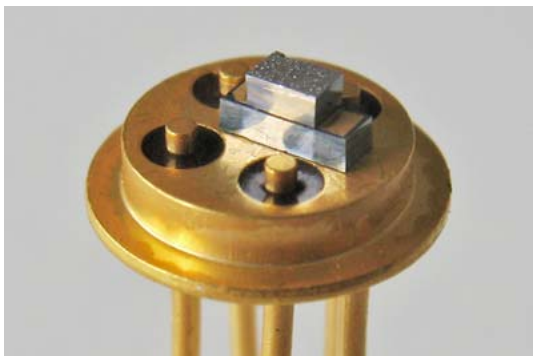


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Ultra-small Micropelt Peltier Coolers have 60 Kelvin Delta T for Fiberoptic and Sensor Applications

Micropelt GmbH, manufacturer of thin film thermoelectric coolers, announces a significant technology advancement in its ultra-small, microchip thermoelectric coolers (TECs). The new MPC-D303 Series, Micropelt's smallest TEC with a cold side area of only 0.98 square millimeters (mm²), now supports a maximum temperature difference (delta T) of over 60 Kelvin (K). This increased delta T opens possibilities for laser and photonic sensor manufacturers whose applications require a large bandwidth of thermal control.



The Micropelt MPC-Dx series has a cooling power of up to 100 watts/cm² and can realize temperature changes faster than 180 K/second. It is perfect for fast thermal control with 10 K ramps in just a few milliseconds. Its high cooling power density facilitates packaging and optimally supports small devices. Based on Micropelt's exclusive thin film thermoelectric technology, the new coolers are made of

sputtered material that can be structured to exactly match the thermal and electrical requirements of many applications. This match can reduce their energy consumption and results in improved thermal management.

The MPC-D303 Series, like all Micropelt products, is fabricated on silicon wafer using standard semiconductor processes. The device soldering temperature is 300 degrees Celsius and uses lead-free solder to comply with RoHS initiatives. It has a maximum operating temperature of 200 degrees Celsius and low dimensional tolerances. This chip-sized thermoelectric cooler offers superior performance for chip scale thermal management and fast, precise temperature control. Perfectly adapted designs from less than 1 mm² to 25 mm², each with customizable thermal and electrical properties, including sensor integration, open new dimensions of thermal management.

Applications for the MPC-D303 Micropelt microchip thermal coolers include laser and sensor temperature management, micro-scale thermal cycling, lab-on-a-chip, single well PCR cycling, technical device characterization, and printed circuit board embedded device cooling.

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“Many of our customers wanted to leverage our extremely small form factor and high cooling power for their smaller and more highly integrated packages,” explained Fritz Volkert, CEO of Micropelt. “Now that we’ve expanded our delta T from 40 K to 60 K, we offer them the product they’ve been asking for.”

“Ever increasing integration and packaging densities are driving photonics development to smaller, faster, better performing products,” said Dr. Joachim Nurnus, CTO of Micropelt. “Our advanced thin film thermoelectric platform technology holds exciting potential for further cooler miniaturization in the photonics and life science world.”

For Micropelt MPC-D303 thermoelectric coolers volume prices will be below 10 USD. Contact Micropelt for engineering samples. Detailed specifications for the MPC-D303 Series are available on the data sheet located at http://www.micropelt.com/down/datasheet_mpc_d303.pdf.

About Micropelt

Micropelt GmbH is a venture capital-funded technology company founded in early 2006 as a result of a research cooperation between German chipmaker Infineon Technologies and the Fraunhofer Institute for Physical Measurement Techniques in Freiburg, Germany. Micropelt develops and markets miniaturized thermoelectric (TE) coolers and generators based on a scalable silicon MEMS (Micro Electro-Mechanical Systems) platform technology. Compared to conventional thermoelectric coolers, Micropelt’s unique and patented technology has smaller component sizes, 10 times higher cooling or heating power densities, and economies of scale close to those found in chip-making industries.

Besides replacing small conventional TE coolers, Micropelt products can be used to create new and improved technologies in life science, wireless, laser, photonic, sensor, electronic, and other markets where microelectronics cooling or heating is needed.

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