

### DESCRIPTION

MT776XSH is a high precision constant current LED driver which operates under critical conduction mode (CRM). It is mainly targeted for non-isolated buck LED power systems.

MT776XSH is suitable for applications with 85Vac~265Vac input voltage range. The chip supports adjustable over-voltage protection. Furthermore, OVP pin integrates enable/disable function to support color temperature switch and sensor light applications.

MT776XSH integrates 500V power MOSFET and free-wheeling diode. With innovative internal high voltage power supply solution, no external VCC capacitor and startup resistor are needed, which achieves simplified peripheral circuits and low BOM cost.

The high precision and fast current sensing circuit can support high frequency switch operation and get excellent line regulation. The system operates under CRM which makes the output current is insensitive to the inductance and keeps good load regulation.

MT776XSH provides various protections to improve the system reliability, including short circuit protection (SCP), adjustable over-voltage protection (OVP) and thermal adjustment, etc.

### FEATURES

- Integrates 500V power MOSFET and free-wheeling diode
- No VCC capacitor and startup resistor
- Supports high frequency switch operation, SMD inductor can be used
- Operates under CRM, insensitive to the inductance
- Adjustable moisture-proof LED over-voltage protection (OVP)
- No flicker at low line voltage
- OVP pin with enable/disable function to support color temperature switch and sensor light applications
- $\pm 5\%$  highly accurate constant LED current
- LED short circuit protection
- Under-voltage lockout (UVLO) protection
- Thermal regulation function
- Available in SOP7 package

### APPLICATIONS

- LED bulb, LED tube, LED signal and landscape lamp
- LED candle light, LED corn light, etc.
- LED color temperature switch and sensor light applications
- General purpose constant current source

### TYPICAL APPLICATION CIRCUIT

