



Automotive-Compliant LED Driver from Diodes Incorporated Simplifies Rear Lighting Designs

Plano, Texas – June 10, 2021 – Diodes Incorporated (Nasdaq: DIOD) has expanded its portfolio of devices supporting automotive exterior illumination with the introduction of the [AL5873Q](#) three-channel linear LED driver targeted at simplifying rear lamp cluster designs.

Rated for 125°C ambient temperature operation, this automotive-compliant, AEC-Q100 Grade 1 qualified device meets the demands of next generation vehicle design – while also providing energy and space savings, hence, low overall system costs. Each of the AL5873Q's channels can drive up to 250mA, and is set via two reference resistors, which are connected to the driver IC's REF1 and REF2 pins. Support for two different LED current levels enables more streamlined lighting systems - as the same LEDs can be used in rear lamp clusters for tail and brake lamps. This lowers the bill of materials (BOM) cost substantially.

The AL5873Q has analog and master PWM dimming control functionality, supporting a maximum PWM frequency of 1kHz. The PWM dimming function is pivotal in improving current accuracy when LEDs are being driven at low current levels. The current on each channel is regulated to within a $\pm 4\%$ tolerance, which allows better channel-channel matching in the rear combination lamps. To conserve power, the AL5873Q goes into standby mode if no PWM signal is detected.

The [AL5873Q](#) has built-in protection features with a bidirectional (input/output) fault pin which flags any faults and allows up to four devices to have their fault pins connected together, so that any faults identified are commonly reported. As part of its protection feature set, an internal junction temperature monitoring circuit reduces the LED current if its defined threshold temperature is exceeded. In addition to this thermal foldback, thermal shutdown and LED string-open/-short protection mechanisms are also included, as well as input undervoltage lockout.

The AL5873Q is supplied in a compact 16-pin TSSOP package, supports PPAP documentation, and is manufactured in IATF 16949 certified facilities. The unit price is \$0.50 in 10,000 piece quantities.

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About Diodes Incorporated

Diodes Incorporated (Nasdaq: DIOD), a Standard and Poor's SmallCap 600 and Russell 3000 Index company, delivers high-quality semiconductor products to the world's leading companies in the consumer electronics, computing, communications, industrial, and automotive markets. We leverage our expanded product portfolio of discrete, analog, and mixed-signal products and leading-edge packaging technology to meet customers' needs. Our broad range of application-specific solutions and solutions-focused sales, coupled with worldwide operations of 31 sites, including engineering, testing, manufacturing, and customer service, enables us to be a premier provider for high-volume, high-growth markets. For more information visit www.Diodes.com.

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