GL8259

Primary side control off line LED controller with active PFC

Preliminary

Features

- Real-Current Control Without Secondary-Feedback
- Accurate Constant Current Output
- Transition Mode (TM) PFC Control
- Ultra-Low (10μA) Start Up Current
- Low (1mA) Quiescent Current
- Over-Temperature Protection
- Cycle-by-Cycle Over Current Protection
- VCC Pin Over Voltage Protection
- Output Open Protection
- Short-Circuit Protection
- Available in SOT26 Package

Application

- Solid State Lighting
- Industrial and Commercial Lighting
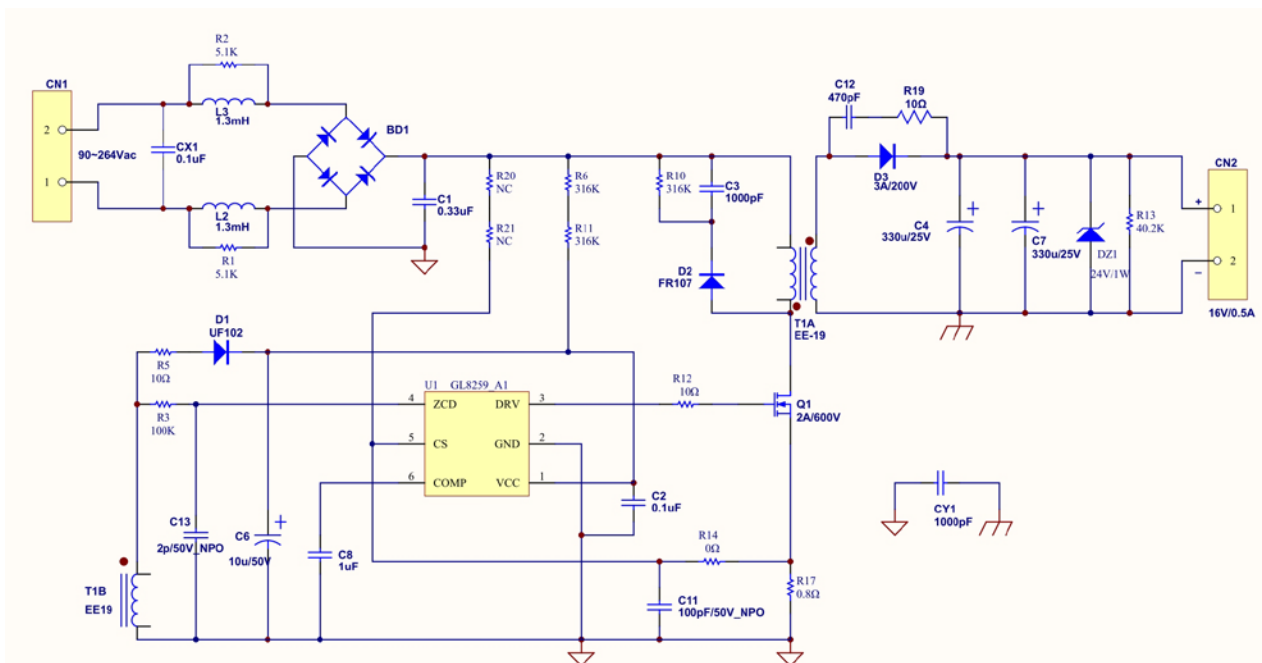- Residential Lighting

