



MCT DETECTORS

INFRARED VISION FOR SPACE, DEFENSE, HEALTHCARE, AND MORE

Sofradir's infrared imager matrices are the best when it comes to detecting the infrared radiation emitted by the human body and hot objects. The matrices operate at very low temperatures (-192°C) and only require a few photons to detect the presence of a body or object. They are used in military night-vision systems, on weather satellites and space probes, and in industrial and commercial applications.





THE TECHNOLOGY

Sofradir has been working with Leti on the matrices for 25 years. To develop their innovative semiconductor alloy (mercury cadmium telluride, or MCT), they had to first understand its fundamental properties, perfect fabrication and doping, and improve the material from one generation to the next to make the detectors increasingly powerful.

Today Sofradir is the global market leader for MCT detectors, and the world's second-leading manufacturer of "cooled" infrared detectors.

And additional improvements are under development, including further reducing pixel size without compromising detection capacity, detecting signals from as little as a single photon per pixel, reducing energy consumption to just a few watts to increase battery life, and designing matrices that can operate at higher temperatures.



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