

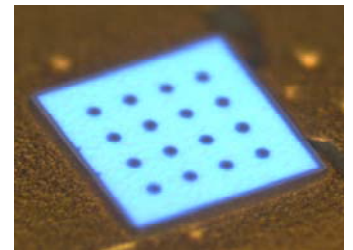
Press Information

July 10, 2007

Philips Lumileds Thin Film Flip Chip technology delivers the highest performance LEDs for lighting applications

San Jose, CA — Philips Lumileds has introduced its new Thin Film Flip Chip (TFFC) technology delivering as much as 17% more light output than other competing thin film chip architectures. The TFFC process involves removal of the sapphire substrate and roughening of the chip's light emitting surface to improve light output efficiency. The company's TFFC design is optically and thermally superior to competing chip architectures. The brighter and more robust technology is already implemented in the company's LUXEON Rebel and LUXEON Flash families.

"White LUXEON LEDs with TFFC are capable of delivering more than 80 lm/W at 350mA," said Frank Steranka, Executive Vice President of Research and Development at Philips Lumileds. "TFFC technology allows us to maximize the light emitting area and minimize thermal resistance resulting in brighter and more efficient LEDs. These attributes are required for applications in general lighting, automotive lighting, display, and projection to name a few."



Philips Lumileds TFFC technology will lead the industry to 100 lm/W and higher white power-LEDs in the coming year and, in the longer term, achieve performance levels of 150 lumens/Watt and above. The unique TFFC architecture is a pre-requisite for additional innovations from Philips Lumileds' Advanced Labs group, some of which were used to achieve our record 115 lumens/Watt performance earlier this year. "We will continue to move technologies from our Advanced Labs group into R&D and Manufacturing," said Steranka. "This process provides for a continuum of performance improvements in the chip, phosphor, and packaging areas."

Additional information about TFFC architecture and its advantages can be found on the Philips Lumileds web site and in an article titled [Evolutionary new chip design targets lighting systems](#), also published on the web site in our Case Studies areas.



Philips Lumileds Lighting Company pioneered power LED technology and is the world's leading provider of power LEDs for everyday lighting applications. The company's recent records for light output, efficacy and thermal management are direct results of the ongoing commitment to advancing solid-state lighting technology and enabling lighting solutions that are more environmentally friendly, help reduce CO₂ emissions, and reduce the need for power plant expansion. Philips Lumileds' LUXEON LEDs are enabling never before possible applications in the automotive, camera flash, display, general lighting, and signage markets. More information about the company's products and technologies can be found at www.philipslumileds.com.

About Royal Philips Electronics

Royal Philips Electronics of the Netherlands (NYSE: PHG, AEX: PHI) is a global leader in healthcare, lifestyle and technology, delivering products, services and solutions through the brand promise of "sense and simplicity". Headquartered in the Netherlands, Philips employs approximately 124,300 employees in more than 60 countries worldwide. With sales of EUR 27 billion in 2006, the company is a market leader in medical diagnostic imaging and patient monitoring systems, energy efficient lighting solutions, personal care and home appliances, as well as consumer electronics. News from Philips is located at www.philips.com/newscenter.

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Contact:

Steve Landau, Director of Marketing Communications
Philips Lumileds Lighting Company
steve.landau@philips.com
+1 408 964 2695

