

DESCRIPTION

MT7896 is a high precision LED constant current controller. It operates in critical conduction mode (CRM) with zero current switched-on and peak current switched-off. It's mainly targeted for BUCK-BOOST LED power systems. MT7896 supports high power factor application. The Power Factor (PF) can reach 0.8 or higher.

CRM ensures that the MT7896 turns on the internal power MOSFET when the inductor current reaches zero, reducing the power MOSFET switching loss. With critical conduction mode, and line compensation, MT7896 outputs high accuracy LED current, and further achieves excellent line regulation and load regulation.

MT7896 embedded with 600V power MOSFET, it can achieve simplified peripheral circuits and low BOM cost.

MT7896 provides various protection features to improve the system reliability, including over current protection (OCP), short circuit protection (SCP), adjustable over voltage protection (OVP) and over temperature LED current foldback, etc. With a wide dimmer compatibility, the dimming curve meets the NEMA SSL6 standard.

FEATURES

- Supports high PF application (PF>0.8)
- Wide range of dimmer compatibility
- Deep dimming level (<1%)
- Internal 600V power MOSFET
- Highly accurate constant LED current
- Cycle-by-cycle current limiting
- LED short circuit protection
- Adjustable LED over voltage protection
- Under-voltage lockout (UVLO) protection
- Over temperature LED current foldback
- Available in SOP7 package

APPLICATIONS

- LED bulb, panel light
- Filament bulb
- General purpose constant current source

Typical Application Circuit

