



New Product Announcement

AL9901

Universal High Voltage Buck LED Driver

The AL9901 is a high input voltage PWM LED driver that provides a simple, efficient solution for universal input (85Vac up to 305Vac) high brightness LED lamps.

The AL9901 Buck LED Driver creates a constant LED current programmed by one external resistor; with a switching frequency up to 300kHz determined by an external single resistor.

The LED brightness can be varied by both Linear and PWM dimming using the AL9901's LD and PWM pins respectively. The PWM input operates with duty ratio of 0-100% and frequency of up to several kHz.

The AL9901 is available in the SO-16 and also the thermally enhanced DFN6040-12 packages.



The Diodes Advantage

The AL9901 provides a simple Bill Of Materials (BOM) solution for universal input voltage applications.

- **High Voltage MOSFET**

Up to 650V, 2A

- **Internal High Voltage Regulator Removes Start-Up Resistor**

7.5V regulated output, can supply an external circuitry

- **LED Brightness Control through Linear and PWM Dimming**

LD pin and PWM_D pin operate from 0 -100% Dimming

- **Thermal Enhanced U-DFN6040-12, and SO-16 Packages**

Applications

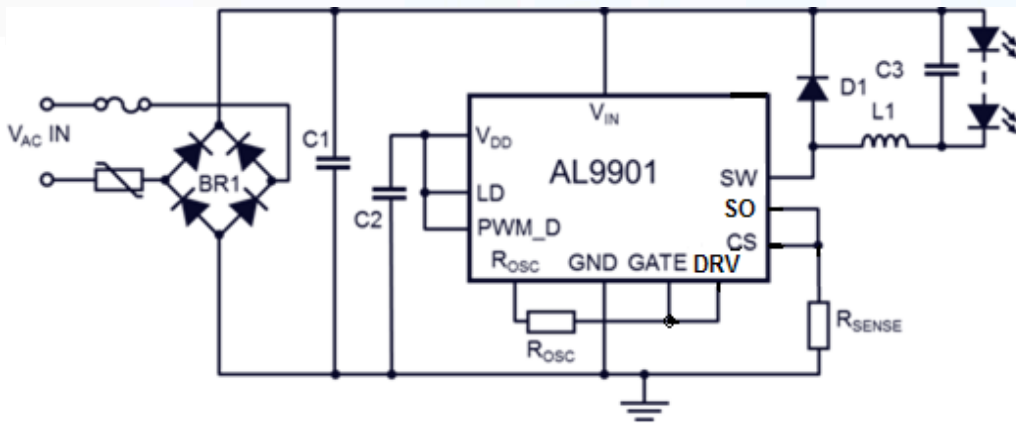
- LED Offline Lamps
- High Voltage DC-DC LED Driver
- Signage and Decorative LED Lighting
- Back Lighting of Flat Panel Displays
- General Purpose Constant Current Source



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Typical Application Schematic



Product Portfolio

Part	Min Input Voltage	Max Input Voltage	V _{DD}	Output Gate Current	LED Current	Accuracy	Max Switching Frequency	Efficiency	Dimming		Supply Current	Temp Range	Package
	V	V							PWM	Analog			
AL9901	15	500	7.5	400	Internal MOSFET	±5	300	90	Y	Y	0.5	-40~+105	DFN6040, SO16
AL9910-5	15	500	7.5	400	External MOSFET	±5	300	90	Y	Y	0.5	-40~+85	SO-8
AL9910	15		±10			0.5							
AL9910A	20		±10			0.65					-40~+105	SO-8EP	

Ordering Information

Part Number	Vcs Tolerance	Package Code	Packaging	Quantity	Reel size
AL9901FDF-13	±5%	FDF	U-DFN6040-12	3000/Tape & Reel	13
AL9901S16-13	±5%	S16	SO-16	3000/Tape & Reel	13