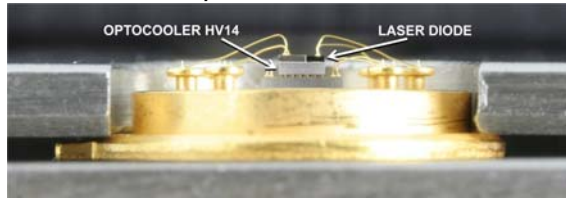


**FOR IMMEDIATE RELEASE**  
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*Side profile of a laser diode TO package (cap removed) with embedded OptoCooler HV14 thermoelectric cooler*

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*Gold-tin in the OptoCooler HV14 enables conformance to standard optoelectronic assembly processes...*

## **NEXTREME ANNOUNCES HIGH TEMPERATURE GOLD-TIN THERMOELECTRIC MODULE FOR OPTOELECTRONIC COOLING**

**DURHAM, N.C. (December 15, 2009)** — Nextreme Thermal Solutions, the leader in microscale thermal and power management products for the electronics industry, is now offering an updated version of the OptoCooler HV14 that enables assembly temperatures as high as 320°C. These assembly temperatures make the HV14 compatible with eutectic gold-tin (AuSn) solder — the industry standard process for packaging optoelectronic devices that require tight tolerances. Specific applications include laser diodes, semiconductor optical amplifiers and sensors.

The OptoCooler HV14 module is a high heat pumping thermoelectric device that is designed for standard electrical power requirements. At 85°C, the HV14 operates at a maximum of 2.7V and can pump 1.7 watts of heat in a footprint of only 3mm<sup>2</sup>. The module can create a temperature differential ( $\Delta T$ ) of up to 50°C between its hot and cold sides, making it suited for the cooling and temperature control of optoelectronic devices such as laser diodes.

AuSn solder provides excellent joint strength, strain resistance and thermal conductivity. After the initial reflow during device assembly, the melting point of this particular AuSn solder is 320°C, enabling subsequent attachment of laser diodes and other devices to Nextreme's thermoelectric modules at lower temperatures, typically at 283°C, which is the industry standard. The use of this strain resistant material is particularly important for the laser diodes where movement of solder as little as 10 microns can cause significant alignment issues.

"Nextreme now offers the standard for solder assembly established by the optoelectronics industry," said Dr. Paul A. Magill, vice president of marketing and business development for Nextreme. "The introduction of gold-tin in the HV14 product line addresses our customers' most challenging assembly requirements."

-more-

## Nextreme Announces High-Temperature Gold-Tin OptoCooler HV14, Page 2

The OptoCooler HV14 is RoHS compliant and is available for order now. Pricing is available upon request. More information on the OptoCooler family can be found at [www.nextreme.com/optocooler](http://www.nextreme.com/optocooler). Contact Nextreme at 3908 Patriot Dr., Suite 140, Durham, NC 27703-8031; call (919)-597-7300; e-mail [info@nextreme.com](mailto:info@nextreme.com); or go to [www.nextreme.com](http://www.nextreme.com).

### **About Nextreme Thermal Solutions™, Inc.**

Nextreme Thermal Solutions designs and manufactures microscale thermal and power management products for the electronics, telecommunications, semiconductor, consumer, and aerospace/government industries. The company uses breakthrough thin-film thermoelectric material to embed cooling, temperature control and power generation capabilities into the widely accepted copper pillar bumping process used in high-volume electronic packaging. Nextreme's headquarters and manufacturing facility are based near Research Triangle Park, North Carolina. Visit [www.nextreme.com](http://www.nextreme.com).

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