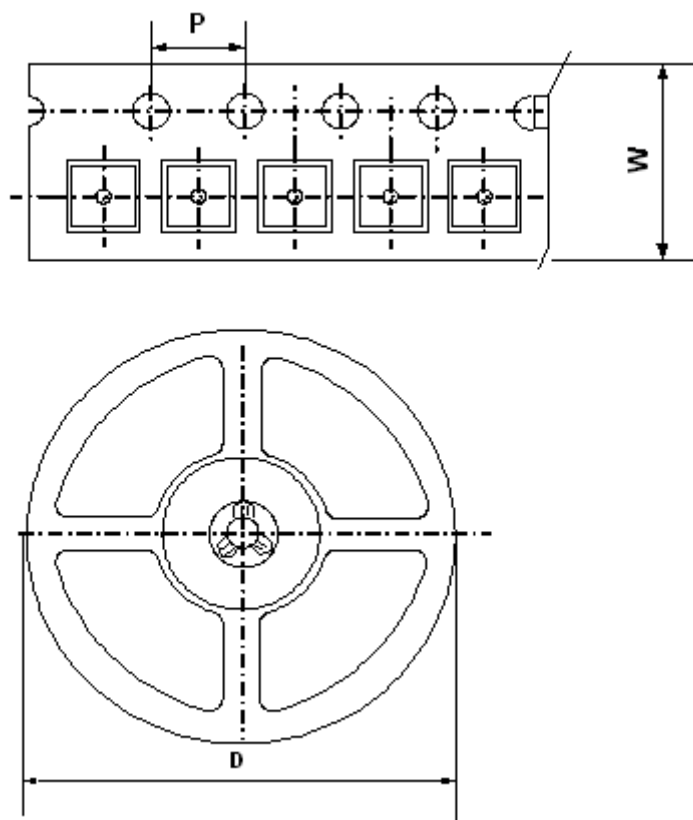


Figure 1, Flash Dimming Typical Application Circuit of AS6585

■ Packing Information



Package Type	Carrier Width(W)	Pitch(P)	Reel Size(D)	Packing Minimum
DFN2030-14L	8.0±0.1 mm	4.0±0.1 mm	180±1 mm	3000pcs

Note: Carrier Tape Dimension, Reel Size and Packing Minimum