



## **Mains-Dimmable LED Lamp Driver from Diodes Incorporated Raises Device Flexibility while Reducing BOM Cost**

**Plano, Texas – December 19, 2013** – 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 AP1694, an AC-DC controller providing a universal high-performance driver solution for a variety of mains-dimmable LED lamp designs. Suitable for both 120V and 230V AC inputs, while supporting non-isolated buck, buck-boost and isolated flyback topologies, this part enables between 10% and 50% reductions in total BOM costs.

The controller uses Diodes' patented PFM technology to tightly regulate LED current and achieve a high power factor and low total harmonic distortion. By operating in boundary-conduction mode, the AP1684 also assures high efficiency and low EMI driver characteristics. As a primary side controller, this part removes the need for opto-coupler and secondary-side control circuitry, and being inherently stable, eliminates the need for loop compensation.

The AP1694 delivers a 5% initial LED current accuracy, meeting the requirements of most mains-dimmable LED lighting applications and is compatible with a wide range of different dimmers, including both leading edge and trailing edge types. It achieves deep dimming down to 1%, complies with the NEMA SSL6 standard for dimming curves and meets the requirements of the IEC6100-3-2 harmonic standard.

Provided in the small form factor SO-8 package and requiring only 26 external components in buck topology, the AP1694 driver controller offers designers of mains-dimmable LED lamps a higher power density with a simpler and smaller total circuit footprint. The device also integrates comprehensive protection

features, including open-load detection, over-voltage, short-circuit and over-temperature protection. For further information, visit the Company's website 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, logistics center, 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 more located in Shanghai, China. In addition, two assembly-test facilities are located in Shanghai; two are located in Chengdu, China, with one in Neuhaus and one in Taipei. Additional engineering, sales, warehouse, and logistics offices are located in Fort Worth, Texas; Taipei; Hong Kong; Manchester; Shanghai; Shenzhen, China; Seongnam-si, South Korea; Suwon, South Korea; Tokyo, Japan; and Munich, Germany, with support offices throughout the world. For further information, including SEC filings, visit Diodes' website at <http://www.diodes.com>.

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