



High Power Factor & Accuracy Constant Current LED Driver Built-in MOSFET

Description

The GP8630A is a highly-integrated, low startup current, average current mode, one cycle control PFC and fixed switching frequency PWM controller. These functions enable the LED driver to easily meet the accuracy average LED current and high power factor requirements. The GP8630A integrates a power MOSFET with 600V breakdown voltage. The integrated functions also include the LED short protection, open protection, and internal over temperature protection. The COMP pin controls the duty by connected an RC compensation network to ground and forming the closed loop feedback control. The GP8630A improves the performance and reduces the cost of the LED driver.

Application

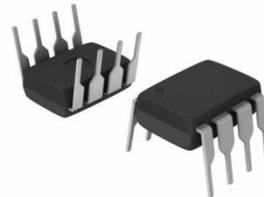
- LED Off-line Lamps
- Others LED Lighting Applications

Features

- Integrated 600V MOSFET
- High Power Factor by One Cycle Control
- Accuracy Constant Current
- Low BOM Cost
- Linear Dimming on DIM Pin
- Average Current / Fixed Frequency Control
- Gate Output Voltage Clamp
- LED Open Protection (OVP)
- LED Short Protection (SCP)
- Over Current Protection (OCP)
- Internal OTP Protection

Ordering Information

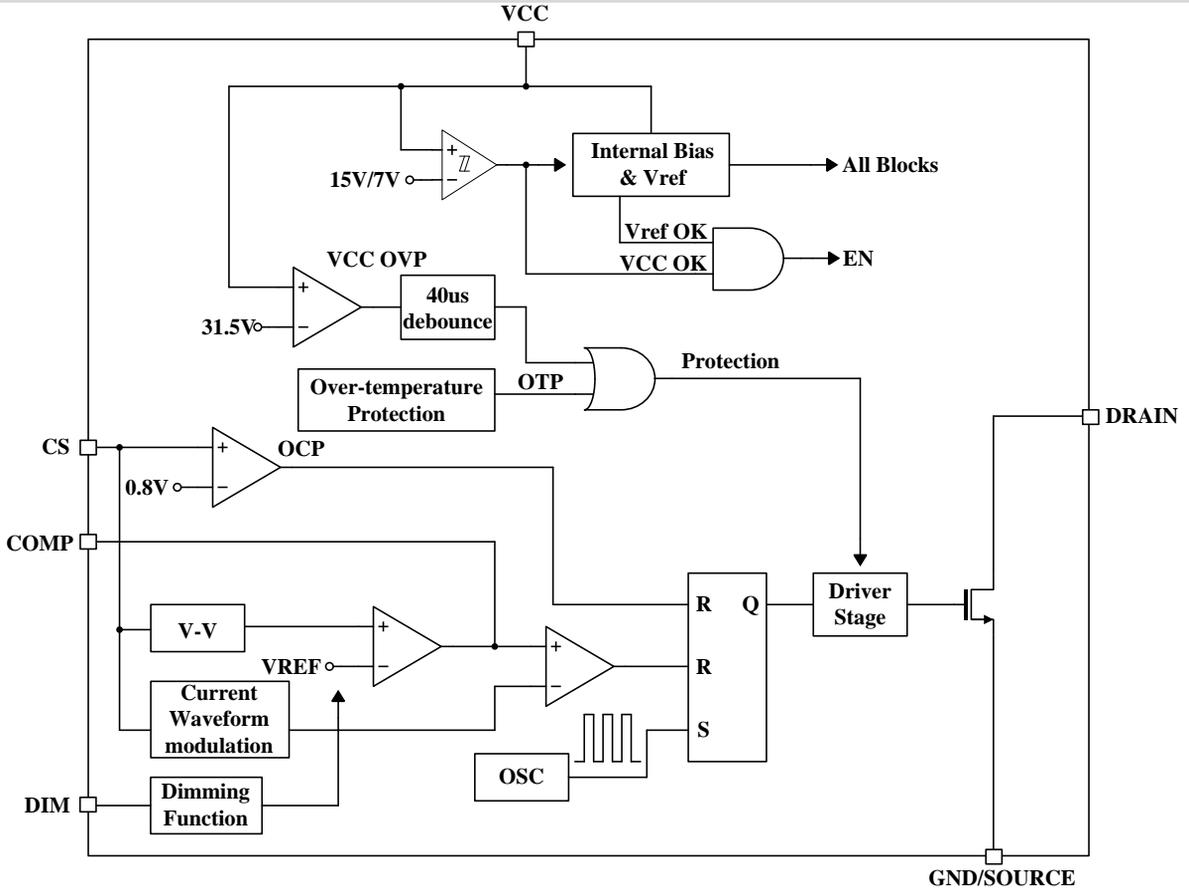
Device	Marking	Package
GP8630A	GP8630A	8-DIP



