



New Product Announcement

AL8808

Simple Cost Effective LED driver for high-brightness LED lamps

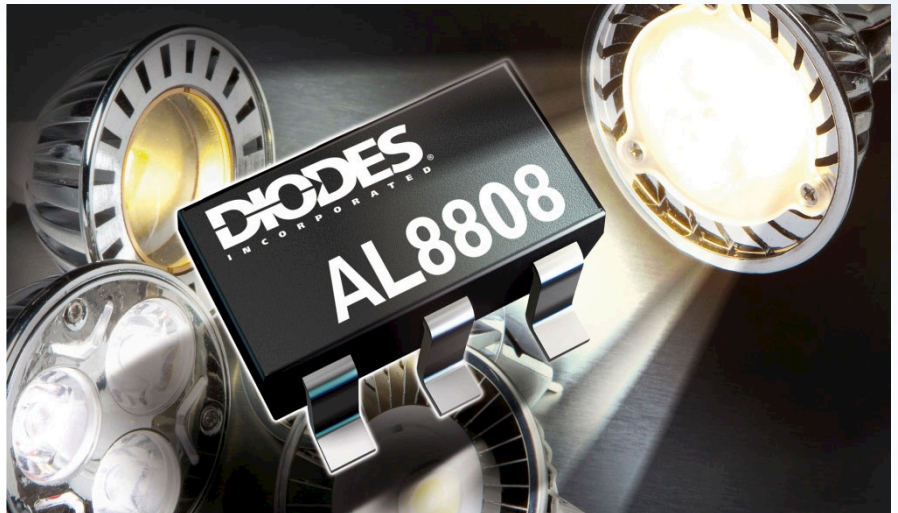
The AL8808 is Diodes' latest high brightness buck LED driver to meet the demands of latest low voltage LED lamps.

The AL8808 provides protection against a number of potential faults within a lamp:

1. Over-temperature condition → switches itself off,
2. Open-LEDs → automatically stops switching
3. Short-LEDs → continues switching but at reduced duty cycle minimising power dissipation

The AL8808 can operate up to 1MHz – reducing the size of external components. The small TSOT25 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 for cost sensitive lighting applications.



The Diodes advantage

The AL8808 provides a simple low EMI solution for Low Voltage general illumination LED lamps

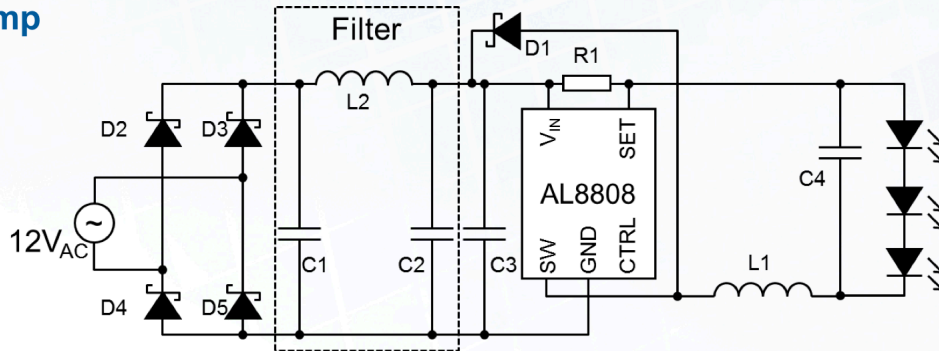
- **Reduced switching noise and ringing**
Solves EMI issues – especially in non-optimised PCB layout
- **Open-LED, short-LED and Over-Temperature Protection**
Open-LED → automatically stops switching,
Short-LED → f_{SW} & duty cycle reduction
 $T_J > 145^\circ\text{C}$ → Thermal trip
- **Small footprint packages – TSOT25**
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 PWM dimming And Analog dimming on the CTRL pin**
Provides flexible scheme to users with different dimming methods:
Analog 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} and 24V_{DC} lighting
- SELV lighting



**Typical Application:
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 θ _{JA}
		V					PWM	Analog		OTP	OC	SC		
AP8800A	Low Cost 1W LED Dr	8 ~ 28	0.37	5	0.7	92	Y	Y	-40~85	-	Y	Y	Y	TSOT23-5 (250)
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 1W 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)
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)
AL8807A	Low-EMI 3W LED Dr	6 ~ 36	1 1.3	5	1	98	N	>10: 1	-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)
AP8802H	60V 3W LED Dr	8 ~ 60	1	5	0.7	95	Y	Y	-40~105	-	Y	Y	Y	SO-8EP (45)
ZXLD1362	60V 3W LED Dr	6 ~ 60	1	5	1	95	Y	Y	-40~125	-	Y	Y	Y	TSOT23-5 (82)
ZXLD1366	60V 3+W LED Dr - Tighter accuracy	6 ~ 60	1	2.5	1	95	Y	Y	-40~125	-	Y	Y	Y	TSOT23-5 (82) DFN3030-6 (44) SO-8EP (45)

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/AL8808.pdf>

Ordering information

Device	Packaging	Part mark	Reel size	Tape width	Quantity
AL8808WT-7	TSOT25	B9 Y W X	7"	8mm	3000

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

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