



February 14, 2005

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Process demonstrated to yield high-quality, reliable and robust devices...

AVO PHOTONICS DEVELOPS LEAD-FREE TEC-TO-PACKAGE ASSEMBLY PROCESS

HORSHAM, Penn. (February 14, 2005) – Avo Photonics, specialists in RF and optical packaging solutions, has developed a lead-free TEC-to-Package process. The process is ideal for high-quality, high-performance applications, as well as helping manufacturers meet pending global regulations requiring lead-free electronics components. The process has been qualified and can be used for volume production of assemblies.

Avo's process caters to a broad range of markets requiring high-end thermoelectric cooler (TEC) packages. The TEC packages can be used in a variety of telecommunications, medical and military applications, such as lasers, temperature-controlled etalons, high-speed detectors and temperature reference sources.

“The TEC-to-Package process can be very painful for some manufacturers,” said Dr. Joseph Dallas, COO of Avo Photonics. “As packages get smaller and smaller for higher-end applications, the process of putting TECs in becomes a greater challenge. Fortunately for our customers, we have the technology and expertise to manage the process. Product companies, as well as TEC and package-housing vendors, have benefited from outsourcing this process to us.”

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AVO PHOTONICS DEVELOPS LEAD-FREE TEC-TO-PACKAGE PROCESS, PAGE 2

Avo's TEC-to-Package process includes solder bonding of the TEC within a non-oxidizing inert gas environment leading to void-free coverage. The process results in excellent thermal connectivity across the interface and very rugged bond strengths. Avo's TEC-to-Package process includes Surface Acoustic Microscopy (SAM) testing to verify void free results. For TECs without wirebond posts, Avo trims, forms and simultaneously reflows the solder to bond the TEC leads to the package within the TEC packaging process.

“When using gold-tin solder, our customers benefit threefold with greater flexibility in the solder hierarchy defined for follow-on process steps, a more rugged product, and meeting of global lead-free requirements,” said Dr. Dallas.

Avo provides complimentary initial technical consultation and proposals for its TEC-to-Package services in as little as 24 hours.

In addition to prototype and volume assembly services, Avo works with customers to transition designs from complex packages. A broad range of experience in both TO-can and butterfly packages provides Avo with the flexibility to identify and create the right packaging solution for each of its customers' individual needs.

Avo supports its design capabilities with a complete suite of modeling tools, including RF, optical, thermal and mechanical analysis, ensuring that products are ready for immediate prototyping and low-volume production, as well as the ability to flow to high-volume production without having to re-tool or re-qualify the design.

Manufacturing processes include: laser welding, die bonding, flip chip, wire bonding, seam sealing and optical fiber attach. Avo also provides failure analysis, and supply chain management. Avo's philosophy is to provide the customer with the design that is best suited for their product and their market, whether it is a custom or standard package.

For a complete overview of Avo Photonics' service offerings, visit www.avophotonics.com or call (919) 593-2571.

About Avo Photonics

Founded in 2004, Avo Photonics specializes in design and manufacturing solutions for photonic and microelectronic packaging, assembly, and test for the communications, military/ aerospace, and medical/ industrial markets. Avo's mission is to develop cost-effective manufacturing solutions for customers while providing support from design to production for products in all markets. Avo can be found on the Internet at www.avophotonics.com.

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Keywords: TEC, TEC-to-Package, Surface Acoustic Microscopy (SAM), assembly, design, packaging, contract manufacturing