

### 14V/19V High Efficiency Step-Up LED Driver with PWM Control

#### Features

- Up to 3 or 5 series LEDs
- Integrated 20V high current switch (1.2A limit)
- High efficiency PWM converter (up to 90%)
- Low 200mV feedback voltage
- High accuracy across full load range
- $V_{IN}$  range 2.7V to 5.5V
- LED open-circuit (OVP) protection
  - KTD2511C: 19V
  - KTD2511D: 14V
- High switching frequency: 1MHz
- PWM dimming frequency: 100Hz to 200kHz
- Simple, small solution size
- Integrated Soft-start
- Shutdown Current less than 1 $\mu$ A
- Small TSOT23-6 and TDFN22-8 Package
- RoHS and Green compliant
- -40°C to +85°C Temperature Range

#### Brief Description

The KTD2511 is a versatile constant current LED driver with a high efficiency DC-DC step-up “boost” converter architecture. The low-side power MOSFET is integrated in the device, minimizing the total number of external components. High 1.2A current limit and 14V or 19V OVP allow the KTD2511D/C to drive numerous parallel strings of 3 or 5 LEDs in series, with KTD2511D or KTD2511C, respectively. KTD2511 can deliver 260mA total current with 3 series LEDs per string. It can also maximize the current capability while achieving high conversion efficiency. The optimized 1.0MHz switching frequency results in small external component size. The driver allows a wide range of PWM dimming frequencies through the EN pin.

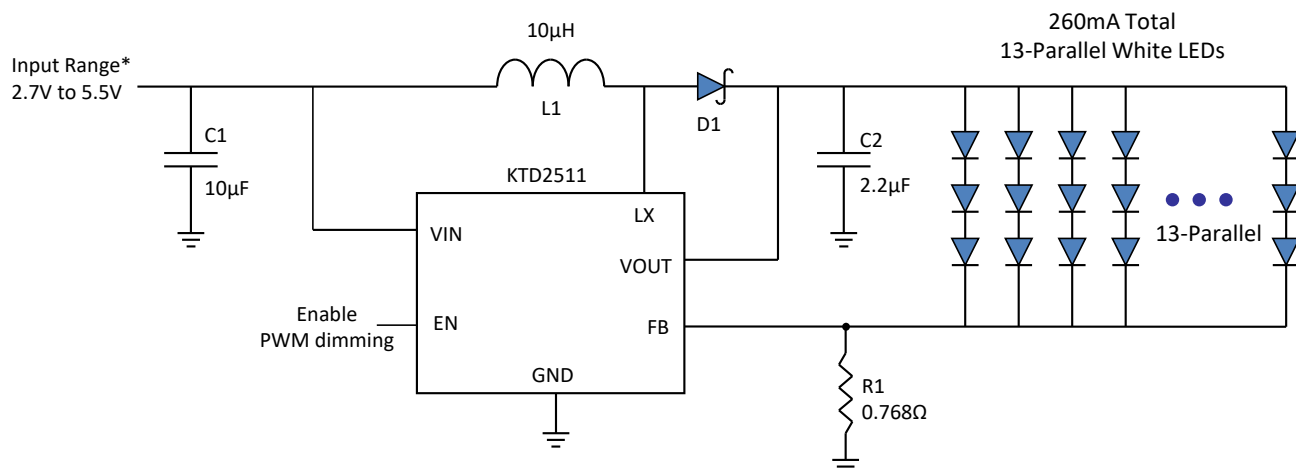
Various protection features are built into the KTD2511, including cycle-by-cycle input current limit protection, LED open-circuit (output over voltage) protection and thermal shutdown protection. The leakage current in shutdown mode is less than 1 $\mu$ A.

The KTD2511 is available in a RoHS compliant 6-lead TSOT23 and 8-lead TDFN22 package.

#### Applications

- LED backlighting
- Mobile Phones
- Handheld Devices
- Digital Photo Frames
- Automotive Navigation

#### Typical Application



\*Note: Maximum output current must be derated with  $V_{in}$  less than 3.4V

## Ordering Information

Part Number	OVP Threshold (nominal)	Marking <sup>1</sup>	Operating Temperature	Package
KTD2511CEHD-TR	19V	GCYYZ	-40°C to +85°C	TSOT23-6
KTD2511CECE-TR	19V	GCYYZ	-40°C to +85°C	TDFN22-8
KTD2511DEHD-TR	14V	FPYYZ	-40°C to +85°C	TSOT23-6
KTD2511DECE-TR	14V	FPYYZ	-40°C to +85°C	TDFN22-8

1. "YYZ" is the date code and assembly code.

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