Powerful tools for thermal characterisation of MEMS...

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Cedip Infrared Systems have published applications data demonstrating how their high-resolution SILVER 660M thermal infrared camera system has been used to provide detailed information as to the static and dynamic thermal behaviour of MEMS structures.

Microelectromechanical systems (MEMS) are miniature devices that enable the operation of complex systems. Smaller than a grain of sand, MEMS devices combine tiny mechanical, optical and fluidic elements with electronics and are integrated on a silicon chip.

Typically MEMS devices act as sensors, actuators, pumps and valves. Because of their small size, MEMS are frequently more precise in their operation than their larger machined counterparts. MEMS are used in automotive, military, medical, microfluids, telecommunications and aerospace industries.

Infrared thermography is today recognised as an essential tool for investigating the thermal behaviour of key components and microstructures in a wide and growing range of applications. To make such measurements on MEMS devices requires infrared cameras that can deliver state-of-the-art resolution.

The SILVER 660M from Cedip Infrared Systems has been designed for the most demanding users of IR technology, who need to perform thermal imaging at high spatial resolution with leading-edge sensitivity and accuracy. Used in conjunction with microscope objectives the SILVER 660M has been demonstrated to routinely achieve a spatial resolution of 3.5 microns sufficient to thermally characterise structures within MEMS devices.

Cedip Infrared Systems offers a range of high-performance infrared imaging cameras and systems incorporating the latest technology in optics, infrared focal plane array detectors, electronic hardware and software. Founded in 1989 Cedip Infrared Systems is today recognised as a leading supplier of Infrared Imaging solutions for security and surveillance customers around the world.

For further details of measuring the thermal behaviour of MEMS devices using IR thermography please contact Cedip Infrared Systems on telephone +33-1-6037-0100, email cedip-marketing@cedip-infrared.com or visit www.cedip-infrared.com