

# UNCOOLED IR BOLOMETRIC DETECTOR

Keywords: Thermal camera module, IR camera module, microbolometer, uncooled microbolometer

## TECHNOLOGY

INO has extensive experience in microbolometric detector design, fabrication and characterization, as well as in detector-to-ROIC (read-out integrated circuit) interfacing technology. INO's standard platforms are 384x288 pixels microbolometer focal plane arrays (FPAs). INO has developed several custom IR-FPAs for its clients, including a 512x3 pixels FPA produced for the European and Canadian Space Agencies. INO fabricates microbolometric detectors over customer supplied ROICs as a foundry service, and has been active in helping its customers to design their own readout integrated circuits.

## APPLICATIONS

Security/Surveillance	Military
Industrial inspection	Laser beam profiling
Medical	Preventive maintenance
Transportation	Fire fighting
Aerospace/Astronomy	Environment

## COMPETITIVE ADVANTAGES

Uncooled technology is revolutionizing infrared (IR) detection and imaging by providing low-cost, reliable sensors for civilian and military applications. Compared with cryogenically cooled devices, uncooled IR bolometric detectors operating at room temperature offer considerable advantages in cost and operational convenience with minimal sacrifice in performance. Advantages of uncooled bolometers include higher reliability, reduced power consumption, smaller size and reduced weight, as well as multispectral response capability.

## STATE OF DEVELOPMENT

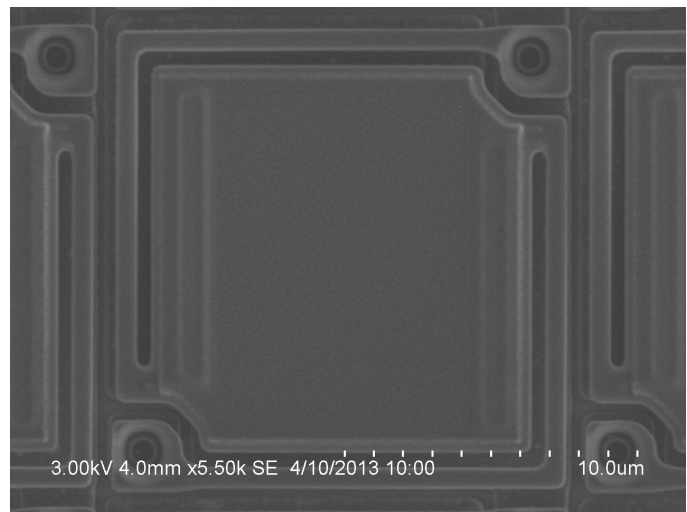
INO's uncooled infrared technology detector has been developed to TRL 8. At this level of technological readiness, the first production units have been tested and qualified to validate operability, performance, quality, and reliability.

## BUSINESS OPPORTUNITY

INO is looking for companies interested in producing and/or selling uncooled infrared bolometers (17  $\mu\text{m}$  and up), under a licensing agreement. The terms of the transfer agreement will depend on the applications and markets addressed by the partners.

## INTELLECTUAL PROPERTY

*List of patents available on request.*



17  $\mu\text{m}$  uncooled infrared microbolometer

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For the complete list of technologies available for transfer  
[www.ino.ca/availabletechnologies](http://www.ino.ca/availabletechnologies)