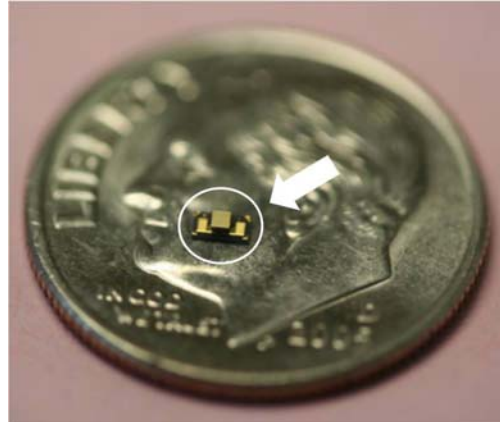


Nextreme Announces New UPF OptoCooler Thermoelectric Platform

Microscopic size and high heat pumping capability is particularly well suited for optoelectronics applications

Durham, N.C. (January 9, 2008) — Nextreme Thermal Solutions™, the leader in microscale thermal and power management products for the electronics industry, announces the availability of a new thermoelectric module - the Ultra-High Packing Fraction (UPF) OptoCooler module - that addresses the latest cooling and temperature control requirements for optoelectronics, electronics, medical, military and aerospace applications. The new module has been optimized for laser diode, LED and advanced sensor products.



The UPF OptoCooler removes a maximum of 420 mW of heat at 25°C ambient in an active footprint of only 0.55 mm². As a result, the module can pump a heat density up to 78 W/cm². At 85°C, these values increase to 610 mW and 112 W/cm², respectively. The module was developed in response to market demand for microscale cooling solutions that improve the performance of electronics without sacrificing efficiency.

With Nextreme's thin-film thermal bump technology at its core, the OptoCooler can be integrated directly into electronic and optoelectronic packaging to deliver more than 45°C of cooling for a wide variety of thermal management applications. For example, the module can be embedded within laser diode packages - devices that illuminate telecom fiber-optic cables - to control temperatures and maintain proper operating conditions for optimal performance. In addition, the module's ultra-fast, millisecond response time and broad temperature range capabilities can enable improved performance of the thermal cycling processes in a host of applications.

“The OptoCooler module is the industry's first thermoelectric device to offer a heat pumping density in excess of 70 W/cm², a ten-fold increase in heat pumping capacity over conventional TEC modules,” said Dave Koester, Vice President of Engineering at Nextreme. “This is a major breakthrough. For example, this development enables direct cooling of a laser diode on a scale that is similar to the diode itself. This significantly improves efficiency and offers new, integrated packaging options that were previously unavailable.”

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The UPF OptoCooler module serves as Nextreme's unit building block for all discrete products in the future. It is manufactured in high volumes with Nextreme's Thermal Copper Pillar Bump process – a process that is based upon an established electronic packaging approach that scales well into large arrays. The Thermal Copper Pillar Bump process integrates thin-film thermoelectric material into the solder bumped interconnects that traditionally provide mechanical and electrical functionalities in today's high performance/high density integrated circuits. But unlike conventional solder bumps, Nextreme bumps function as solid-state heat pumps on a microscale. The thermal bumping process can be implemented at the system-level, package-level or wafer-level, and also in discrete modules as demonstrated by Nextreme's newly available OptoCooler.

OptoCooler modules are available now and can be purchased for \$12 in unit volumes of 1000's. Pricing for smaller or larger volumes are available upon request.

Nextreme will be demonstrating the OptoCooler at the Photonics West conference, January 22-24, 2008 in booth #6328 at the San Jose Convention Center, South Hall 1.

For more information, contact Nextreme at 3908 Patriot Dr., Suite 140, Durham, NC 27703-8031; call (919)-597-7300; e-mail info@nextreme.com; or go to www.nextreme.com.

About Nextreme Thermal Solutions, Inc.

Nextreme designs and manufactures microscale thermal and power management products for the semiconductor, photonics, consumer, automotive and defense/aerospace industries. The company has embedded cooling, temperature control and power generation capabilities into the widely accepted copper pillar bumping process used in high-volume electronic packaging. Nextreme's breakthrough addresses the most challenging thermal and power management constraints in electronics today, and delivers the only fully-scalable technology solution by leveraging the existing, high-volume flip chip manufacturing infrastructure. By minimizing the need for manufacturing changes and focusing on developing a seamless design-in solution, Nextreme will change the future of thermal and power management for the entire electronics industry.

Nextreme is managed by an experienced start-up team and world-renowned experts in electronic packaging, thermal management and pillar bump technology. The company has 38 employees and is based in Research Triangle Park, North Carolina.

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