



New product
Announcement
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AL8821

High PF Boost Dimmable MR16 LED driver

The AL8821 is a boost converter that delivers an accurate constant current for MR16 and similar LED lamps.

With a proprietary control scheme, the AL8821 is compatible with many commonly used electronic transformers and provides designs with High Power Factor (PF) and low Total Harmonic Distortion (THD).

The operation frequency is up to 1MHz that allows the use of a small size inductor.

SO-8EP package has a low thermal resistance and can be used in a wide range of output powers.

The driver can be used in dimmable applications and is compatible with leading-edge and trailing-edge dimmers.



The Diodes' Advantage

The AL8821 develops a good compatibility, low BOM cost, high PF, flicker-free solution for MR-16 LED drivers.

- **Highly integrated controller in SO-8EP package**
Low BOM solution cost
- **Used for Dimmable and Non-dimmable MR-16 LED drivers**
Compatible with leading-edge and trailing-edge dimmers
- **Internal 40V/2A NDMOS Switch**
Large output power capability
- **Up to 1MHz Switching Frequency**
Small size inductor
- **High PF and low THD**
PF > 0.9, THD < 30% and low ripple <20%
- **Built-in UVLO, OCP, OVP and output short/open protections**
Provides a complete protection function

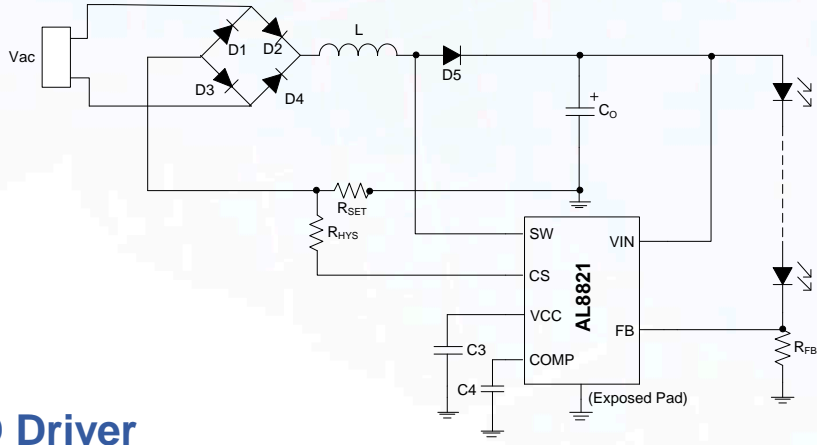
Applications

- Dimmable and non-dimmable MR16 Lamps
- General illumination lamps



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Typical Application: MR-16 LED driver



Diodes MR-16 LED Driver

Part Number	Product Description	Min. Input Voltage	Max. Input Voltage	Max. Output voltage	Max. Output Current	LED Current accuracy	Switching frequency	Dimming method		Efficiency	Sense Voltage (mV)	AEC-Q100 Grade	Package Outline
		V	V	V	mA	+/- %	kHz	Analog	PWM				
AL8821	High PF, High efficiency, 40V/2A Boost LED driver	5	36	36	1500	5	up to 1000	Triac Dimming		85	100	NA	SO-8EP
AL8820	High PF, High efficiency, Two Stage LED driver	5	36	36	1500	5	up to 1000	N	N	85	100	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

Further Information:

Medium Voltage DC-DC LED Drivers: http://diodes.com/catalog/medium_voltage_dc_dc_led_drivers_91/
 Datasheet : <http://diodes.com/datasheets/AL8821.pdf>

Ordering Information

Device	Packaging	Marking ID	13" Tape and Reel	
			Quantity	Part Number Suffix
AL8821SP-13	SO-8EP	AL8821	2500	-13