



Boost/Buck/Inverting DC-DC Converter for high-brightness LED lamps

The AL8811 is Diodes' latest Boost/Buck/Inverting DC-DC converter developed to meet the demands of latest low voltage LED lamps.

Its constant on-time enables it to provide power factor improvements in low-voltage AC-DC LED lamp applications

The AL8811 provides a simple protection against a number of potential faults within a lamp:

1. Current limiting
2. Output switch current up to 1.6A
3. Controlled duty cycle oscillator

The accuracy, temperature range and cost make it ideally suited to LED lighting applications.



The Diodes Advantage

The AL8811 provides a simple boost/buck/inverting DC-DC solution for Low Voltage General Illumination LED lamps.

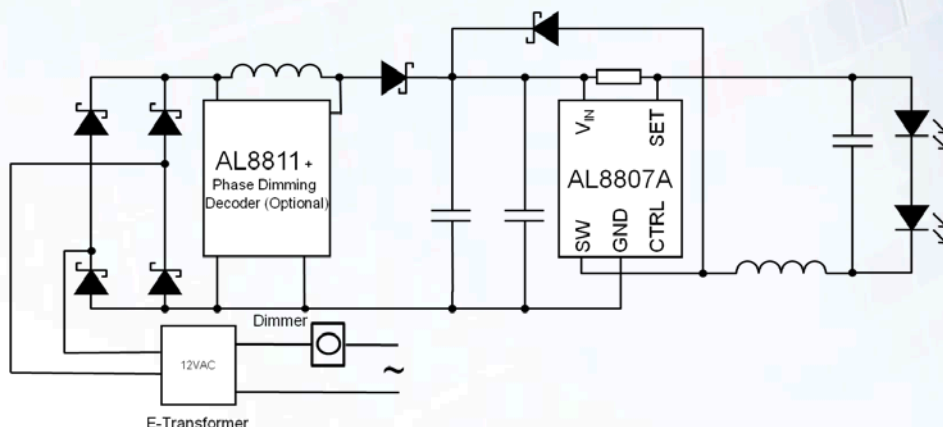
- Minimum number of external components
- Active current limiter
- **Simple protection**
 - Current limiting
 - Controlled duty cycle oscillator
- **Small footprint package – MSOP-8**
 - High power density small PCB footprint solution
- **2% initial average LED current accuracy**
 - Meets accuracy requirements of most lighting apps at cost effective price and improves inter-channel matching.
- **Simple Constant On-time Boost Converter**
 - Constant On-time allows the input current's magnitude to be in phase with the input voltage → Improving the power factor and reduces input filter capacitor.

Applications

- General illumination
- Driving of parallel LED chains
- MR16 lighting
- 12V_{AC/DC} lighting



Typical Application:
Dimmable MR16 LED lamp



Diodes Medium Voltage High brightness LED Drivers

Part number	Comment	V _{IN}	LED Current A	Accuracy %	Switching Frequency MHz	Efficiency %	Dimming		Temp range °C	Protection			Soft-start	Package JA
		V					PWM	Analog		OTP	OC	SC		
ZXLD1350	AEC-Q100 1W Dr	7 ~ 30	0.38	5	1	95	Y	Y	-40~105	-	Y	Y	Y	TSOT23-5 (250)
ZXLD1360	AEC-Q100 3W Dr	7 ~ 30	1	5	1	95	Y	Y	-40~125	-	Y	Y	Y	TSOT23-5 (82)
AL8805	Low Cost 3W LED Dr	6 ~ 36	1	5	1	98	Y	Y	-40~125	-	Y	Y	Ext cap	SOT25 (250)
AL8806	Multi-Die 3+W LED Dr	6 ~ 36	1.5	5	1	96	Y	Y	-40~125	-	Y	Y	Ext cap	MSOP-8EP (69)
AL8807A	Wide Analog dimming	6 ~ 36	1.3	5	1	98	-	Y	-40~125	Y	Y	Y	Ext cap	MSOP-8EP (69)
AL8807	Low-EMI 3W LED Dr	6 ~ 36	1 1.3	5	1	98	Y	Y	-40~125	-	Y	Y	Ext cap	SOT25 (250) MSOP-8EP (69)
AL8808	Low Cost 3W LED Dr	6 ~ 30	1	5	1	97	Y	Y	-40~125	Y	Y	Y	Ext cap	TSOT25 (209)
AL8811	Boost/Buck/Inverting DC-DC Converter	3 ~ 20	1	2	0.1	-	-	-	-40~105	-	Y	Y	Ext cap	MSOP-8 (130)
AP8802H	60V 3W LED Dr	8 ~ 60	1	5	0.7	95	Y	Y	-40~105	-	Y	Y	Y	SO-8EP (45)

OTP: Over-Temperature Protection OC: Open-Circuit SC: Short-Circuit

To find out more information:

Medium voltage LED Driver Web page
Datasheet

<http://www.diodes.com/products/catalog/list.php?parent-id=91>
<http://www.diodes.com/datasheets/AL8811.pdf>

Ordering information

Device	Packaging	Part mark	Reel size	Tape width	Quantity
AL8811M8-13	MSOP-8	Y W X AL8811	13"	8mm	2500

All variants are in packages that are "Green" Molding Compound (No Br, Sb) with Lead Free Finish/RoHS Compliant (Note 1)
Notes:1. EU Directive 2002/95/EC (RoHS). All applicable RoHS exemptions applied, see EU Directive 2002/95/EC Annex Codes for date coding on part marks

Y Year 0~9 W A~Z week 1~26 a~z week 27~53 X: A~Z: Internal code