



# New Product Announcement

## AL5892

### TRIAC Dimmable Linear LED Driver for LED Lamps

The AL5892 is an offline TRIAC dimmable linear LED driver with smart bleeder operation. It is compliant with EMI standards without requiring extra special EMI components.

With its built-in innovative efficiency compensation circuitry, the AL5892 operates at up to 85% efficiency (driving a single high-voltage LED chain) and maintains a >0.7 power factor.

Optimized to work with 120V<sub>AC</sub> TRIAC dimmers with extremely low external BOM count, the AL5892 has a dimming curve compliant with NEMA SSL7.

AL5892's closed-loop control regulates the LED current variation within 2% across all line or load voltage changes.

The AL5892 has abundant protection features, such as LED open/short protection (OSP), thermal foldback protection (TFP), and overtemperature shutdown protection (OTP).

It is available in SO-8EP package.

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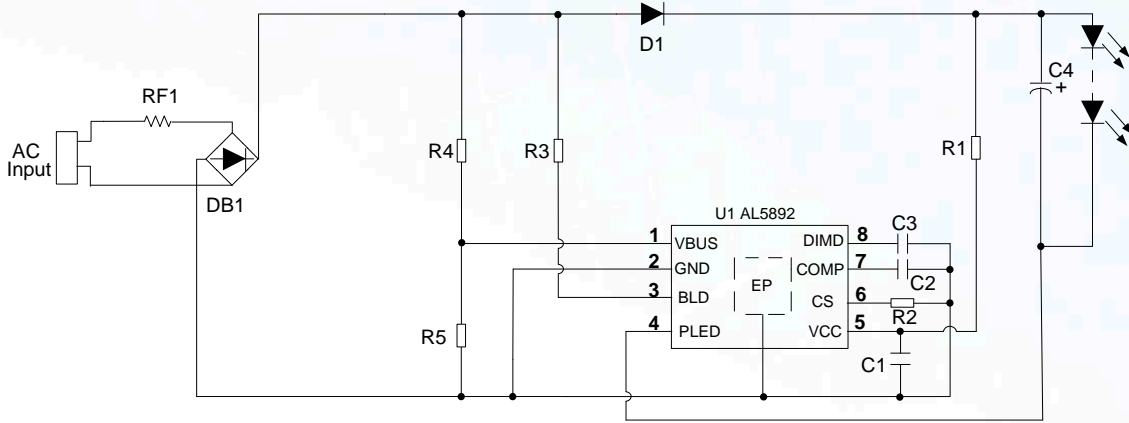
#### The DIODES' Advantage

- Integrated Main Power 350V MOSFET and Bleeder 500V MOSFET**  
 Reduced PCB size and BOM cost
- Wide Dimmer Compatibility**  
 Supports popular 120V<sub>AC</sub> TRIAC dimmers with dimming curve compliant with NEMA SSL7
- Simple and Low EMI with Linear Topology**  
 No inductor, linear driver easily meets EMI standard
- High-Efficiency and High-Power Factor Operation**  
 Innovative compensation method provides up to 85% efficiency with power factor >0.7 to meet Energy Star® requirements.
- Robust Protection Features**  
 LED open/short protection (OSP), thermal foldback protection (TFP), and overtemperature shutdown protection (OTP)

#### Applications

- LED Retrofit Bulbs
- TRIAC Dimmable LED Lamps
- LED Lighting Luminaires

### Typical Application



### Diodes' High-Voltage Linear LED Drivers

Part Number	Min. Input Voltage	Max Input Voltage	Accuracy CS	Efficiency	Operating temp range	Power Factor	Max Output Current	Dimming	Topology	Package Outline
	V <sub>AC</sub>	V <sub>AC</sub>	%	%	°C		mA			
AL5890	12	265	±10	85	-40~+105	0.5	40	No	Linear	PowerDi123/ SOT89/ TO252
<b>AL5892</b>	<b>108</b>	<b>132</b>	<b>±4</b>	<b>&gt;82</b>	<b>-40 ~ +105</b>	<b>&gt;0.7</b>	<b>100</b>	<b>TRIAC</b>	<b>Linear</b>	<b>SO-8EP</b>

### Ordering Information

Part Number	Package Code	Package	Tape and Reel	
			Quantity	Part Number Suffix
AL5892SP-13	SP	SO-8EP	4000/Tape & Reel	-13

For more information: <https://www.diodes.com/part/AL5892>