



*For immediate release*

## **Cost-Effective Dimmable LED Driver from Diodes Incorporated Delivers Wide Triac Compatibility**

**Plano, Texas – December 17, 2015** – Diodes Incorporated (Nasdaq: DIOD), a leading global manufacturer and supplier of high-quality application specific standard products within the broad discrete, logic and analog semiconductor markets, today introduced the AL1696. This LED driver is designed to fit a wide range of triac-dimmable lighting applications, especially retrofit lamps. An integrated MOSFET, which also eliminates the need for an auxiliary winding, reduces BOM cost and component count while the option of three MOSFET voltage/current ratings provides design flexibility for meeting manufacturing requirements for residential lighting.

The AL1696 is based on buck or buck-boost topology and implements constant current conversion with a high power factor by operating in boundary conduction mode. This also reduces switching noise, easing EMI/EMC testing and qualification. The design only requires a single winding inductor and achieves a tight current sense tolerance of  $\pm 3\%$ . The device features a low operating current of  $120\mu\text{A}$ , with a  $150\mu\text{A}$  startup current, and is compatible with a wide of leading-edge and trailing-edge dimmers, providing compliance with the NEMA SSL6 dimming curve.

MOSFET options for 3A at 300V, 2A at 500V and 2A at 600V enable the AL1696 to be matched to end-market line-input voltage requirements and allow it to be used in LED lamps up to 12W. The AL1696 is offered in a small outline SO-7 package that is configured with an extra pin space between the high-voltage MOSFET drain and its low-voltage pins to increase electrical isolation. The device also features internal protection for output short circuit, over-temperature,

under-voltage lockout, leading-edge blanking and cycle-by-cycle over-current protection. Further information is available at [www.diodes.com](http://www.diodes.com).

### **About Diodes Incorporated**

Diodes Incorporated (Nasdaq: DIOD), a Standard and Poor's SmallCap 600 and Russell 3000 Index company, is a leading global manufacturer and supplier of high-quality application specific standard products within the broad discrete, logic and analog semiconductor markets. Diodes serves the consumer electronics, computing, communications, industrial, and automotive markets. Diodes' products include diodes, rectifiers, transistors, MOSFETs, protection devices, functional specific arrays, single gate logic, amplifiers and comparators, Hall-effect and temperature sensors; power management devices, including LED drivers, AC-DC converters and controllers, DC-DC switching and linear voltage regulators, and voltage references along with special function devices, such as USB power switches, load switches, voltage supervisors, and motor controllers. Diodes' corporate headquarters and Americas' sales office are located in Plano, Texas. Design, marketing, and engineering centers are located in Plano; San Jose, California; Taipei, Taiwan; Manchester, England; and Neuhaus, Germany. Diodes' wafer fabrication facilities are located in Kansas City, Missouri and Manchester, with two additional facilities located in Shanghai, China. Diodes has assembly and test facilities located in Shanghai and in Chengdu, China, as well as in Neuhaus and in Taipei. Additional engineering, sales, warehouse, and logistics offices are located in Taipei; Hong Kong; Manchester; Shanghai; Shenzhen, China; Seongnam-si, South Korea; and Munich, Germany, with support offices throughout the world. For further information, including SEC filings, visit Diodes' website at [www.diodes.com](http://www.diodes.com).

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