

New LED-Downlight Reference Design from Power Integrations Achieves High-Performance Dimming While Reducing Component Count

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RDR-347 combines industry-leading efficiency, low component count and great dimming

SAN JOSE, Calif.--(BUSINESS WIRE)-- **Power Integrations** (Nasdaq: **POWI**), the world leader in high-efficiency, high-reliability LED driver ICs, today announced **RDR-347**, an LED-downlight reference design. The new circuit demonstrates the capabilities of the recently launched **LYTSwitch™** IC family, which offers the industry's best high-end dimming performance from a single-stage LED driver — together with all the associated efficiency, space and cost benefits that the single-stage approach brings.

The **RDR-347** 12 W reference design, based on the **LYT4313E**, delivers a power factor greater than 0.95 and reduces total harmonic distortion (THD) to less than 10% - easily meeting EN61000-3-2C requirements. Efficiency is greater than 86% at 120 VAC — industry-leading performance for an isolated solution capable of operating with a wide range of dimmers. This performance is possible because **LYTSwitch** ICs use one combined PFC and CC power conversion stage which minimizes losses and cuts component count, which in turn increases reliability and decreases cost.

TRIAC dimming is challenging, especially deep-dimming where TRIAC asymmetry between half-cycles can have a significant effect. **RDR-347** shows that **Power Integrations' LYTSwitch** driver IC works excellently, even at very low output currents, without any shimmer or flicker. The design also demonstrates system start-up without noticeable hysteresis (so-called "pop-on effect"), even in deep-dimming. The IC features a very fast start-up time (under 500 ms) even when dimmed to 10% output current, achieving the "instant-on" condition that many customers want, but that many designs in the market cannot provide.

Comments Andrew Smith, senior product marketing manager for **Power Integrations**: "By using our **LYTSwitch** driver, lighting engineers can achieve excellent dimming with minimal efficiency loss."

RDR-347 is available for download via the **Power Integrations** website at

<http://www.powerint.com/sites/default/files/PDFFiles/rdr347.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. CONCEPT 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.powerint.com; visit Power Integrations' **Green Room** for a comprehensive guide to energy-efficiency standards around the world.

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