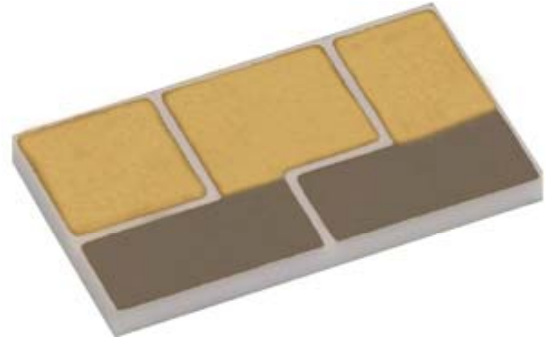


**FOR IMMEDIATE RELEASE****Remtec Adds Cost-effective Gold Tin Finish to its Zero Pullback™ Metallization for High Power Laser Diodes**

Norwood, MA, January 5, 2009. Remtec Inc., a leader in custom and semi-standard ceramic packaging based on Plated Copper on Thick & Thin Film (PCTF<sup>®</sup>) technology, has added a new economical gold tin finish capability to its Zero Pullback metallization for high power laser diode submounts.

The cost of PCTF submounts with gold tin finish is substantially lower than that of thin film submounts where gold tin is deposited via evaporation or sputtering processes. This cost advantage is made possible by the inherently less expensive nature of both the PCTF manufacturing process and the gold tin application method. Remtec's PCTF technology uses a time-proven printing and sintering technique combined with a reliable copper plating process and economical gold tin deposition unlike commonly used more expensive thin film technology and materials. As a result, Remtec is now able to offer to the high power laser diode industry a reliable single source for submounts combining an economical gold tin finish, Zero Pullback copper metallization and all the advantages of PCTF technology.



Remtec provides gold tin alloy with composition varying from 72/28 to 80/20 and its thickness can be specified between 3 to 10 microns. A barrier metal under AuSn prevents gold enrichment and a protective cap layer is applied on the gold tin layer to avoid oxidation and to provide void-free solder joints. The lower cost of Remtec's new submounts has been accomplished without any compromise in performance or quality.

For laser diode submounts, the advantages of PCTF technology include combining elements of thick and thin film processing with electroplating of copper, nickel, gold and other materials. Therefore, substrates are available with multiple metallization techniques and selective plating options permitting both silver thick film and TiW thin film seed layers of various thicknesses, plated copper from 5 to 75 micron and Ni-Au finish with gold thickness from .1 to 2.5 micron. Ceramic and copper surface finish can be held to less than 1  $\mu\text{m}$ . PCTF technology, with its ductile structure of plated copper over thick or thin film on ceramic, also minimizes solder joint stresses during assembly of Ga-As devices to ceramic substrates.

These unique and cost-effective manufacturing processes are the result of Remtec's integrated in house manufacturing capabilities including a state-of-the-art thick film facility, electrolytic and electroless plating lines as well as photolithography and etching capabilities. Therefore, Remtec controls all aspects of the manufacturing process and provides a reliable single source for the manufacture of laser diode submounts.

Remtec, a RoHS compliant and ISO 9001:2000 registered company, provides ceramic packaging solutions for optoelectronics, microwave / RF components and modules and power electronics. Low upfront tooling costs and fast turnaround time permit designers to bring their systems into production faster and with lower engineering costs. Additional data is available at [www.remtec.com](http://www.remtec.com).