

### GENERAL DESCRIPTION

OB3350 is a highly integrated and cost effective Light Emitting Diode (LED) driver optimized for LCD monitor and LCD TV backlighting application. It provides a high performance LED backlight solution with minimized BOM count.

The OB3350 contains a PWM boost driver which uses current mode control and fixed frequency operation to regulate the LED current. The LED current is sensed through an external current sense resistor. The voltage across the sensing resistor is compared with reference level of 300mV, the error is amplified to control the pulse width of the power switch thus to regulate the current flowing the LED.

The OB3350 offers external low frequency PWM (LPWM) dimming method for a wide range of dimming control.

The OB3350 offers comprehensive protection such as power MOSFET over current protection (OCP), output over voltage protection (OVP), IC power supply under voltage lockout (UVLO), and LED open protection.

### FEATURES

- Current Mode PWM Controller With Good Dynamic Response
- 8V to 35V Input Voltage Range
- External PWM Dimming Mode
- Over Voltage Protection
- Over Current Protection
- Under Voltage Lockout (UVLO)
- Thermal Shutdown

### APPLICATIONS

- LCD Monitor
- LCD TV
- Flat panel display

The OB3350 is offered in SOP-8 Packages.

### TYPICAL APPLICATION

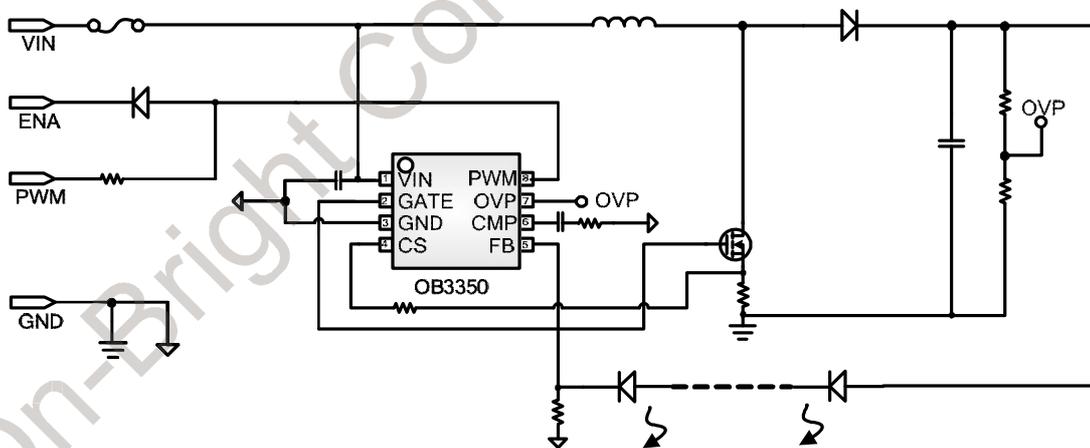


Figure1. OB3350 Typical Application Schematic

**Absolute Maximum Ratings**

Parameter	Value
VIN Input Voltage to GND	-0.3V to 40V
I/O to GND	-0.3V to 7V
Operating Ambient Temp. T <sub>A</sub>	-40°C ~ 85°C
Operating Junction Temp. T <sub>J</sub>	-40°C ~ 150°C
Min/Max Storage Temp. T <sub>stg</sub>	-55°C ~ 150°C
Lead Temp. (10 Sec)	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.

**Recommended Operating Range**

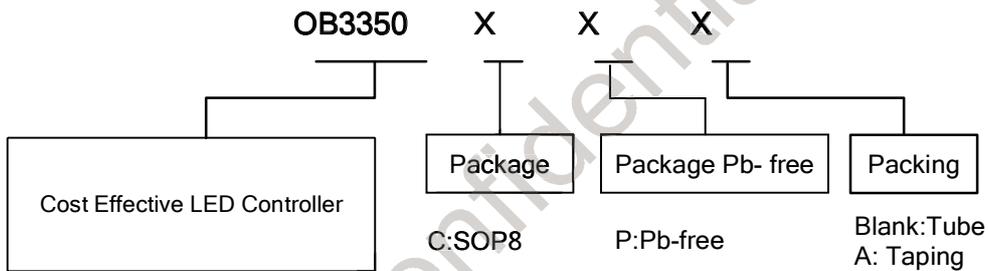
Parameter	Value
Vin Voltage	8V to 35V
Burst Dimming Frequency	100Hz to 1KHz

