

GENERAL DESCRIPTION

OB3338C is a dimmable offline controller, achieve high power factor, low THD and no stroboscopic specialized for LED lighting application combing with PFC system.

It can achieve low system cost for an isolated lighting application by primary side control in a single stage converter.

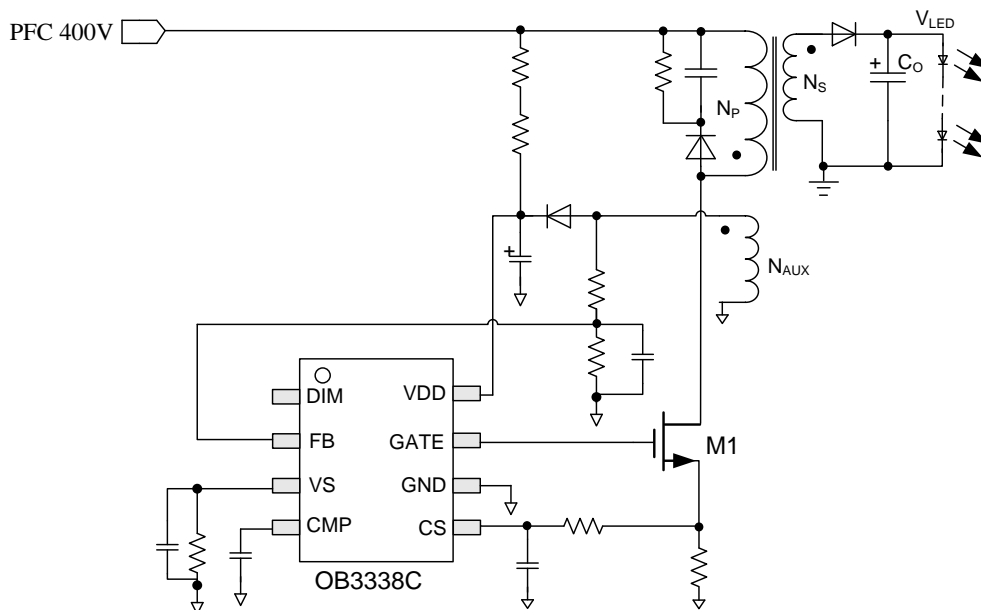
The proprietary CC control scheme is used. Quasi-resonant (QR) operation and clamping frequency greatly improves the system efficiency. The advanced start-up technology is used to meet the start-up time requirement (<0.5s). The constant output current is compensated for tolerance of transformer inductance variation. And the line compensation is built in OB3338C for high precisely constant output current control.

OB3338C offers a dimmable function, the LED current can be controlled by setting the duty cycle of PWM waveform into the DIM pin.

OB3338C offers comprehensive protection coverage with auto-recovery features including LED open loop protection, LED short circuit protection, cycle-by-cycle current limiting, built-in leading edge blanking, VDD under voltage lockout (UVLO), etc.

OB3338C is offered in SOP8 package.

TYPICAL APPLICATION



FEATURES

- Dimmable LED current control
- Primary-side sensing and regulation without TL431 and opto-coupler
- High precision constant current regulation
- Fast start-up
- Quasi-resonant operation
- Built-in line compensation
- LED short circuit protection
- LED open loop protection
- Cycle-by-cycle current limiting
- Built-in leading edge blanking (LEB)
- VDD under voltage lockout with hysteresis
- VDD over voltage protection
- Over temperature protection (OTP)

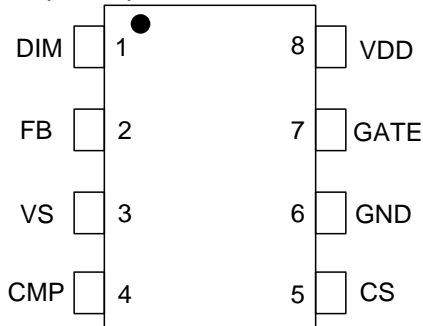
APPLICATIONS

- LED lighting

GENERAL INFORMATION

Pin Configuration

The pin map is shown as below for SOP8.



Ordering Information

Part Number	Description
OB3338CCP	8 Pin SOP, Halogen-free in Tube
OB3338CCPA	8 Pin SOP, Halogen-free in T&R

Note: All Devices are offered in Halogen-free Package if not otherwise noted.

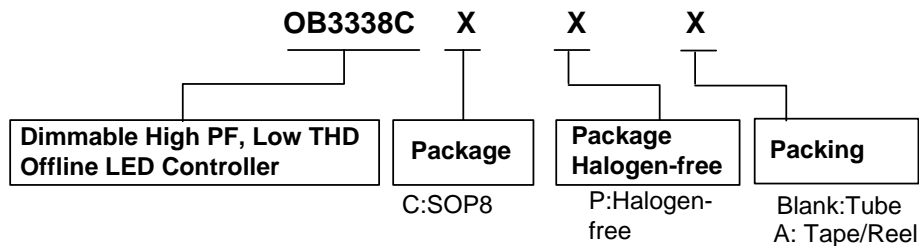
Package Dissipation Rating

Package	R θ JA (°C/W)
SOP8	150

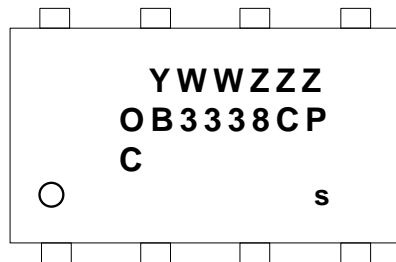
Absolute Maximum Ratings

Parameter	Value
VDD Voltage	-0.3V to 40V
GATE Voltage	-0.3V to 40V
CS/FB/DIM/VS/CMP Input Voltage	-0.3V to 7V
Min/Max Operating Junction Temperature T _J	-40°C to 150 °C
Min/Max Storage Temperature T _{stg}	-55°C to 150 °C
Lead Temperature (Soldering, 10secs)	260 °C

Note: Stresses beyond those listed under “absolute maximum ratings” may cause permanent damage to the device. These are stress ratings only, functional operation of the device at these or any other conditions beyond those indicated under “recommended operating conditions” is not implied. Exposure to absolute maximum-rated conditions for extended periods may affect device reliability.



Marking Information



Y: Year Code
 WW: Week Code (01-52)
 ZZZ: Lot Code
 C: SOP8
 P: Halogen-free Package
 C: Character Code
 s: Internal Code(Optional)

TERMINAL ASSIGNMENTS

Pin Num	Pin Name	I/O	Description
1	DIM	I	PWM dimming signal input. The LED current can be controlled by the duty cycle of the PWM waveform at the DIM pin. IC adopts DIM pin negative logic control.
2	FB	I	Voltage feedback from auxiliary winding. Connected to resistor divider from auxiliary winding reflecting output voltage.
3	VS	I/O	Output voltage selection in standby mode.
4	CMP	I/O	Loop compensation pin. A capacitor is connected between CMP and GND.
5	CS	I	Current sensing terminal.
6	GND	P	Power Ground.
7	GATE	O	Gate driver output for power MOSFET.
8	VDD	P	Power supply Input.