



## Power Integrations Achieves 92%-Efficient Power Supply for LED Streetlights up to 150 W

### *LED Design Simplified Using PI's HiperPLC(TM) Controller IC and PI Expert(TM) Software*

SAN JOSE, Calif., May 19, 2009 (BUSINESS WIRE) -- Power Integrations (Nasdaq:[POWI](#)), the leader in high-voltage integrated circuits for energy-efficient power conversion, today released a new engineering report ([DER-212](#)) describing a 92%-efficient power supply for LED streetlight applications. The design utilizes Power Integrations' [HiperPLC](#) power supply controller, which enables a simple, cost-effective circuit design by combining power factor correction (PFC) and resonant (LLC) control functions on a single integrated circuit. The new design will be showcased in the Power Integrations booth at [LED Expo Korea](#) (Kintex, Korea; May 20-23) and [LED Lighting Taiwan](#) (Taipei, Taiwan; June 10-12).

LEDs are rapidly emerging as the preferred streetlighting technology, displacing traditional technologies such as high pressure sodium (HPS) lamps. LEDs consume far less electricity for each lumen of useful light emitted, delivering as many as 80 lumens per watt when driven by a high-efficiency resonant power supply, versus just 58 lumens per watt for HPS lamps. In addition, LEDs provide better directional control and color quality than HPS lights, an important consideration in shopping and residential areas. LEDs can also turn on and off instantly and retain their efficiency when dimmed - features well suited to automated sensing of ambient light and human activity, allowing light output to be optimized for cost, with minimal consequences to the community lighting scheme. Maintenance costs, and therefore the total cost of ownership, are also significantly reduced due to the intrinsically high reliability of LEDs compared to HPS lamps.

*HiperPLC*, Power Integrations' first high-power product, is designed to control AC-DC converters from 80 to 600 watts. *HiperPLC* minimizes costs by reducing the size of the PFC magnetics required, and by combining the PFC and LLC controllers into a single IC. The IC provides up to 0.99 power factor and features synchronization of PFC and LLC controllers. Synchronization reduces the ripple in the bulk capacitors, which reduces capacitor operating temperature and significantly extends the life of the power supply. Support for *HiperPLC* is now featured in Power Integrations' [PI Expert](#) software (version 7.1.4), an automated power supply design tool based on PI products.

Comments Doug Bailey, Power Integrations' vice president of marketing: "Municipalities around the world are finding that LEDs offer a greener, more economical approach to streetlighting by saving both energy and maintenance costs. However, these benefits cannot be fully realized without a highly efficient, reliable power supply driving the LEDs. With *HiperPLC*, designers can produce a simple, reliable, cost-effective, power supply with efficiency as high as 92%."

DER-212 is available now for download at [www.powerint.com/PDFFiles/der212.pdf](http://www.powerint.com/PDFFiles/der212.pdf). For more information, visit the Power Integrations [LED lighting microsite](#). Power Integrations' *PI Expert* design software, with full support for *HiperPLC*, can be downloaded at no cost from <http://www.powerint.com/pi-expert>.

### References

1. *DER-212:150 W Power Factor Corrected LLC Power Supply Using HiperPLC (PLC810PG)*, Power Integrations (5/11/09). [www.powerint.com/PDFFiles/der212.pdf](http://www.powerint.com/PDFFiles/der212.pdf)
2. *Power Integrations' LED Lighting Microsite*: [www.powerint.com/applications/led-lighting](http://www.powerint.com/applications/led-lighting)

### About Power Integrations

Power Integrations is the leading supplier of high-voltage analog 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*(R) energy-efficiency technology has saved an estimated \$3.4 billion of standby energy waste and prevented millions of tons of CO<sub>2</sub> emissions. The company's Green Room web site ([www.powerint.com/greenroom](http://www.powerint.com/greenroom)) 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 is included in clean-technology stock indices sponsored by the Cleantech Group (Amex: CTIUS) and Clean Edge (Nasdaq: CELS). For more information, please visit <http://www.powerint.com>.

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