

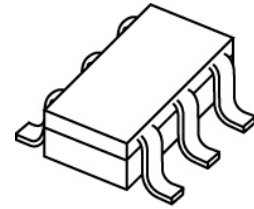


## Step-Down LED Driver

### Features

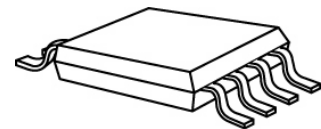
- Maximum constant output current: 750mA
- 96% efficiency @ input voltage 12V, 350mA, 3-LED
- 6~30V input voltage range
- Hysteretic PFM improves efficiency at light loading
- Settable output current
- Integrated power switch with 0.45ohm low Rds(on)
- Full protection: Thermal/Start-Up/LED Open-/Short- Circuit
- Only 4 external components required

#### Small Outline Transistor



GST: SOT-23-6L

#### Mini Small Outline Package



GMS: MSOP-8L-118mil

### Product Description

The MBI6652 is a high efficiency, constant current and step-down DC/DC converter. It is designed to deliver constant current to light up high power LED with only 4 external components. With hysteretic PFM control scheme, MBI6652 improves the efficiency of light loading. The output current of MBI6652 can be programmed by an external resistor and LED dimming can be controlled via pulse width modulation (PWM) through DIM pin. In addition, the start-up function limits the inrush current while the power is switch on. The MBI6652 also features over temperature protection, LED open-circuit protection and LED short-circuit protection to protect IC from being damaged.

Additionally, to ensure the system reliability, the MBI6652 builds thermal protection (TP) function inside. This function protects IC from overheating (165°C) in various application conditions. MBI6652 provides thermal- enhanced packages as well to handle power dissipation more efficiently. MBI6652 is available in SOT-23-6L, SOT-89-5L and MSOP-8L packages.

### Applications

- Signage and Decorative LED Lighting
- Automotive LED Lighting
- High Power LED Lighting
- Constant Current Source