

Product Brief

TB62763/62755/62752 Compact LED Driver with DC/DC Step-up Regulator

Highlights

- LED driver features single cell Li-Ion battery driving LEDs at up to 45V/80 mA.
- This family of LED drivers are highly integrated LED drivers that are packed in a compact SON6 (1.8 mm x 2.0 mm) to SON8 (2.9 mm x 3.0 mm) packages. They are suited for low-to-medium power applications such as portable lanterns and solar-powered outdoor floodlight applications.
- Combined with the Toshiba Schottky diode, and efficient LEDs, the TB62763/62755/62752 provide cost-effective solutions for battery-operated LED lighting applications.

Description

The TB62763FMG LED driver is a high-efficiency, step-up type DC/DC converter especially designed for constant current driving of White LEDs. This IC can drive a string of LEDs of up to 45V. At maximum loading of 12 LEDs, with minimum Li-Ion battery voltage of 2.8V, the device can drive the LEDs at 80 mA with over 85% efficiency. The drive current can be increased at lower boost ratio applications. The switching frequency can be adjusted from 200 kHz to 2 MHz enabling flexible component size versus power efficiency tradeoffs. The TB62763FMG integrates a high-performance switching Power MOSFET and is offered in a compact SON8 2.9 mm x 3.0 mm package. The TB62763FMG is especially ideal for battery-operated lighting applications such as solar-power outdoor flood lighting and portable lanterns.

Features

- V_{IN_IC} : 2.8V – 5.5V (device can operate with a 1 cell lithium polymer battery of 2.8V)

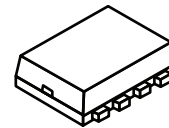
- V_{IN_coil} : V_{IN_IC} to 80% of V_{OUT_max}
- V_{OUT_max} : 45V
- Integrated DC/DC Step-Up regulator
- Adjustable switching frequency between 200 kHz and 2 MHz maximizes efficiency, component footprint, and noise tradeoff.
- Integrated Softstart
- Features Over Voltage Protection
- High-Efficiency: Up to 85% peak efficiency under Toshiba evaluation conditions.
- PWM Dimming: Can be achieved by applying a filtered PWM signal at the FB pin (see datasheet application diagram)
- Compact SON8 2.9 mm x 3.0 mm Package

Application

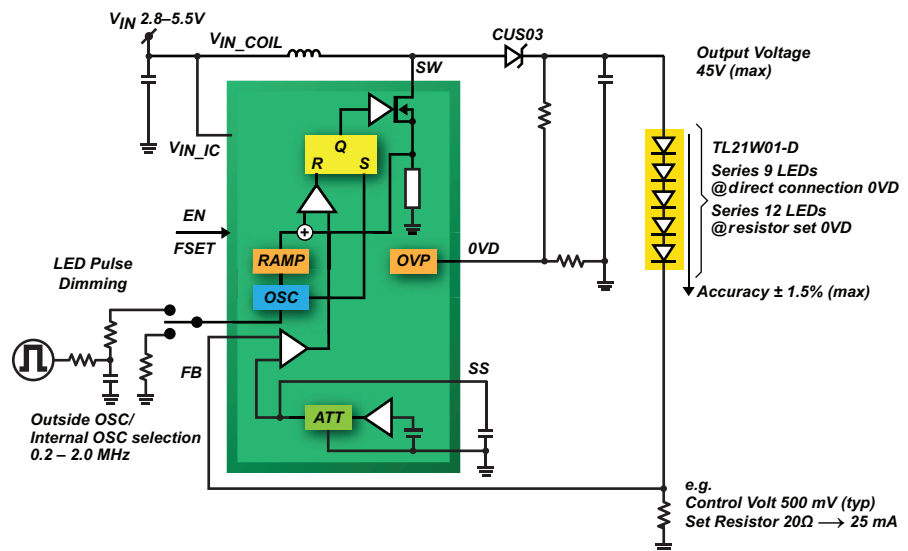
- Solar-powered Outdoor Flood Light
- Portable Lantern
- Scanner Light Source

Package

- SON8-P-0303-0.65



TB62763FMG 45V/80 mA LED-Driver with DC/DC Step-up Regulator



Regional Sales Offices

NORTHWEST

San Jose, CA
TEL: (408) 526-2400
FAX: (408) 526-2410

SOUTHWEST

Irvine, CA
TEL: (949) 623-2900
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TB62755FPG/TB62752BFUG 40V/80 mA Compact LED- Drivers with DC/DC Step-Up Regulators

Description

The TB62755FPG/TB62752BFUG LED drivers are the most compact step-up type DC/DC converters especially designed for constant current driving of White LEDs. These ICs can drive a string of LEDs of up to 40V. With integrated 1.5A switches, the TB62755FPG/ TB62752BFUG can drive 9 LEDs at 80 mA at minimum Li-Ion battery voltage of 2.8V with over 85% efficiency. The drive current can be increased at lower boost ratio applications. The TB62755FPG and TB62752BFUG are offered in compact SON6 (PLP-6) 1.8 mm x 2.0 mm and SSOP6 (surface mount) 2.8 mm x 2.9 mm packages respectively. These devices are especially ideal for battery-operated lighting applications such as solar-powered outdoor flood lighting and portable lanterns.

Features

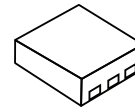
- V_{IN_IC} : 2.8V – 5.5V (device can operate with a 1 cell lithium polymer battery of 2.8V)
- V_{IN_coil} : V_{IN_IC} to 80% of V_{OUT_max}
- V_{OUT_max} : 40V
- Integrated DC/DC Step-Up regulator
- High-Efficiency: 85% over (Reference : under Toshiba evaluation conditions)
- Features Over Voltage Protection
- Compact SON6 (PLP-6) 1.8 mm x 2.0 mm Package (TB62755FPG)
- Surface Mount SSOP6 2.8 mm x 2.9 mm Package (TB62752BFUG)

Application

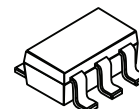
- Solar-powered Outdoor Flood Light
- Portable Lantern
- Portable Device LCD Backlight

Package

SON6-P-0202-0.50 (PLP-6)



SSOP6-P-0.95B



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