



New product
Announcement

AL8820

High Power Factor Boost/Buck, Non-Dimmable LED Driver for MR16

The AL8820 is a high PF LED driver targeted at reducing the solution cost and complexity of LED MR16 lamps with good electronic transformer (ET) compatibility.

The device integrates two DC-DC regulators. The first stage boosts the input voltage to a voltage greater than the LED chain voltage and provides the power supply for the second (buck) stage. The second stage regulates the LED current to the target value.

With a proprietary control scheme, the LED driver is compatible with most commonly used electronic transformers.

The high switching frequency allows use of small size inductors and capacitors. The integrated low $R_{DS(ON)}$ MOSFETs reduces the power loss.

AL8820 in its compact SO-8EP package, provides the ideal solution for Non-Dimmable MR16 LED lighting.



The Diodes Advantage

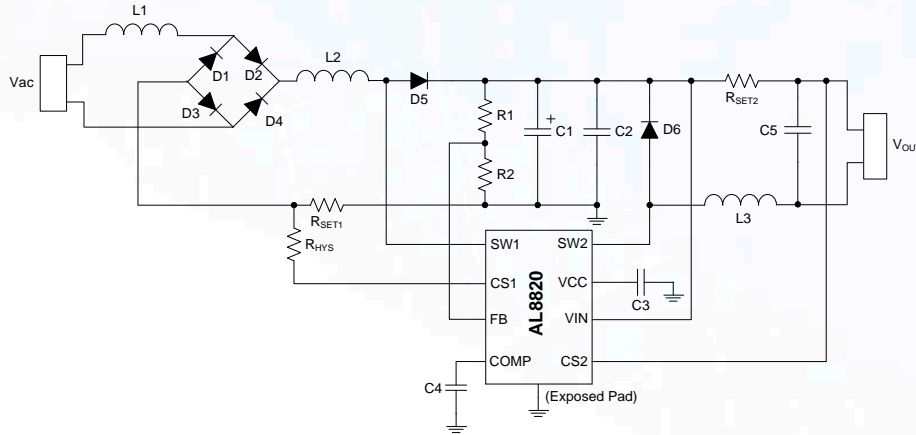
The AL8820 provides a simple High PF solution for non-dimmable MR16 with good electronic transformer compatibility.

- **Highly integrated controller in SO8-EP package**
Low BOM solution cost
- **Compatible with most of commonly used Electronic transformers**
covers most types of electronic transformers with minimal flicker
- **Internal 40V/2A NDMOS Switch**
Large output power capability
- **Up to 1MHz Switching Frequency**
Reduced size and cost inductors and capacitor
- **High Power Factor (PF) and low Total Harmonic Distortion (THD)**
PF > 09, THD < 30% for 6W MR16
- **Built-in UVLO, OCP, OVP and output short/open protection**
Provides a robust LED lamp solution

Applications

- MR16/AR111 Lamps
- General Illumination Lamps

Typical Application: Non-Dimmable MR-16 LED driver



Diodes MR-16 LED Driver

Part Number	Product Description	Min. Input Voltage	Max. Input Voltage	Max. Out put voltage	Max. Out put Current	LED Current accuracy	Switching frequency	Dimming method		Efficiency	Sense Voltage (mV)	AEC-Q100 Grade	Package Outline
		V	V	V	mA	+/- %	kHz	Analog	PWM				
AL8820	High PF, High efficiency, Two Stage LED driver	5	36	36	2000	5	up to 1000	N	N	85	100 (Buck stage)	NA	SO-8EP
AL8806	High efficiency 36V 1.5A Buck LED Driver	6	36	36	1500	5	Up to 1000	Y	Y	98	100	NA	MSOP-8EP
AL8807	High efficiency Low EMI 36V 1A/1.3A Buck LED Driver	6	36	36	1300	5	Up to 1000	Y	Y	98	100	NA	MSOP-8EP SOT25
AL8808	Cost Effective Low EMI 30V 1A Buck LED Driver	6	30	30	1000	5	Up to 1000	Y	Y	97	100	NA	TSOT25

To find out more information:

Medium Voltage DC-DC LED Drivers: http://diodes.com/catalog/medium_voltage_dc_dc_led_drivers_91/

Ordering Information

Device	Packaging	Marking ID	13" Tape and Reel	
			Quantity	Part Number Suffix
AL8820SP-13	SO-8EP	AL8820	2500	-13