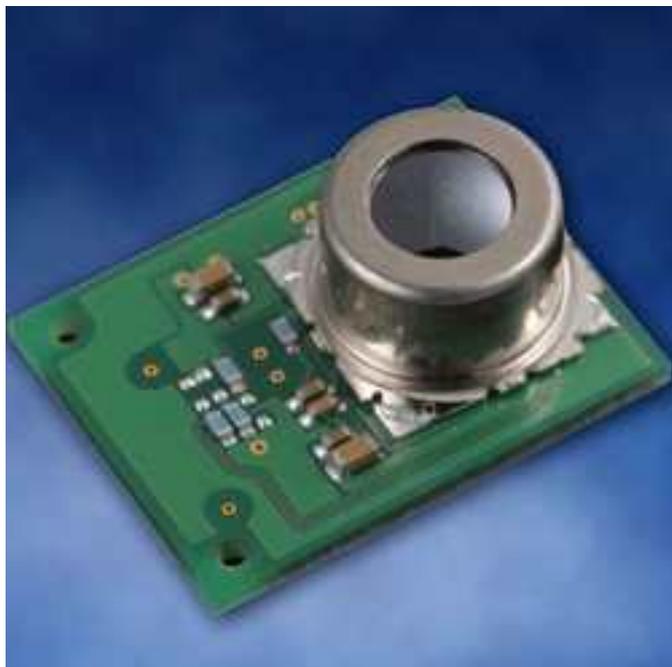


## Thermal IR Sensing Array Module



Omron's Micro Device Division (MDD) has a number of new MEMS products in development to watch for in the coming year including two Thermal IR Sensing Array Modules and an Absolute Pressure Sensor. MEMS Thermal IR Sensor Modules are being developed for building automation and energy savings. The first consists of 8 MEMS Thermal IR sensors aligned in a 1x8 array. When positioned to scan a room, it can detect occupancy (regardless of movement) and determine if additional heating or cooling is required in localized areas. It can also be used for intelligent lighting controls. For factory automation, it can be used to detect hot-spots in equipment such as control cabinets. A 4x4 array is also in development, aimed at the home appliance market for energy savings and security for personal computers. In addition a 16x16 array is also currently being tested for monitoring larger spaces. Each individual sensor element has an approximate 8 degree field of vision and a 6 meter detection length.

Expanding on their Piezo Resistive Pressure Sensor technology, a MEMS Absolute Pressure Sensor is nearing completion. Sealed on one side from atmospheric pressure, it is able to detect changes in elevation at a resolution less than 1 vertical meter. It could, for instance, be used to determine what floor of an office building a person is on for 911 assistance, or help direct a person to a specific store within a multi-level shopping mall. With an operating pressure of 50 to 110 kPa, target applications for this product include enhancement of GPS Navigation (particularly indoor navigation), Portable Navigation Devices, enhanced Pedometers and Sports Watches, and Weather Forecasting Equipment. Engineering samples will be available in the spring of 2012, with mass production starting early summer 2012.

**Omron Electronic Components**

[www.components.omron.com](http://www.components.omron.com) [1]

## Thermal IR Sensing Array Module

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