



New Product Announcement

AL5816Q

Automotive-Compliant 60V Linear LED Driver Controller with Fast PWM Dimming

The AL5816Q is a 5-terminal adjustable constant current linear LED driver controller offering excellent temperature stability and current capability.

The AL5816Q works across a wide input voltage range from 4.5V to 60V. With its low 200mV current sense FB voltage, it controls the regulation of LED current with minimum overheads.

The device has an output drive up to 15mA, which enables it to drive external bipolar transistors or MOSFETs.

The AL5816Q can be dimmed down through PWM pin, it can run at frequency up to 50kHz.

It is available in SOT25 package, and is automotive-compliant, qualified to AEC-Q100 Grade 1.



The Diodes Advantage

- **Wide input voltage range from 4.5V to 60V**
Works across automotive supply ranges including transients
- **15mA driving capability at OUT pin**
Supports up to 1.5A current applications with BJT
Can drive higher output current with MOSFET
- **200mV LED current sense voltage $\pm 4\%$**
High output current accuracy and Low power consumption for sense resistor and system
- **Robust solution with many internal protection features**
Under-Voltage Lock Out (UVLO), Output Short Protection, Over-Temperature Protection (OTP)
- **Fast Robust PWM Dimming**
Up to 50kHz PWM dimming frequency with 60V withstand capability
- **Automotive-Compliant with AEC-Q100 Grade 1**
Qualified for Automotive Applications

Applications

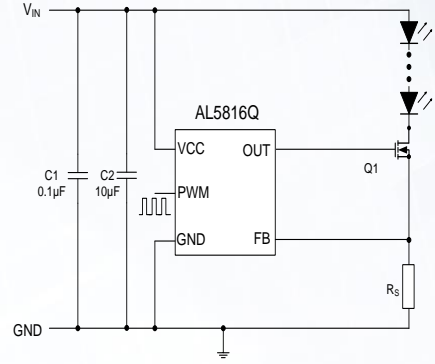
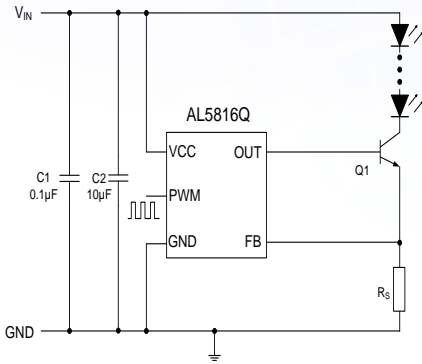
- Automotive Rear Lamps
- Automotive Interior Lamps



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Circuit Diagram



Product Portfolio

Part Number	Product Description	Min. Input Voltage	Max. Input Voltage	Max. Out put voltage	Max. Out put Current	LED Current Accuracy	Switching Frequency	Dimming Method		Efficiency	Sense Voltage	Ambient Temperature	Package Outline
								Analog	PWM				
AL5809Q	60V LED Linear Converter	2.5	60	60	150	5	-	-	-	Ext.	-	-40 ~ +125	PowerDI-123
AL8400Q	LED Linear Controller	2.2	18	External BJT and MOSFET	External BJT and MOSFET	3	-	-	-	Ext	200	-40 ~ +125	SOT353
AL5816QW5-7	60V LED Linear Controller	4.5	60	External BJT and MOSFET	External BJT and MOSFET	4	-	-	Y	>80	200	-40 ~ +125	SOT25

Ordering Information

Device	Packaging	Marking ID	7" Tape and Reel	
			Quantity	Part Number Suffix
AL5816QW5-7	SOT25	BJQ	3,000	-7