

DESCRIPTION

MT7890 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, Fly-back LED power systems. MT7890 supports high power factor application. The Power Factor (PF) can reach 0.8 or higher.

CRM ensures that the MT7890 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, MT7890 outputs high accuracy LED current, and further achieves excellent line regulation and load regulation.

The external MOSFET that can be chosen depend on output power, it can achieve simplified peripheral circuits and low BOM cost.

MT7890 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%)
- 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 SOP8 package

APPLICATIONS

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

Typical Application Circuit

