

DESCRIPTION

MT7200 is a continuous mode inductive step-down converter, designed for driving single or multiple series connected LEDs efficiently from a voltage source higher than the total LED chain voltage. The device operates with a wide input supply voltage up to 55V and provides an externally adjustable output current.

MT7200 is used to drive external power MOSFET. It sets the average output current by the high-side output current sense circuit.

The ADJ pin accepts either a DC voltage or a PWM dimming signal to adjust the output LED current. The PWM dimming frequency can be as high as 20kHz. The soft-start time is set by putting an external capacitor from the ADJ pin to ground. Applying a 0.2V or lower voltage to the ADJ pin turns the output off and switches the device into a low current standby state.

MT7200 provides various protection features to improve the system reliability, including over temperature regulation (OTR), and over temperature shutdown (OTP), LED short/open protection, etc.

FEATURES

- Few external components.
- Single pin for ON/OFF and DC voltage or PWM brightness control
- Built-in V_{IN} line compensation
- Proprietary frequency Jitter technique to reduce EMI
- High efficiency (up to 97%)
- Wide input voltage range
- Adjustable constant output current
- Up to 1MHz switching frequency
- Over temperature regulation (OTR)
- Inherent open/short-circuit LED protection
- High accuracy output current ($\pm 3\%$)
- Available in SOT23-6 packages

APPLICATION

- Low voltage halogen replacement LEDs
- Automotive lighting
- Low voltage industrial lighting
- LED back-up lighting
- Illuminated signs
- Stage lights
- LCD TV backlighting

APPLICATION CIRCUIT

