

### 60V Adjustable Current Up To 200mA Linear LED Driver in a Small Footprint W-DFN2020 Package

The AL5810Q is an Automotive compliant, AEC-Q100 Grade 2 qualified Linear LED driver with adjustable LED currents up to 200mA. It offers excellent temperature and voltage current stability. The LED output current can be set by an external standard value resistor.

The AL5810Q has a combined supply rail and open drain output pin that can swing from 2.5V up to 60V. This allows it to maintain LED current regulation across the whole automotive operating voltage range, including load dumps, in both high-side or low-side LED strings configuration.

To meet automotive demands for automatic optical inspection requirements, the AL5810Q is available in the Wetable Flank W-DFN2020-3 (2mm x 2mm) package, power dissipation ( $P_D$ ) up to 2W.



#### The Diodes Advantage

**AL5810Q provides a small footprint, high-power density solution for automotive linear LED driving applications**

- **Wide operating voltage range from 2.5V to 60V**  
Drives multiple LEDs in series across a wide range of input conditions – including load dumps
- **LED output current adjusted by high value external resistor**  
Simplified system design and logistics
- **Wide 5mA to 200mA LED current adjustment range**  
Suitable for wide range LED applications
- **Suitable for high-side and low-side drive of LEDs – including paralleling of devices**  
Simplifies system design and supports higher LED current applications
- **Automotive Compliant in Wetable Flank W-DFN2020-3 package**  
AEC-Q100 grade 2 qualified, manufactured in IATF16949 certified sites supporting PPAP documents with improved AOI

#### Applications

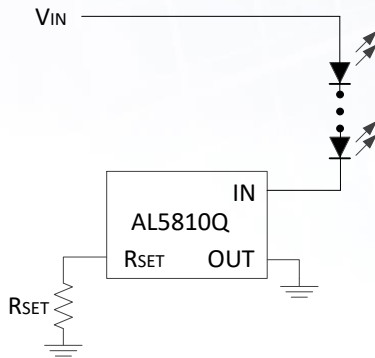
- Automotive Rear Lamps
- Automotive Interior Lamps
- Automotive Infotainment Display Backlights



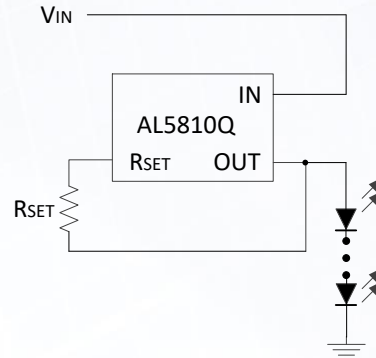
# New Product Announcement

## AL5810Q

### Circuit Diagram



Low Side LED String configuration



High Side LED String configuration

### Automotive Linear LED Driver Portfolio

Part Number	Product Description	Min. Input Voltage *	Max. Input Voltage*	Max. Output voltage*	Channel Out put Current	LED Current accuracy	Dimming method		Ambient temperature	Package Outline
		V	V	V			mA	+/- %		
AL5809Q	60V LED Linear Driver	2.5	60	60	10 to150	5	-	Ext.	-40 ~ +125	PowerDi123®
AL5810Q	60V LED Linear Driver	2.5	60	60	5 to 200	5	-	Ext.	-40 ~ +105	W-DFN2020-3 (SWP)

\* Measured between IN and OUT pins

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Further information: [www.diodes.com/part/view/AL5810Q](http://www.diodes.com/part/view/AL5810Q)

### Ordering Information

Device	Packaging	Marking ID	7" Tape and Reel	
			Quantity	Part Number Suffix
AL5810QFJ3-7	W-DFN2020-3 (SWP)	BSQ	3,000	-7