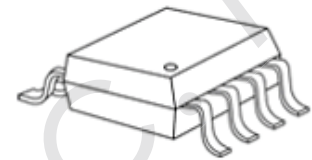




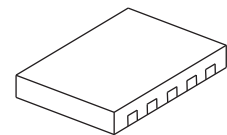
## Features

- 5~45V wide input voltage range
- Open Loop Power Regulator output 5V for Gate Driver
- Support Analog/PWM Dimming (select by EN pin)
- Minimum 5% Analog Dimming
- Minimum 5% PWM Dimming @ 1KHz
- $\pm 3\%$  Output Current Accuracy
- Integrated Low Side Switch w/ Peak Current Limit 3A
- Up to 1MHz Switching Frequency (Adjustable w/ External Resistor through ROSC)
- Fixed Spread Spectrum range for EMI Consideration
- DC-DC Protection: UVLO/Soft-Start/Diode Short/Thermal Foldback(TFB)/Over Current Protection(OCP)/Over Temperature Protection(OTP)

### Small Outline Package



GD: SOP8-150-1.27



GDF: DFN-10L 3\*3

## Product Description

MBI6659 is a step-down constant-current high-brightness LED driver to provide a cost-effective design solution for interior/exterior illumination applications. It is designed to deliver constant current to light up high power LED. With PWM control scheme, MBI6659 eliminates external compensation design and makes the design simple.

The output current of MBI6659 can be programmed by an external resistor and dimmed via pulse width modulation (PWM) or DC voltage through EN pin to achieve higher efficiency linear current modulation.

MBI6659 features completed protection design to handle faulty situations. The start-up function limits the inrush current while the power is switched on. Thermal shutdown, Thermal Foldback and Schottky diode short (SDS) guard the system to be robust and keep the driver away from being damaged which results from LED open-circuited, short-circuited and other abnormal events.

## Applications

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