



Simple 60V, 150mA Linear LED driver

The AL5812 is Diodes' latest Linear LED driver and drives LED chains up to 59V with a constant current up to 150mA.

Its 60V capability enables it to drive long LED chains (up to 16 white LEDs) while operating from rails as low 3.5V. This allows the device to operate with 5V, 12V_{AC/DC}, 24V_{AC/DC} and 48V_{DC} rails.

The AL5812 operates with the minimal amount of external components – just a decoupling capacitor and a high value LED current setting resistor - which allows the use of small size and cost external components and results in a small solution footprint.

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

AL5812 is available in MSOP-8EP and U-DFN3030-6 thermally enhanced packages which support linear operation over the wide operating voltage range and ambient temperatures.



The Diodes Advantage

The AL5812 provides a simple, cost-effective solution for low-current LED lamps.

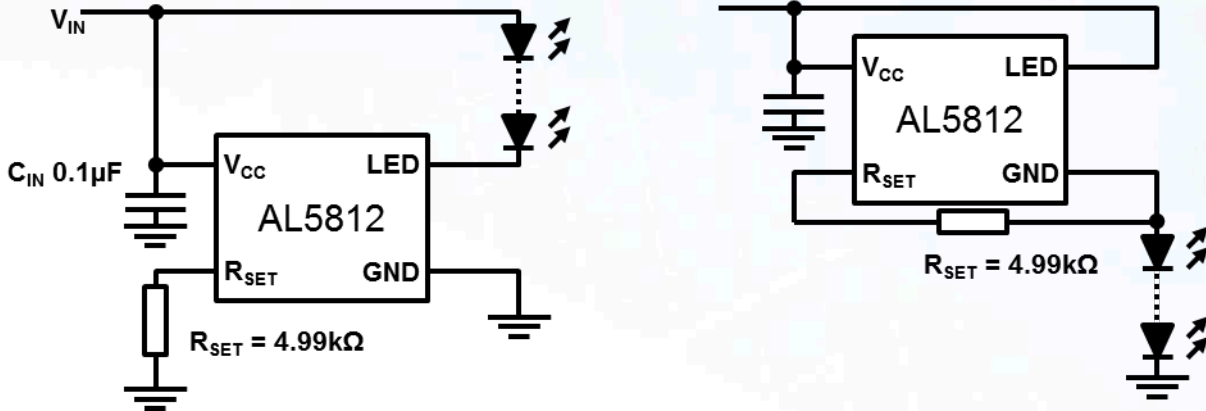
- **Small footprint thermally enhanced surface mount packages**
Provides the power handling capability over wide supply voltages and ambient temperatures
- **High-value current setting resistor R_{SET}**
Lower cost small footprint resistors reducing system cost
- **3% initial average LED current accuracy**
Meets lamp accuracy requirements
- **1 ~ 60V output voltage range**
Drives up to 16 LED
- **-40°C to +125°C temperature range**
Works at high luminaire internal temperatures

Applications

- Signage
- Secondary side local LED current regulation
- Instrument illumination



**Typical Application:
1/2W LED lamp**



Diodes Linear LED Drivers

Part	Topology	Supply Voltage		Max V _{OUT} V	Output Current mA	Max. LED Current mA	Accuracy %	Frequency kHz	Efficiency %	Dimming	Temp Range °C	Package
		Min	Max									
		V	V									
AL8400	Controller	2.2	18	18	15	external transistor	3	-	-	-	-40~+125	SOT353
DLD101	Driver	-	100	2	1000	1000	-	-	-	-	-40 ~+85	DFN3030D-8
AL5801	Driver	4.5	100	2	1000	1000	-	-	-	PWM	-40 ~+85	SOT26
AL5802	Driver	4.5	30	30	650	120	-	-	-	PWM	-40~+125	SOT26
AL5812	Driver	3.5	60	60	150	150	3	-	-	-	-40~+125	MSOP-8EP U-DFN3030-6

To find out more information:

LED Driver Web page

<http://www.diodes.com/products/catalog/list.php?parent-id=182>

Datasheet

<http://www.diodes.com/datasheets/AL5812.pdf>

Ordering information

Device	Packaging	Part mark	Reel size	Tape width	Quantity
AL5812FF-7	U-DFN3030-6	B9 Y W X	7"	8mm	3000
AL5812MP-13	MSOP-8EP	Y W X E AL5812	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