

# Power Integrations Launches New Reference Design for High-Power LED-Lighting Applications

12/16/2014

Innovative design drastically shrinks component count, improving efficiency, size and reliability of LED streetlights and high-bay lighting

SAN JOSE, Calif.--(BUSINESS WIRE)-- Power Integrations (Nasdaq: **POWI**), the leader in high-efficiency, high-reliability LED-driver ICs, today announced a new reference design for LED streetlights, high-bay lights and other high-power LED-lighting applications. The new design, **RDR-382**, describes a constant current, 43 V (nominal), 150 W reference power supply for 90-265 VAC solid-state lighting, utilizing Power Integrations **HiperPFS™-2** PFC controller ICs and **HiperLCS™** integrated LLC power stage ICs.

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Traditional dual-stage drivers with separate PFC and LLC stages produce a constant-

voltage (CV) output requiring multiple DC-DC converters to convert the output to constant current (CC). In contrast, RDR-382 uses a novel feedback and control scheme which enables the LLC to provide constant current directly at the output. As a result, component count is cut by approximately one-third, efficiency is increased to > 93 %, and the elimination of the DC-DC converter stage significantly reduces size. Additionally, the high nominal LLC switching frequency (250 kHz) reduces the size of the required magnetics, while the use of a continuous-conduction-mode, variable-frequency PFC stage reduces EMI compared to fixed-frequency alternatives.

Comments Andrew Smith , senior product marketing manager for Power Integrations: "Reliability is especially important for high-power lighting applications above 75 W output. Because this design is high efficiency, less heat is generated. In combination with a reduced component count, this ensures a long lifetime."

**RDR-382** can be used to drive single or multiple LED strings and allows analog dimming to be implemented with a 0-10 VDC input. The reference design can be downloaded from: <http://led-driver.power.com/sites/default/files/PDFFiles/rdr382.pdf>

## About Power Integrations

**Power Integrations, Inc.**, is a Silicon Valley-based supplier of high-performance electronic components used in high-voltage power-conversion systems. The company's integrated circuits and diodes enable compact, energy-efficient AC-DC power supplies for a vast range of electronic products including mobile devices, TVs, PCs, appliances, smart utility meters and LED lights. SCALE™ IGBT-driver systems enhance the efficiency, reliability and cost of high-power applications such as industrial motor drives, solar and wind energy systems, electric vehicles and high-voltage DC transmission. Since its introduction in 1998, Power Integrations' EcoSmart™ energy-efficiency technology has prevented billions of dollars' worth of energy waste and millions of tons of carbon emissions. Reflecting the environmental benefits of the company's products, Power Integrations' stock is included in the NASDAQ® Clean Edge® Green Energy Index, The Cleantech Index®, and the Ardour Global IndexSM. For more information, including design-support tools and resources, please visit [www.power.com](http://www.power.com); visit Power Integrations' **Green Room** for a comprehensive guide to energy-efficiency standards around the world.

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Photos/Multimedia Gallery Available: <http://www.businesswire.com/multimedia/home/20141216006710/en/>

Source: Power Integrations, Inc.

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