General Description

The GL8259 is a single-power stage, isolated, primary side control offline LED lighting controller that achieves high power factor.The proprietary real-current control method can control the LED current accurately from the primary side information. It can significantly simplify the LED lighting system design by eliminating the secondary side feedback components and the optocoupler.
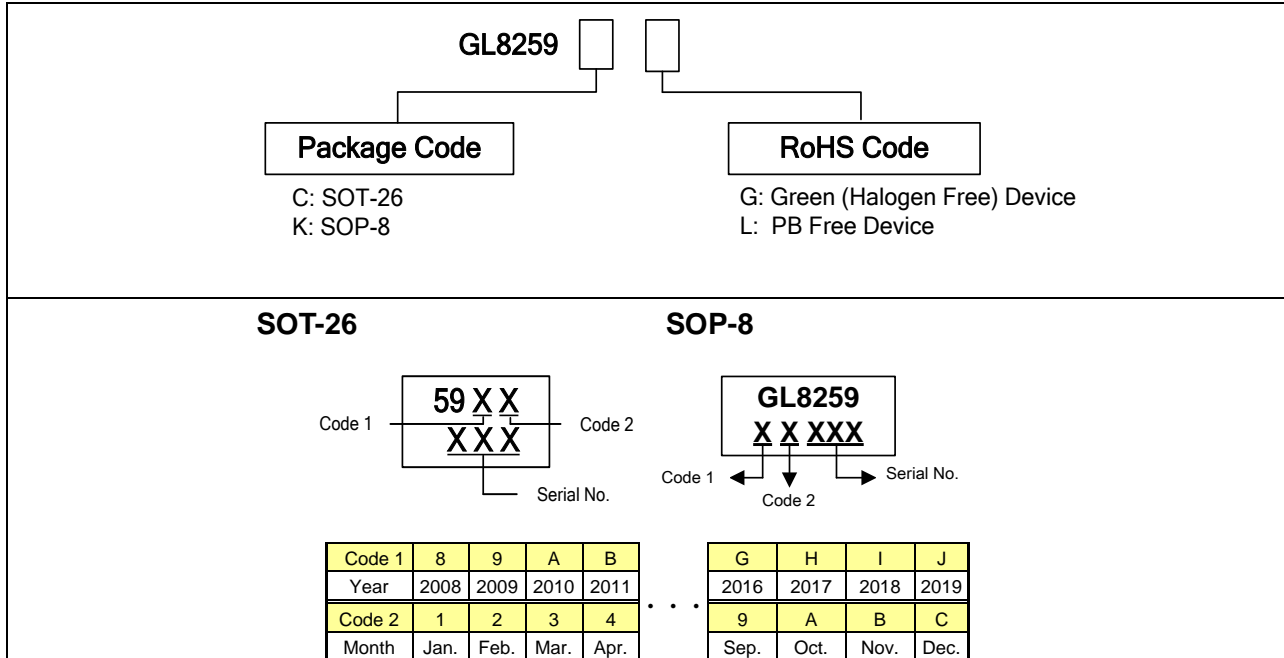
The extremely low start-up current and quiescent current reduces the total power consumption to provide a high efficiency solution for lighting applications.

The multi-protection features of GL8259 greatly enhance the system reliability and safety. The GL8259 features over voltage protection, short circuit protection, cycle-by-cycle current limit, auto restart over temperature protection
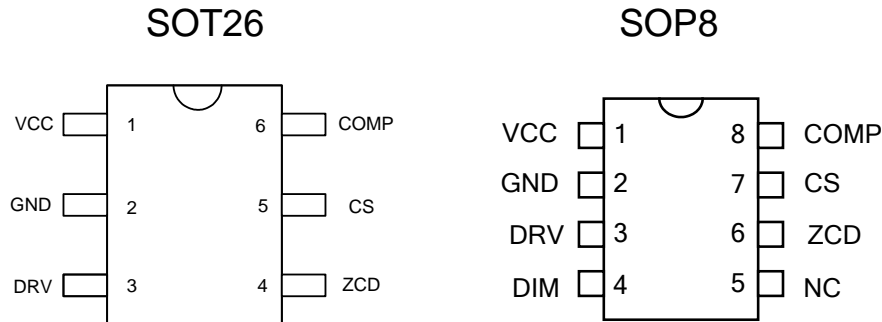
Typical application

Ordering and Marking Information

GL8259 ☐ ☐

Package Code	RoHS Code
C: SOT-26 K: SOP-8	G: Green (Halogen Free) Device L: PB Free Device

SOT-26   **SOP-8**

Code 1 — 59 X X — Code 2   GL8259
              X X X   X X XXX
                 └ Serial No.   Code 1 ← ↓ → Serial No.
                                       Code 2

Code 1	8	9	A	B	G	H	I	J
Year	2008	2009	2010	2011	2016	2017	2018	2019
Code 2	1	2	3	4	9	A	B	C
Month	Jan.	Feb.	Mar.	Apr.	Sep.	Oct.	Nov.	Dec.

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Pin Configuration (Top View)

SOT26

VCC	1	6	COMP
GND	2	5	CS
DRV	3	4	ZCD

SOP8

VCC	1	8	COMP
GND	2	7	CS
DRV	3	6	ZCD
DIM	4	5	NC

Pin Description

Name	Pin No. (SOT26)	Pin No. (SOP8)	Function
VCC	1	1	Positive power supply pin.
GND	2	2	The ground pin.
DRV	3	3	The DRV pin is connected to the totem pole gate driver to drive the external power switch.
ZCD	4	6	The Zero Current Detector Input, which is connected to an auxiliary winding to monitor the zero crossing current of the inductor. When the ZCD detects that the winding has been demagnetized, it will send the set signal to turn on the external MOSFET.
CS	5	7	The Current Sense pin is connected to the input of OCP comparator, and terminates the power switch when the current sense voltage is beyond threshold.
COMP	6	8	The COMP pin is connected to the output of internal error amplifier. Adding compensation network to stabilize the control loop and get higher power factor.
DIM		4	
NC		5	