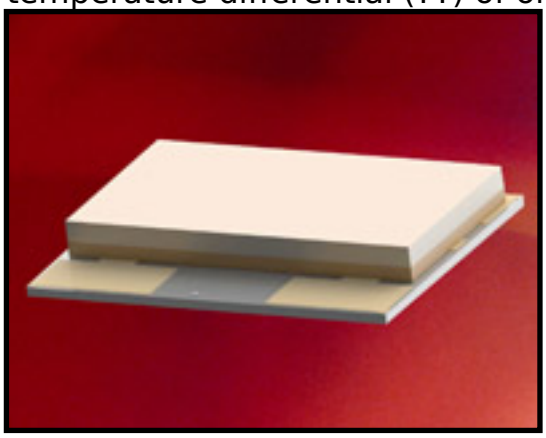
Nextreme Offers New Thermoelectric Series for Energy Harvesting

Nextreme Thermal Solutions, the leader in micro-scale thermal management and power generation solutions, has announced a new series of thin-film thermoelectric power generators that offer higher power, more robust mechanical design and ease of integration with common sources of thermal energy.

The eTEG PG8000 Series harvests waste heat from thermal sources, converting it into electricity for a variety of self-powered applications in the wireless sensor, automotive, aerospace, industrial, and medical device markets.

The eTEG PG8000 Series includes five new modules that can produce between 2.7 mW to 21.6 mW of output power and open circuit voltages of 0.17 V to 1.35 V at a temperature differential (?T) of only 10 K.



At 50K ?T, the series can produce 65 mW to 520 mW of power and open circuit voltages of 0.85 V to 6.8 V. The modules can be configured electrically in series to produce higher output voltage.

Thermoelectric power generators (TEGs) convert waste heat from thermal sources into electricity as an alternative source of energy. The devices can provide electricity to a load directly when a constant heat source is available or can be used in combination with batteries when the heat source is variable. The advanced technology eliminates the need to use wires or replaceable batteries as a power source for remote applications.

The eTEG PG8000 Series operates with moderate heat flux density that match the heat flux found in common sources of thermal energy such as piping and industrial manufacturing processes. Heat fluxes in this range simplify integration with heat sinks that are necessary to maintain constant heat flow.

The new series features a high mechanical strength seal ring made from Cirlex® polyimide film that provides mechanical isolation across the thermoelectric device, virtually eliminating vertical force and sheer issues. The seal ring also serves as a

barrier to moisture and other contaminants that could affect the performance of the module.

For more information, visit http://www.nextreme.com/pg8000 *[1].*

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