Issue Number | 001
September 2011

New Product Announcement

AL8807

Simple Low-EMI LED driver for high-brightness LED lamps

The AL8807 is Diodes' latest buck LED driver that drives LEDs with constant current up to 1.2A.

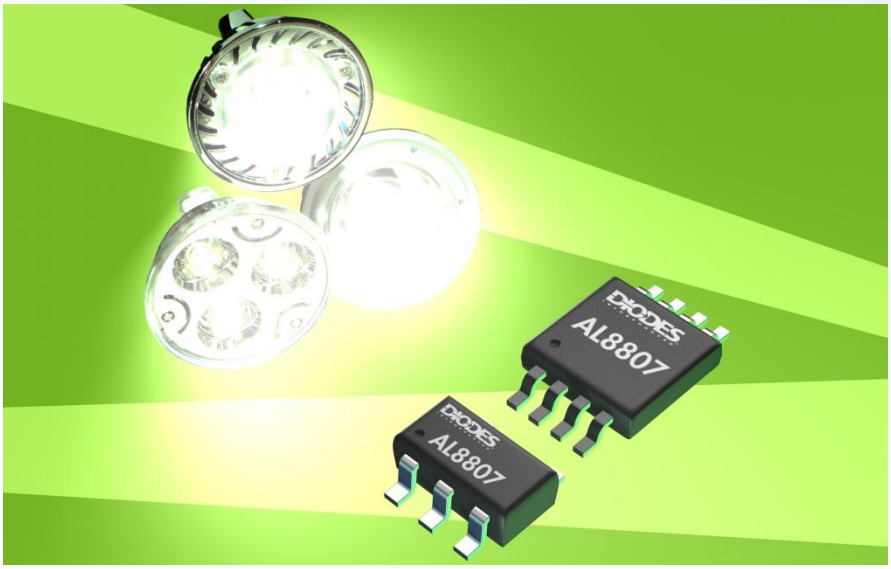
With its 30V maximum operating voltage it can drive up to 8 LEDs. With its minimum of 6V it comfortably operates at $12V_{AC}/_{DC}$ rails.

The AL8807 switches at up to 1MHz - which allows the use of small size external components. The small package size coupled with the need for only 4 external components produces a small solution footprint.

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

AL8807 is available in SOT25 enabling it to maintain its high drive capability over a wider ambient temperature range.

MSOP-8EP package supports larger LED currents and will be available mid-Q4



The Diodes advantage

The AL8807 provides a simple low EMI solution for Low Voltage general illumination LED lamps

- **Reduced switching noise and ringing**
  Reduces EMI issues – especially in non-optimised layout PCBs
- **Up to 30V & 1.2A LED drive capability**
  Drives up to 8 LEDs in series and provides cost effective solution for MR16 and other $12V_{AC/DC}$ systems
- **Small footprint packages – SOT25 & MSOP-8EP**
  High power density small PCB footprint solution
- **5% initial average LED current accuracy**
  Meets accuracy requirements of most lighting apps at cost effective price and improves inter-channel matching.
- **Simple digital PWM dimming with DC dimming on the CTRL pin**
  Provides flexible scheme to users with different dimming methods: DC for thermal control, PWM for brightness control (doesn't over drive the LED current)

Applications

- General illumination
- Multi-substrate LED driving
- Driving of parallel LED chains
- MR16 lighting
- $12V_{AC/DC}$ lighting
- SELV lighting

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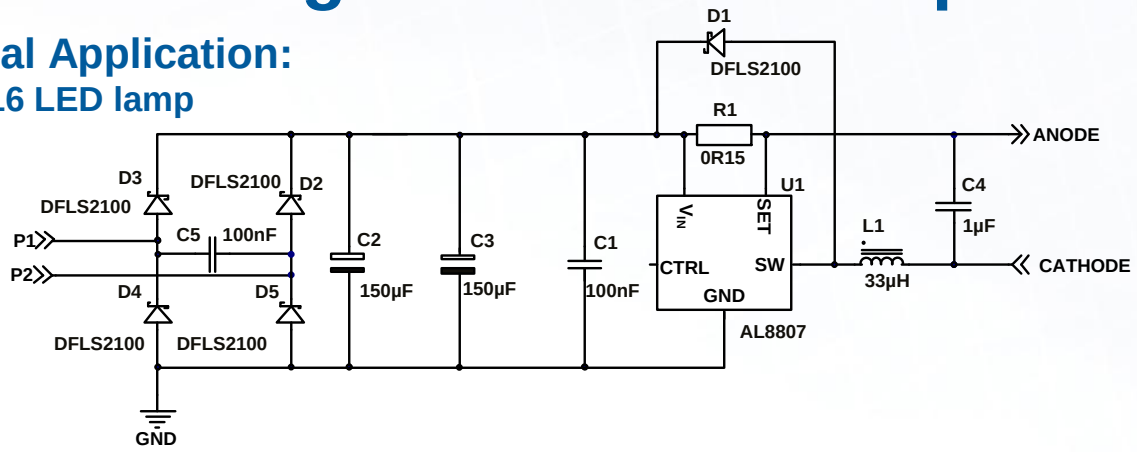
Typical Application:

MR16 LED lamp



Diodes Medium Voltage High brightness LED Drivers

Part number	Comment	Temp range	V_{IN}	LED Current	Accuracy	Frequency	Efficiency	Dimming	Package
		°C	V	mA	%	MHz	%		θ_{JA}
AP8800A	Low Cost 1W LED Dr	-40~85	8 ~ 28	370	5	0.6	92	PWM/DC	TSOT23-5 (250)
ZXLD1350	AEC-Q100 1W Dr	-40~105	7 ~ 30	380	5	1	95	PWM/DC	TSOT23-5 (250)
ZXLD1360	AEC-Q100 1W Dr	-40~125	7 ~ 30	1	5	1	95	PWM/DC	TSOT23-5 (82)
AL8805	Low Cost 3W LED Dr	-40~125	6 ~ 30	1	5	1	98	PWM/DC	SOT25 (250)
AL8807	Low-EMI 3W LED Dr	-40~125	6 ~ 30	1 1.2	5	1	98	PWM/DC	SOT25 (250) MSOP-8EP (69)
AL8806	Multi-Die 3+W LED Dr	-40~125	6 ~ 30	1.5	5	1	96	PWM/DC	MSOP-8EP (69)
AP8802H	60V 3W LED Dr	-40~105	8 ~ 60	1	5	500	92	PWM/DC	SO-8EP (45)
ZXLD1362	60V 3W LED Dr	-40~125	6 ~ 60	1	5	1	95	PWM/DC	TSOT23-5 (82)
ZXLD1366	60V 3+W LED Dr - Tighter accuracy	-40~125	6 ~ 60	1	2.5	1	95	PWM/DC	TSOT23-5 (82) DFN3030-6 (44) SO-8EP (45)

To find out more information:
LED Driver Web page http://www.diodes.com/products/catalog/list.php?parent-id=91
Datasheet http://www.diodes.com/datasheets/AL8807.pdf

Ordering information

Device	Packaging	Part mark	Reel size	Tape width	Quantity
AL8807W5-7	SOT25	B6 Y W X	7”	8mm	3000
AL8807MP-13	MSOP-8EP	Y W X E AL8807	13”	12mm	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