

60V, 1A Hysteretic Buck LED Driver in Thermally Enhanced SO-8EP & DFN3030

The AL8862 is a step-down DC-DC converter designed to drive LEDs with a constant current, and which operates with an input supply voltage of 5V to 60V. The device provides an externally adjustable output current of up to 1A.

The AL8862 integrates a low $R_{DS(ON)}$ power switch and a high-side output current sensing circuit.

The maximum output current of the AL8862 is set via an external resistor connected between the VIN and SET input pins. It supports both Analog and PWM LED brightness dimming by applying either a DC voltage or a PWM signal at the CTRL pin.

UPDATE:

The AL8862 is now available in both the thermally enhanced SO 8EP and high power density 3x3 mm footprint (DFN3030).



The Diodes Advantage

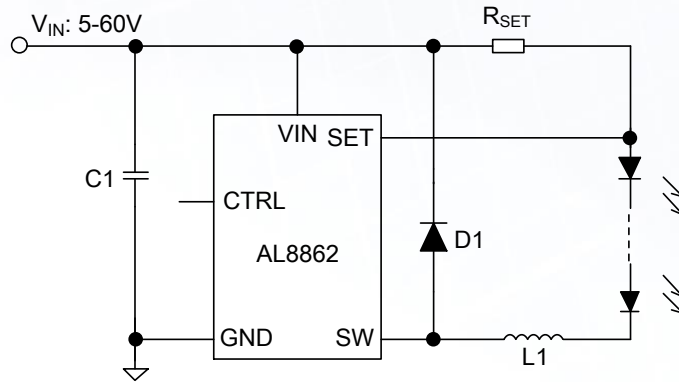
The AL8862 is a step-down DC-DC converter that provides an externally adjustable output current of up to 1A.

- **Integrated 60V/0.4Ω power MOSFET drives LEDs up to 1A current**
Requires fewer external components to achieve higher efficiency. Supports high-power applications.
- **Input voltage range of 5V to 60V**
Delivers a wide range of input voltages to support a broad spectrum of applications.
- **Dimming range from 0% to 100% for PWM dimming**
Creates broad dimming range capabilities.
- **Built-in LED-Short/Open, thermal overload (OTP) protections**
Provides a reliable system performance.
- **Thermally enhanced U-DFN3030-6 and SO-8EP packages**
Supports wide power levels and temperatures.

Applications

- Industrial lighting
- Architectural lighting
- External drivers with multiple channels

Typical Application Circuit



Focus Buck LED Driver Product Portfolio

Part Number	Min. Input Voltage	Max. Input Voltage	Max. Output Current	Reference Voltage Accuracy	Switching Frequency	Hysteresis	Efficiency	Ambient Temperature Range	Package
	V	V	A	± %	MHz	%	%	°C	
AL8862	5	60	1	4	1	±13	>95	-40~ +105	SO-8EP U-DFN3030-6
AL8843	4.5	40	3	4	1	±13	>95	-40~ +105	SO-8EP
AL8860	4.5	40	1.5	4	1	±20	>95	-40~ +105	TSOT25 MSOP-8EP
AL8861	4.5	40	1.5	4	1	±13	>95	-40~ +105	TSOT25 SOT89-5 MSOP-8EP

Ordering Information

Part Number	Compliance	Package Code	Package	Moisture Sensitivity	Tape and Reel	
					Quantity	Reel Diameter
AL8862FF-7	Standard	FF	U-DFN3030-6	MSL 1	3000	7"
AL8862SP-13	Standard	SP	SO-8EP	MSL 1	2,500	13"