

Micropelt Introduces the Future of Thin-Film Thermoelectrics and Clean Thermal Energy Harvesting in Japan

Micropelt cooperates with CP&C to launch energy conserving thermoelectric chips and systems in the Japan market.

FREIBURG, Germany & TOKYO, December 15, 2009, [Micropelt](#) GmbH Germany-based manufacturer of thin film thermoelectrics, announced its sales and service strategy in Japan, in cooperation with [CP&C Japan Partners Ltd](#) of Tokyo Japan.

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Japan is well recognized as a key strategic market for Micropelt’s thin-film thermoelectric solutions, since it takes a leading position in clean and renewable energy conserving technologies in many industries. “We have recognized that the Japanese market is highly promising for the chip-sized [thermoelectric harvesting](#) and efficient [cooler chips](#) of Micropelt”, mentioned Dr. Hidetoshi Nishi, CTO of CP&C.

Micropelt’s thermoelectric chips are fabricated in a unique, wafer based semiconductor [manufacturing process](#), resulting in the world’s smallest thermoelectric component technology. With an output voltage of 140mV per degree, Micropelt’s [thermoelectric generator chips](#) (TEGs) offer a perfect match to all actual ultra low-power semiconductor solutions, even at low temperature gradients.

This makes Micropelt TEGs the ideal solution for battery-free applications, such as wireless sensors and smart energy operated equipment, operating from renewable energy generated by a waste heat source.

Micropelt [thermoelectric cooler chips](#) (TECs), based on the same micro-electronic technology, offer a unique roadmap to miniaturization of fiber optic, photonic and sensor components. The trend of form factor reduction of optical transceiver modules matches perfectly with the chip-size TECs of Micropelt, offering the additional benefit of a higher energy efficiency to drive the TEC.

“To jump-start the evaluation and prototyping of thermoelectric clean power systems, Micropelt offers robust and complete evaluation systems”, said Wladimir Punt, VP Sales & Marketing at Micropelt”. “The [TE-Power NODE](#) represents a fully autonomous wireless sensing system, working without batteries and only needs a waste heat source to operate”.

CP&C and Micropelt will present Micropelt's thermoelectric coolers and generators at the FOE Fiber Optics Expo 2010 in Tokyo, from January 20th to 22nd in Tokyo.

Details and datasheets of Micropelt's thermoelectric solutions can be found at <http://www.micropelt.com/products/datasheets.php> for the components and http://www.micropelt.com/applications/energy_harvesting.php for the systems.

Information on CP&C can be found at <http://www.cpcjp.co.jp/>.

About Micropelt

Micropelt GmbH, a 2006 spin-off from the research cooperation between Infineon Technologies and the Fraunhofer Institute IPM Freiburg, develops and markets the world's smallest and most effective thermoelectric elements for clean-tech power generation (energy harvesting) for sensing, cycling and cooling. Readily available standard products from the pilot-production plant at the company's headquarters in Freiburg, Germany are currently being evaluated by and incorporated into the products of more than 40 customers. A large-scale production facility, fully financed and currently under construction in Halle, Sachsen-Anhalt, Germany, is expected to raise capacity to some 10 million devices per year by mid 2010.

About CP&C Japan Partners Ltd.

CP&C provides foreign companies, from Europe, United States and Israel, to elaborate hands-on consulting and assistance service for early stage penetration into Japan market, based in the center of Tokyo city. CP&C diversifies its service quite flexibly in several business models per clients' requests, such for "Representative Service for Japan office", "Advisor Service for Japan affiliated company", and so on.

About Micropelt's Thermoelectric Solutions

Micropelt's thermoelectric elements are based on a proprietary scalable MEMS (Micro Electro-Mechanical Systems) [micro-structuring platform technology](#). Compared to conventional thermoelectric elements, Micropelt's unique and patented technology reduces component and feature sizes by orders of magnitude, yielding 10 times higher cooling or heating power densities. Economies of scale through volume production break the existing cost and price barriers of conventional thermoelectrics, enabling Micropelt's devices to scavenge free electric power from waste heat to replace or recharge batteries in [low power](#) wireless sensor networks.



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