**Package Thermal Characteristics**

Parameter	Value
Thermal Resistance $\theta_{JA}$ (SOP)	150°C/W

**Ordering Information**

Part Number	Description
OB3350CP	SOP8, pb-free in tube
OB3350CPA	SOP8, pb-free in T&R

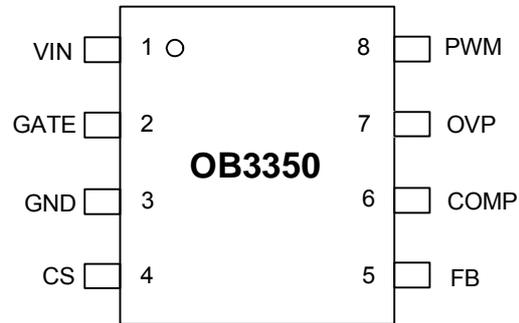


**Package Marking Information**



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

**Pin Configuration**



No.	Name	I/O	Pin Function
1	VIN	Power	Power Supply Input
2	GATE	I/O	Gate Driver Output Pin
3	GND	GND	Ground
4	CS	I/O	Current Sense Input
5	FB	I/O	LED Current Feedback Input
6	COMP	I/O	Boost Converter Loop Compensation Pin
7	OVP	I/O	Over Voltage Protection Sense Input
8	PWM	I/O	External PWM Dimming Control

**Functional Block Diagram**

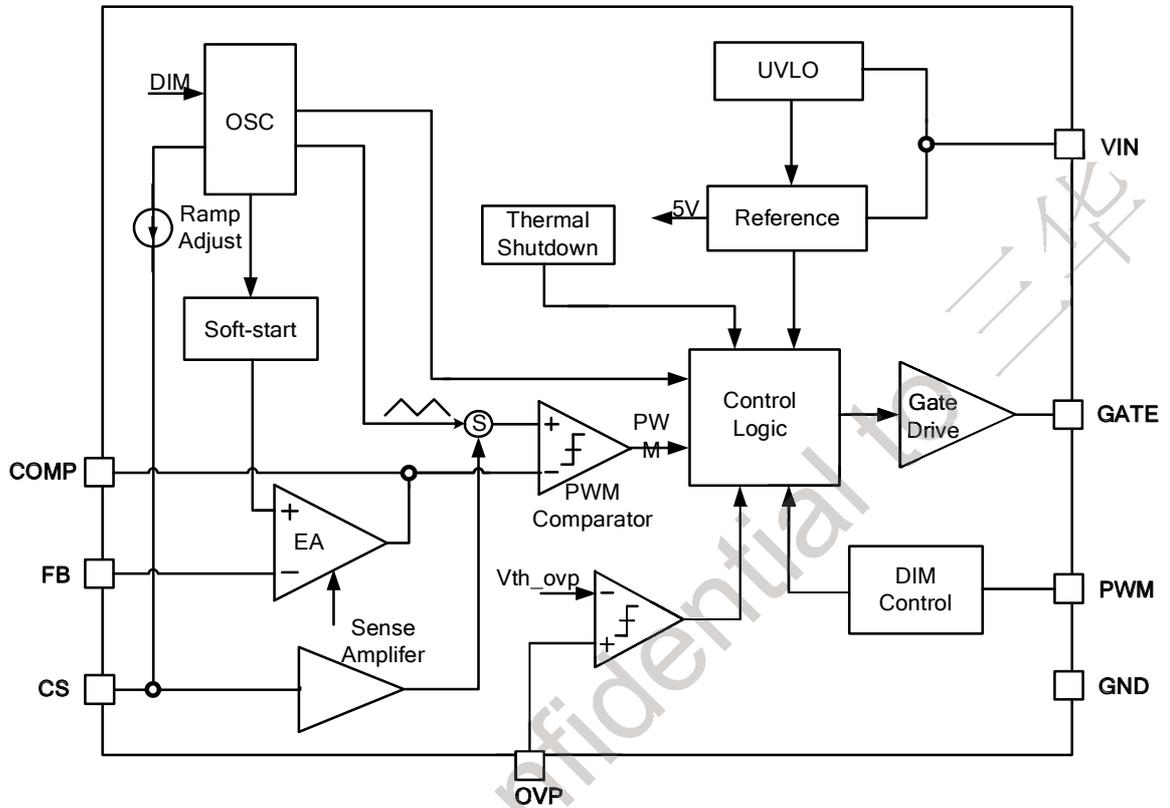


Figure2. OB3350 Functional Block Diagram