

## High Efficiency, Constant Current 20V White-LEDs Driver

### Feature

- Operating Voltage: 2.5V to 5.5V.
- High Operating Frequency: 1MHz
- High Output Voltage: Up to 20V(Typ.)
- Digital Dimming Control.
- Built-in Cycle-by Cycle Current-Limiting.
- Built-in Soft-Start Function.
- 0.1V/0.2V/0.3V Low Reference Voltage
- Thermal Overload Protection
- TSOT-23-6 Package

### Application

- GPS Navigation System
- Compact Back Light Module
- Constant Current Source
- LED Module

### Description

The AT1316A step-up converter drives white LEDs with a constant current to provide backlight in cell phones, PDAs, and other hand-held devices. It features allowing series connection of the white LEDs so that the LED currents are identical for uniform brightness. An enable input can be pulsed repeatedly to adjust LED's brightness. The fast 1.0 MHz current-mode PWM control allows for smaller capacitor and inductor. Fault condition protection uses cycle-by-cycle current limiting to sense maximum inductor current, thermal protection and over-voltage protection. Also included soft-start eliminates inrush current during start-up. The low reference voltage minimized the power loss across the current-setting resistor.

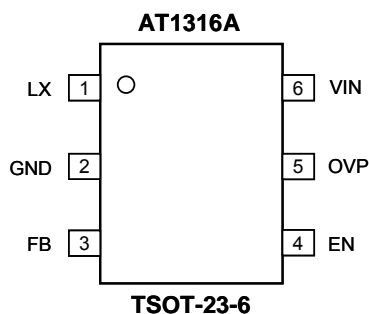
The AT1316A is available in TSOT-23-6 packages.

### Ordering Information

ORDER NUMBER	MARKING	VOLTAGE	TEMP. RANGE	PACKAGE (Green)
AT1316A-01TP1U	3A01x	0.1V	-40°C to 85°C	TSOT-23-6
AT1316A-02TP1U	3A02x	0.2V	-40°C to 85°C	TSOT-23-6
AT1316A-03TP1U	3A03x	0.3V	-40°C to 85°C	TSOT-23-6

Note: TP: TSOT-23-6  
 1 : Bonding Code  
 U: Tape & Reel

### Pin Configuration



### Typical Application Circuit

