



New Product Announcement

AL8822
AL8823

MR16 Single Stage Dimmable LED Driver/Controller

The AL8822/AL8823 is a boost converter/controller that delivers an accurate constant current for MR16 and similar LED lamps.

With a proprietary control scheme, the AL8822/AL8823 is compatible with many commonly used electronic transformers and provides designs with High Power Factor (PF) and low Total Harmonic Distortion (THD). Both are compatible with leading-edge and trailing-edge triac dimmers.

The AL8822/AL8823 support switching frequencies up to 1MHz – allowing the use of small size inductor.

The AL8822 is in the low thermal resistance SO-8EP package – supporting a wide range of output powers.

The AL8823 controller is in SO-8 and with the external MOSFET supports higher lamp powers/LED currents.



The Diodes Advantage

The AL8822/AL8823 provide a good compatibility, low BOM cost, high PF, flicker-free solution for MR-16 and AR111 LED lamps.

- **Highly integrated controller/driver in SO-8/SO-8EP**
Low BOM solution cost
- **Supports Dimmable and Non-dimmable MR-16 LED Lamps**
Compatible with leading-edge and trailing-edge dimmers
- **Internal 50V/2A NDMOS Switch (AL8822) in SO-8EP**
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 Undervoltage Lock-out, Output Open-Circuit Protection, Output Overvoltage Protection and Output Short-Circuit Protection**
Provides a complete protection function

Applications

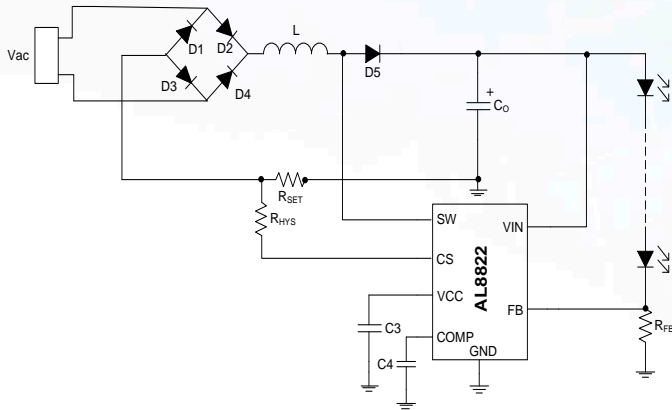
- Dimmable and non-dimmable MR16
- General illumination lamps
- AR 111 Lamps



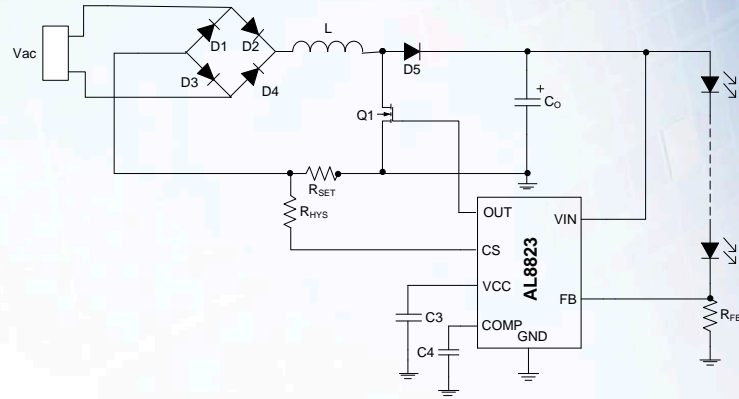
New Product Announcement

AL8822
AL8823

Circuit Diagram



AL8822 Application Circuit



AL8823 Application Circuit

Diodes Preferred MR16/AR16 LED Drivers

Part Number	Product Description	Min. Input Voltage		Max. Input Voltage		Max. Output Voltage		Max. Switch Current		LED Current Accuracy		Switching frequency		Dimming Method		Efficiency	Sense Voltage (mV)	AEC-Q100 Grade	Package Outline
		V	V	V	V	mA	±%	kHz	Analog	PWM									
AL8820	Boost and Buck (2-stage) LED driver	5	36*	-	1500	5	±%	up to 1000	N	N	>90	100	NA	SO-8EP					
AL8822	2A BOOST LED DRIVER	5	36*	-	2000	5	±%	up to 1000	N	N	>90	100	NA	SO-8EP					
AL8823	SINGLE BOOST LED CONTROLLER	5	36*	-	Ext MOS	5	±%	up to 1000	N	N	>90	100	NA	SO-8					

* Powered from Boosted rail

Ordering Information

Device	Packaging	Marking ID	13" Tape and Reel	
			Quantity	Part Number Suffix
AL8822SP-13	SO-8EP	AL8822	2,500	-13
AL8823S-13	SO-8	AL8823	2,500	-13