

Power Integrations' LinkSwitch™-PH LED Driver ICs Eliminate Electrolytic Capacitors, Exceed 90% Efficiency and 0.9 Power Factor

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Reference design leverages single-stage, accurate, offline LED driver technology; maximizes return on investment with high efficiency and long operational lifetime

SAN JOSE, Calif.--(BUSINESS WIRE)-- Power Integrations (Nasdaq:**POWI**), the leader in high-voltage drivers for offline LED lighting, today announced a new reference design (**DER-278**) based on the company's single-stage **LinkSwitch-PH** LED-driver IC family. The new design eliminates the need for unreliable electrolytic capacitors and opto-isolators, making it especially well suited for high-reliability industrial, commercial, and exterior solid-state lighting (SSL) applications. Suitable for designs from 5 W to 55 W, SSL driver ballasts based on **LinkSwitch-PH** ICs achieve greater than 90% energy efficiency and satisfy the ENERGY STAR® requirement of >0.9 power factor.

LED-based lighting systems have the potential for a much longer operational life than incandescent or fluorescent bulbs. However, the classical two-stage topology (i.e., power-factor plus high voltage DC-DC converter), which is sometimes used by manufacturers targeting consumer-grade bulb replacements, utilizes a high-voltage electrolytic bulk capacitor between the stages. The longevity of such systems is limited by the lifetime of the electrolytic capacitor, which tends to dry out and fail, particularly when situated in an enclosed space (e.g., a ballast "brick" or bulb base) and exposed to the heat produced by inefficient two-stage power conversion and proximal high-brightness LEDs. Power Integrations' efficient, accurate, single-stage, primary-side-control technology, featured in **LinkSwitch** products, eliminates both the electrolytic capacitor and the also-unreliable optocoupler used in traditional isolated flyback designs. Designers using **LinkSwitch-PH** ICs for SSL products can expect the operational life of the driver to exceed the 35,000 hours required by the ENERGY STAR SLL (V1.1) specification.

Comments Doug Bailey, vice president of marketing for Power Integrations: "Municipalities, retailers, industrial users, and other businesses are finding that the upfront investment in LED lighting is more than justified by the combination of energy savings plus lower maintenance expenses resulting from the longevity of LED lights. However, the degree to which these benefits are realized depends heavily on the choice of driver technology. The two-stage drivers used in many residential replacement bulbs may not be adequate for applications in which maintenance savings are critical to the ROI calculation."

Bailey continues: "Our single-stage **LinkSwitch-PH** family eliminates the weak links in a typical LED driver. Using **LinkSwitch-PH** LED driver ICs alongside highly stable ceramic capacitors, designers can produce efficient, safe, cost-effective lighting systems that outlast SSL installations using consumer-grade drivers and save on costly maintenance."

LinkSwitch-PH ICs enable designers to optimize system efficiency and meet or exceed all specifications, such as ENERGY STAR and EN61000-3-2. Samples are available now in a halogen-free, ROHS-compliant eSIP™-7C package, priced between \$1.18 and \$1.71 each for 10,000-piece quantities. Datasheets, design ideas, and an introductory video are available on the Power Integrations website at www.powerint.com/linkswitch-ph.

About Power Integrations

Power Integrations is the leading supplier of high-voltage integrated circuits used in energy-efficient power conversion. The company's innovative technology enables compact, energy-efficient power supplies in a wide range of electronic products, in AC-DC, DC-DC, and LED lighting applications. Since its introduction in 1998, Power Integrations' EcoSmart™ energy-efficiency technology has saved an estimated \$4.7 billion of standby energy waste and prevented millions of tons of CO2 emissions. The company's **Green Room** web site provides a wealth of information about "energy vampires" and the issue of standby energy waste, along with a comprehensive guide to energy-efficiency standards around the world. Reflecting the environmental benefits of EcoSmart technology, Power Integrations' stock is included in The Cleantech Index® and the NASDAQ® **Clean Edge**® Green Energy Index. For more information, please visit www.powerint.com.

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