8-DIP



Block Diagram

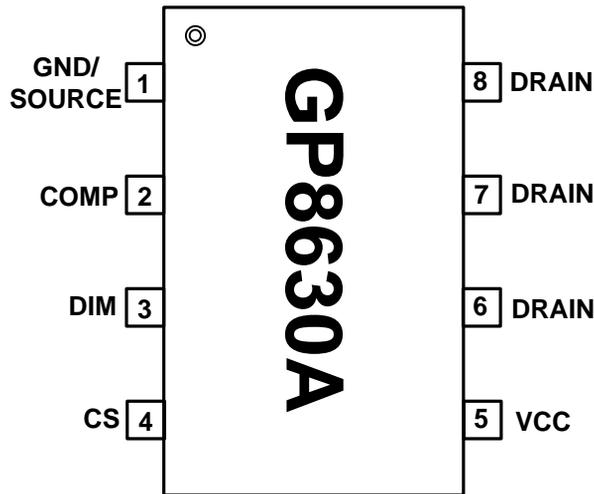


Absolute Maximum Ratings

Symbol	Parameter	Value	Unit
V_{CC}	Supply Voltage	30	V
V_{IN}	INPUT Voltage (DIM, CS, COMP)	-0.3 ~ 7	V
V_{DRAIN}	DRAIN Voltage	600	V
T_J	Operating Junction Temperature	150	°C
T_A	Operating Ambient Temperature Range	-20 ~ 85	°C
T_{STG}	Storage Temperature Range	-55 ~ 150	°C
θ_{JA}	Package Thermal Resistance (8DIP)	125	°C/W
P_d	Power dissipation (8DIP)	1	W



Pin Assignments

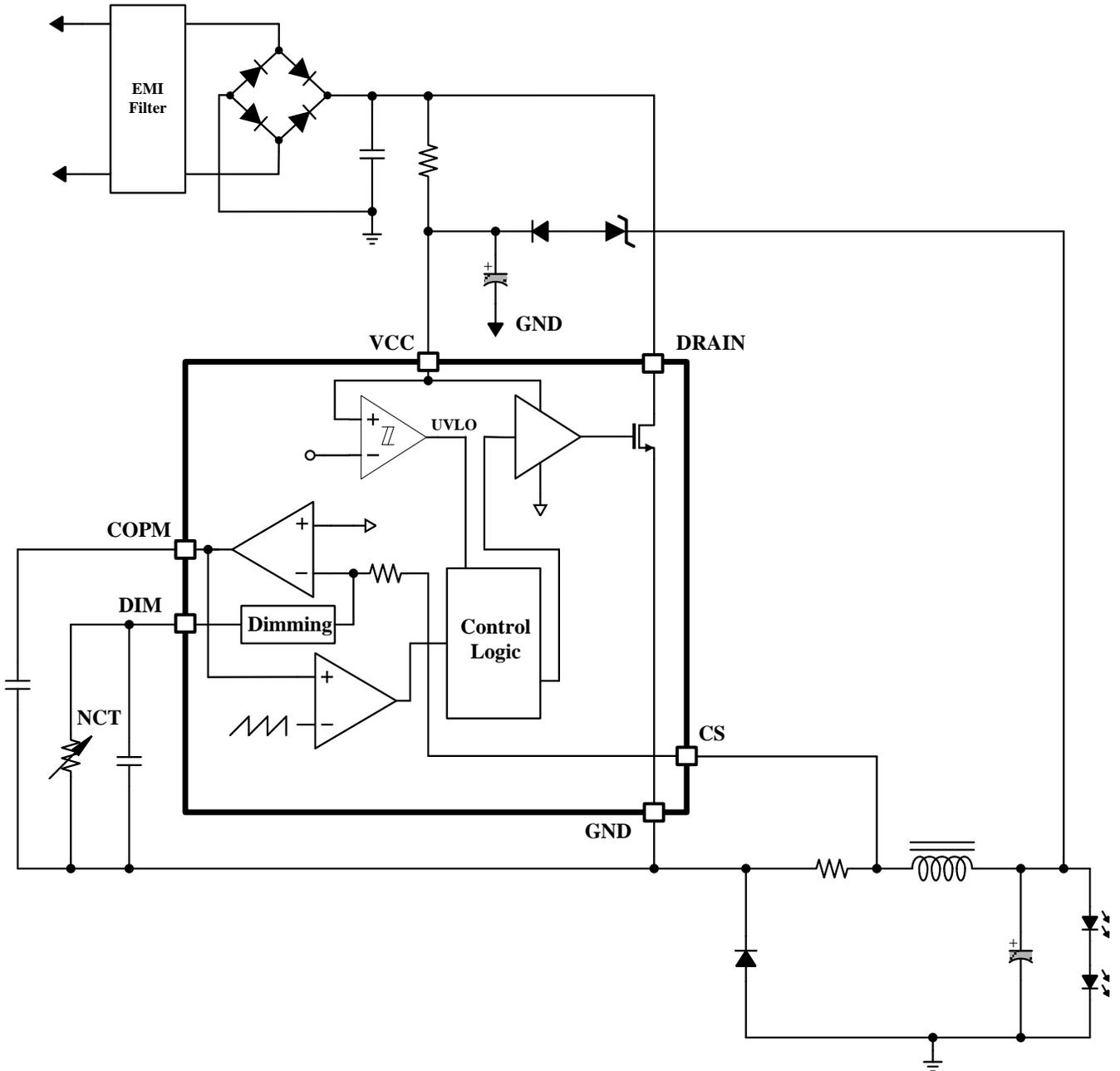


Pin Definitions

Pin Number	Pin Name	Pin Function Description
1	GND/ SOURCE	Ground Pin, Source Pin of the internal MOSFET
2	COMP	Feedback Compensation Network
3	DIM	Dimming Control Pin by Input a DC Voltage
4	CS	Current Sense Pin (current sense resistor : $R_{CS} = V_{REF}/I_{OUT}$)
5	VCC	Power Supply Pin
6,7,8	DRAIN	DRAIN Pin of the internal MOSFET



Application Circuit





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