



## New Product Announcement

### AL8805

# Simple cost effective solution for driving multiple 3W LED

The AL8805 is Diodes' latest step-down DC-DC converter designed to drive LEDs with a constant current up to 1A.

The device can drive up to 8 LEDs, depending on the forward voltage of the LEDs, in series from a voltage source of 6V to 30V. Series connection of the LEDs provides identical LED currents resulting in uniform brightness and eliminating the need for ballast resistors.

The AL8805 switches at frequency up to 1000kHz. This allows the use of small size external components. The SOT23-5 (green molding) package and coupled with it requiring only 4 external components produces a small solution footprint.

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



### The Diodes advantage

The AL8805 provides a simple cost effective solution for general illumination LED lamps

- **30V 1A LED drive capability**  
Drives up to 8 LED in series and provides cost effective solution for MR16 and other 12V<sub>AC/DC</sub> systems
- **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
- **High switching frequency up to 1MHz**  
Small inductance value and size reducing overall solution size
- **Small footprint SOT23-5 package with only 4 external components**  
High power density small PCB footprint solution

### Applications

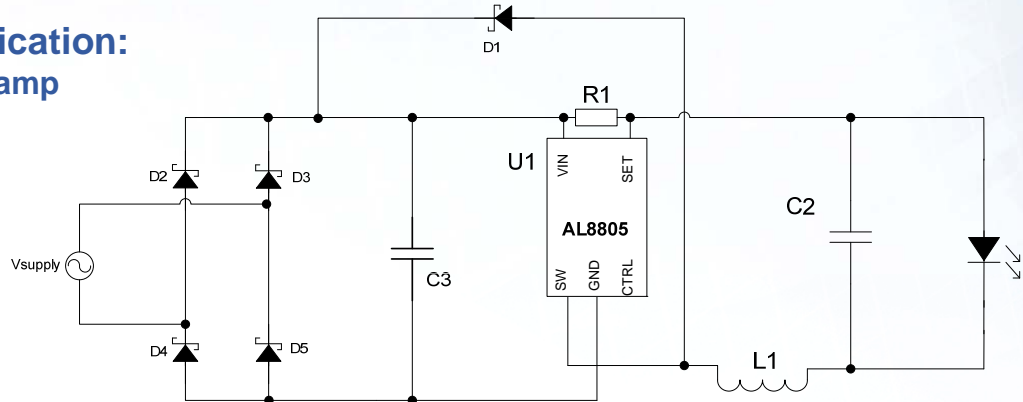
- 3W LED driving
- General illumination
- MR 16 lighting
- 12V<sub>AC/DC</sub> lighting



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Announcement**  
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**AL8805**

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**Typical Application:  
MR16 LED lamp**



## Diodes Medium Voltage High brightness LED Drivers

	AP8800	ZXLD1350 ZXLD1352	AL8805	ZXLD1360	AP8802	AP8802H	ZXLD1362 ZXLD1366
Temp range	-40 ~ 85°C	-40 ~ 105°C	-40 ~ 125°C	-40 ~ 125°C	-40 ~ 105°C	-40 ~ 105°C	-40 ~ 125°C
V <sub>IN</sub>	8 ~ 28V	7 ~ 30V	6 ~ 30V	7 ~ 30V	8 ~ 48V	8 ~ 60V	6 ~ 60V
LED Current	350mA	380mA	1A	1A	1A	1A	1A
Accuracy	8%	5%	5%	5%	8%	5%	5/2.5%
Frequency	500kHz	1MHz	1MHz	1MHz	500kHz	500kHz	1MHz
Efficiency	92%	95%	98%	95%	92%	92%	95%
Dimming	PWM/DC	PWM/DC	PWM/DC	PWM/DC	PWM/DC	PWM/DC	PWM/DC
Package θ <sub>JC</sub> (°C/W)	SO-8 (52), MSOP-8 (90), DFN3030-10 (24)	TSOT23-5 (200)	SOT23-5 (200)	TSOT23-5 (33)	SO-8 (52), DFN3030-10 (24) SO-8EP (7)	SO-8EP (7)	TSOT23-5 (33) DFN3030-6 (14) SO-8EP (7)

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/AL8805.pdf>

## Ordering information

Device	Packaging	Part mark	Reel size	Tape width	Quantity
AL8805W5-7	SOT23-5	A6 YWX	7"	8mm	3000

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