



High Current and High Efficiency Backlight WLED Controller For Medium or Large LCD Panels

■ General Description

The OCP8129 is the LED driver controller IC which loads the constant current driver of LED driver for use in backlighting LCD display from 26" to 56"+ and other LED lighting applications. OCP8129 is a high current and high efficiency backlight LED driver controller for improved backlight reliability and efficiency. The operation frequency is user-defined with spread spectrum operation feature that minimizes system EMI during operation.

The OCP8129 supports external PWM dimming, providing the most flexible solution for LED display applications.

The OCP8129 provides all protection: the MOSFET over current protection (OCP), LED short circuit protection (SCP), LED open circuit protection, inductance short circuit protection, FB Over-voltage Protection Latch, over load protection, under-voltage lock-out (UVLO), GATE pin clamper and internal over temperature protection, external synchronization function. The PWM frequency can be synchronized to an external pulse signal.

The OCP8129 is available in SOP-8L package, and it is RoHS compliant and 100% lead Pb free. Operating temperature range of the OCP8129 is from -40°C to 85°C.

■ Features

- Number of LEDs in series limited by external MOSFETs rating
- Spread Spectrum Feature on Operating Frequency for EMI
- Maximum Duty Cycle Limit
- Support External EN PWM Dimming
- Synchronized Operation with External Signal
- External MOSFET Over Current Protection
- LED Open Circuit Protection
- LED Short Circuit Protection
- LED +/- Short to GND Protection
- FB Over Voltage Protection Latch
- Inductance Short Circuit Protection
- GATE pin Clamper
- LED Fault Status Feedback
- R_{SET} Pin Short Circuit Protection
- Under-voltage lock-out
- Internal Over Temperature Protection
- Linear Voltage Compensation
- Power On Soft Start
- Wide Supply Voltage Range: 10V ~ 30V
- Low Standby current <2uA
- T_A= -40 ~ 85 °C
- Available in SOP-8L Package

■ Applications

- LCD White or RGB Backlighting
- LCD TVs
- Automotive and Infotainment Displays
- Battery Powered LED Lamps
- Other DC/DC LED Drivers
- General LED Lighting Applications
- General Purpose Constant Current Source
- Signage and Decorative LED Lighting

■ Pin Configuration

SOP-8L (Top View)

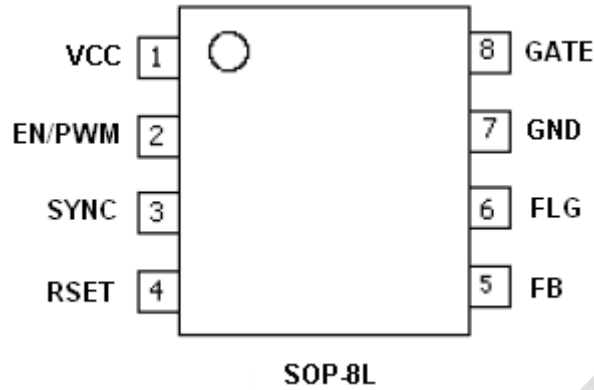


Figure 1, Pin Assignments of OCP8129

Pin Name	Pin No.	I/O	Pin Function
	SOP-8L		
VCC	1	P	Power Supply Input
EN/PWM	2	I	Enable Pin, On/Off control for the controller and external
SYNC	3	I	Synchronization Signal Input Pin
RSET	4	I/O	Set the Operation Frequency Resistance Pin
FB	5	I/O	Set LED Current. Connect a setting resistor from this pin to GND. The LED Current is programmed by $I_{LED} = V_{FB} / (\text{Setting Resistance})$.
FLG	6	I/O	Fault Operation Status Output (Open Drain Output). If FLG fault function is not used, the FLG pin should be floating.
GND	7	P	Ground
GATE	8	O	External MOSFET Gate Drive

■ Typical Application Circuit

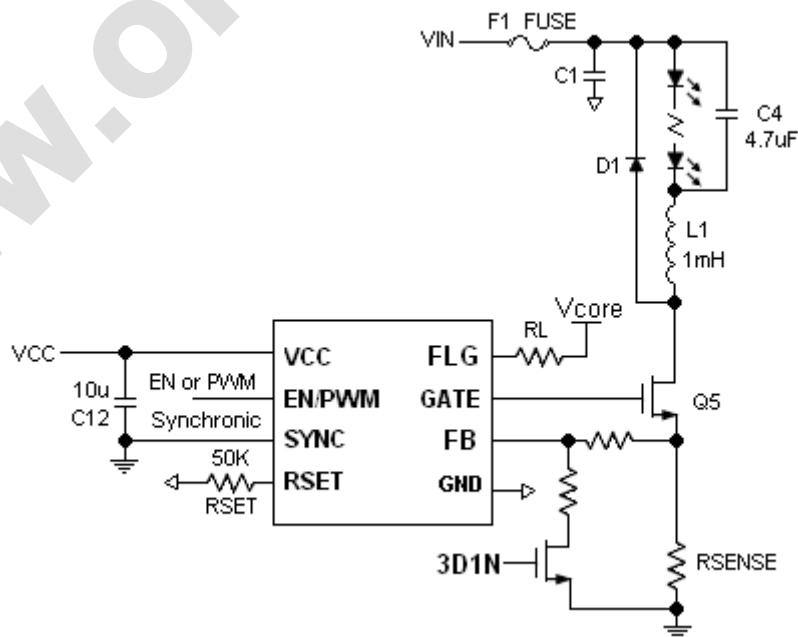
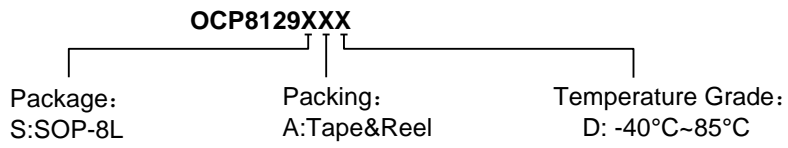


Figure 2, Typical Application Circuit of OCP8129



■ Ordering Information



Part Number	Package Type	Package Qty	Temperature	Eco Plan	Lead
OCP8129SAD	SOP-8L	13-in reel 2500pcs/reel	-40~85°C	Green	Cu

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