

**Step-Down, 1A Dimmable LED Driver****Features**

- 6~36V wide input voltage range
- Maximum 1A constant output current
- Patented fixed frequency analog dimming control
 - PWM-controlled brightness modulation
 - DC voltage-controlled brightness modulation
- 97% efficiency @ input voltage 12V, 350mA, 3-LED
- Hysteretic PFM operation eliminates external compensation design
- Integrated power switch with 0.3ohm low Rds(on)
- Full protections: UVLO/ Start-Up/OCP/ Thermal/ LED Open-/ Short-Circuit
- Only 4 external components required

Product Description

MBI6653 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 only 4 external components. With hysteretic PFM control scheme, MBI6653 eliminates external compensation design and makes the design simple.

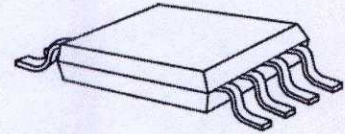
The output current of MBI6653 can be programmed by an external resistor and dimmed via pulse width modulation (PWM) through PWMD pin. In addition, a novel fixed frequency analog dimming method is proposed and offered by the device. Users can achieve higher efficiency linear current modulation from 5% to 100% of preset current by applying either PWM-controlled or DC voltage-controlled brightness modulation.

MBI6653 features completed protection design to handle faulty situations. The start-up function limits the inrush current while the power is switched on. Under voltage lock out (UVLO), over temperature protection (OTP), and over current protection (OCP) 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.

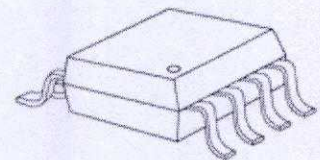
MBI6653 provides thermal-enhanced MSOP-8 and SOP-8 packages as well to handle power dissipation more efficiently.

Applications

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

Mini Small Outline Package

GMS : MSOP-8L-118mil

Small Outline Package

GD: SOP8L-150-1.27