

DESCRIPTION

MT79338 is a single-stage, primary side control AC-DC LED driver with active power factor correction. MT79338 integrates on-chip PFC circuit operates in critical conduction mode (CRM) to achieve high power factor and reduce the power MOSFET switching loss. With MAXIC Proprietary control technique, precision LED current is achieved without secondary side sense and feedback circuit including opto-coupler.

Embedded with 600V power MOSFET, the peripheral circuit is simplified.

MT79338 provides various protections, such as over current protection (OCP), over voltage protection (OVP), short circuit protection (SCP) and over temperature protection (OTP), etc, to improve system reliability.

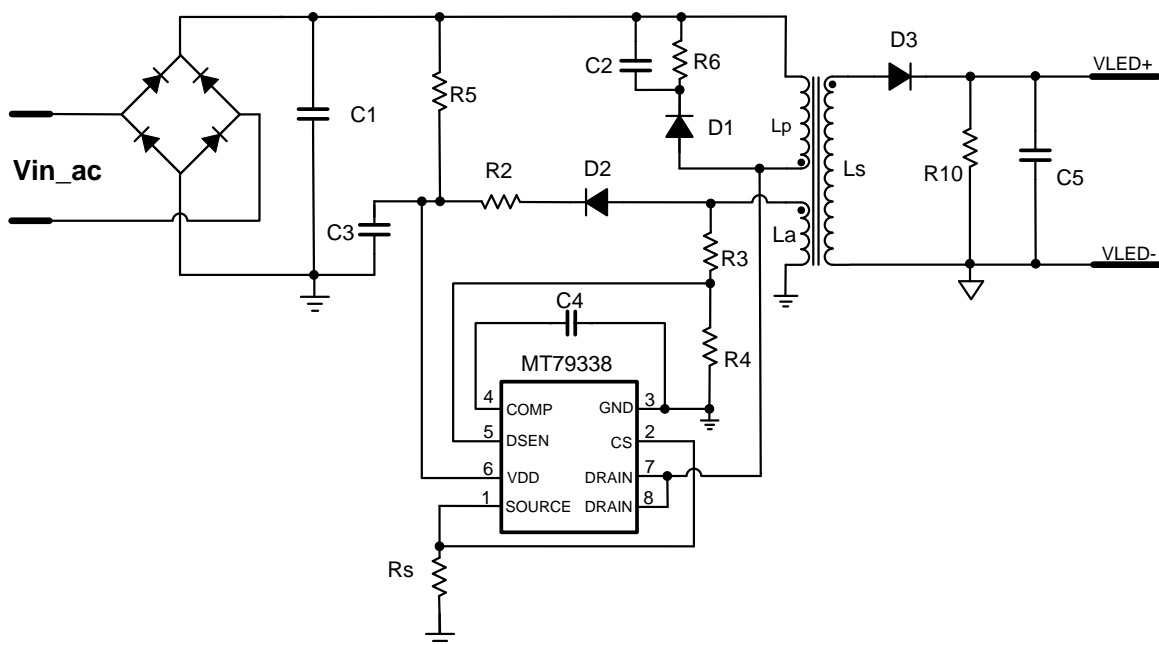
FEATURES

- Single-stage Active PFC for high power factor and low THD
- Primary side control eliminates opto-coupler
- High precision LED current ($\pm 3\%$)
- Critical Conduction Mode operation
- Cycle-by-cycle current limiting
- Under-voltage lockout (UVLO) protection
- VDD and output over voltage protection
- Adjustable constant current and output power setting
- Power on soft-start
- Embedded with 600V power MOSFET
- DIP8 package

APPLICATIONS

- AC/DC LED driver applications
- Signal and decorative LED lighting
- E27/PAR30/PAR38/GU10 etc.LED lamp
- T8/T10 LED String

Typical Application Circuit



ABSOLUTE MAXIMUM RATINGS

VDD Voltage	-0.3V to VDD Clamp
DRAIN Pin Voltage	-0.3V to 600V
COMP/CS/SOURCE/DSEN Pins Voltage	-0.3V ~ 5V
Lead Temperature (soldering, 10 sec.)	260°C
P _{DMAX} (maximum power consumption)	1.5W
Storage Temperature	-55°C ~ 150°C
Junction Temperature (T _j)	150°C

Recommended operating conditions

Supply voltage	7.2V to 23V
Operating Temperature	-40°C to 105°C

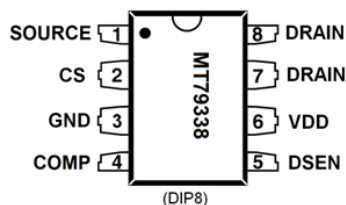
Thermal resistance^①

Junction to ambient (R _{θJA})	70°C/W
Junction to Case (R _{θJC})	47°C/W

Note:

- ① be measured in the natural convection at TA = 25°C on a low effective single layer thermal conductivity test board of JEDEC 51-3 thermal measurement standard. Test condition: Device mounted on 2" X 2" FR-4 substrate PCB, 2oz copper, with minimum recommended pad on top layer and thermal vias to bottom layer ground plane.

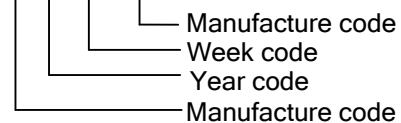
PIN CONFIGURATIONS



Chip Mark

MT79338

XX Y WW XX



PIN DESCRIPTION

Name	Pin No.	Description
SOURCE	1	Power MOS source
CS	2	Current sense input
GND	3	Ground
COMP	4	Internal EA's output. Connect a capacitor to ground for frequency compensation.
DSEN	5	The voltage feedback from auxiliary winding. Connected to a resistor divider from auxiliary winding to sense output voltage.
VDD	6	Power Supply
DRAIN	7,8	Power MOS drain