

## DESCRIPTION

MT7943 is a high precision primary-side feedback and regulation controller for LED lighting. It regulates precisely LED current in isolated lighting applications. MT7943 works under Discontinuous Conduction Mode (DCM). It simplifies LED lighting system by eliminating the secondary sense, the auxiliary winding and feedback circuit. Integrated with 650V power switch, the adjustable LED open-circuit protection (OVP) function simplifies the system design and improves the reliability.

With Maxic's proprietary current regulation and internal compensation technique, the MT7943 achieves  $\pm 3\%$  accuracy of LED current along with excellent line regulation and load regulation. It is also non-sensitive to the inductance of the transformer.

MT7943 provides various protection features to improve the system reliability, including over current protection (OCP), short circuit protection (SCP), over voltage protection (OVP) and over temperature regulation (OTR), etc.

## FEATURES

- Internal 650V power MOSFET
- No auxiliary winding
- Supporting 85V to 265V AC line voltage range
- Primary side sensing and regulation, no secondary side feedback
- High precision constant LED current ( $\pm 3\%$ )
- Adjustable LED open-circuit voltage protection threshold
- LED short circuit protection
- Cycle-by-cycle peak current control
- VDD under voltage lock-out protection
- Over temperature regulation (OTR)
- Freewheeling diode Open/short-circuit protection
- Available in SOP7 package

## APPLICATION

- LED bulb, spotlight
- LED lighting application
- General purpose constant current source

## Typical Application Circuit

