



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

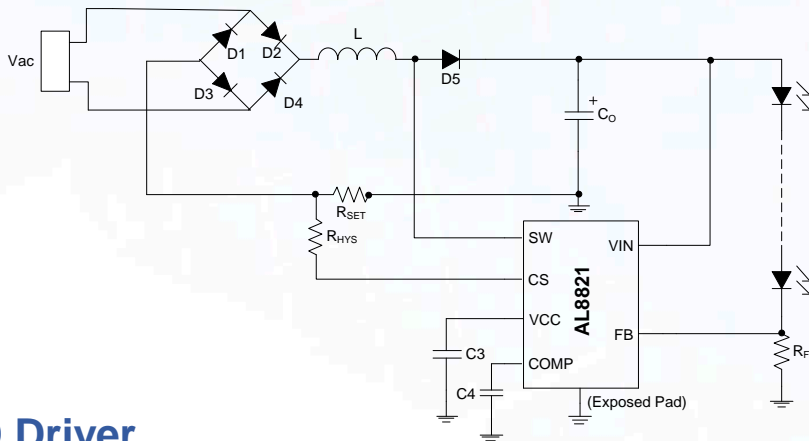
- Dimmable and non-dimmable MR16 Lamps
- General illumination lamps



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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