



New Product Announcement

AL5802LP
AL5802LP4

30V/120mA Linear LED Drivers in Tiny DFN Packages Bring Simplicity and Dependability to LED Lighting

Diodes Incorporated announces the introduction of two new linear LED drivers, supporting output voltage and output current up to 30V and 120mA, respectively.

The AL5802LP/4 combines two high performance NPN bipolar transistors; one is used to measure the current and the second to drive the LEDs. This provides a cost-effective, dimmable current sink solution for controlling LED strings.

The AL5802LP/4 LED current can be dimmed by using a PWM signal on the EN pin; and its nominal LED current can be adjusted from 10mA to 120mA by connecting the REXT pin to a variable external resistor.

At extremely high temperatures the negative temperature coefficient characteristic of the driver provides overtemperature protection to improve the reliability.

The AL5802LP/4 are packaged in U-DFN1616-6 and X2-DFN1310-6 packages, respectively (standard AL5802 is in SOT26). These advanced leadless packages provide excellent thermal impedance for thermally challenged LED lighting systems.



The Diodes Advantage

- **Low Thermal Impedance, Low-Profile and Small Form-Factor Package**
Enables Smaller Footprint solutions
U-DFN1616-6: Only 1.65mm x 1.65mm footprint with 0.55mm height
X2-DFN1310-6: Only 1.38mm x 1.075mm footprint with 0.4mm height
- **Adjustable Constant Current up to 120mA with PWM Dimming Functionality**
LED brightness/current is simply set by external resistor with PWM dimming of the LED string providing brightness control
- **Automatic Overtemperature Protection**
Built-in negative temperature coefficient automatically reduces the LED current at high temperatures and improves system integrity
- **Fast Power-Up Time**
As soon as the bias is applied, these drivers power-up immediately providing fast illumination
- **Wide Open-Collector Output**
AL5802 supports operation from 4.5V to 30V without the need of additional components

Applications

- General illumination
- LED signs
- Emergency lighting
- Light sheets



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Typical Application Circuit

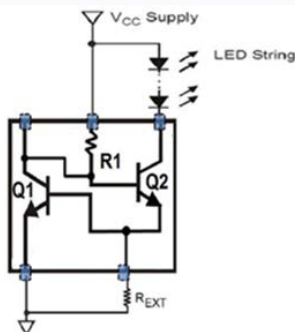


Fig 1. LED Driver

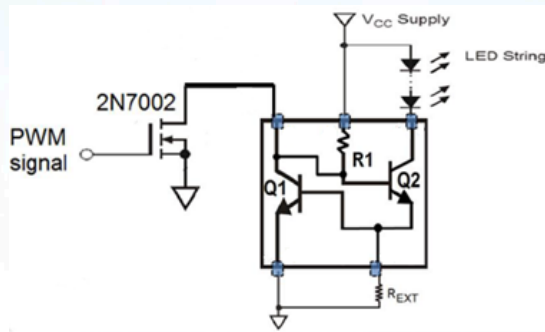


Fig 2. LED Driver with PWM Dimming Functionality

Product Portfolio

Part Number	Output Voltage Range V_{OUT} (V)	Supply Voltage Range V_{CC} (V)	Adjustable Current Range I_{OUT} (mA)	Reference Voltage Range V_{REXT} (V)	Power Dissipation P_D (W)	PWM Dimming Capable	Package
AL5802LP-7	0.8 to 30	4.5 to 30	10 to 120	0.75	0.44	Yes	U-DFN1616-6
AL5802LP4-7	0.8 to 30	4.5 to 30	10 to 120	0.75	0.36	Yes	X2-DFN1310-6