



NeTHIS
New TeraHertz Imaging Systems

OpenIR-Converter

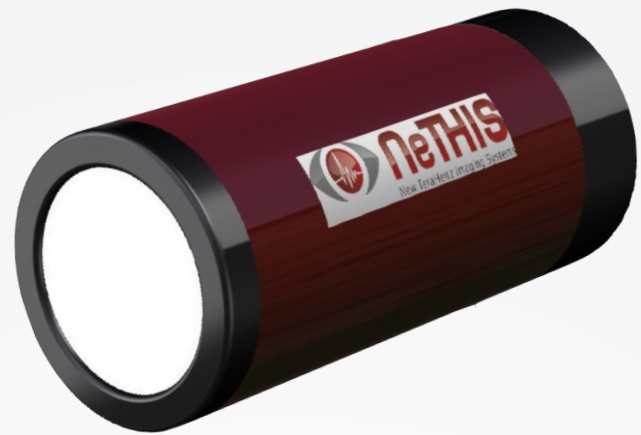
Improve your infrared thermal camera into a multispectral broadband sensor

Product overview

OpenIR-Converter is an **optical passive** module implemented on all available **cooled or uncooled infrared thermal camera**.

NeTHIS hence proposes an **extension of the spectral band of InSb/MCT/Microbolometer** detector into all the electromagnetic spectral band from **UV to THz waves (0,1 μm to 3 000 μm)**.

Imagine the next use of your thermal camera for multi-spectral active imaging



Typical Specifications (*Configurable by the customer)	
Spectral extension*	InSb (1-5 μm) MCT (7-14 μm) $\mu\text{bolometer}$ (8-12 μm) } 0,1–3 000 μm^*
Sensitive diameter* / Pixel size*	Φ 25 mm / R=90 μm
	Φ 50 mm / R=180 μm
	Φ 100 mm / R= 360 μm
Response Time	< 1 s
Damage threshold	> 1 W/cm ²
Product size (mm)	80x80x150 mm ³
NEP	-1 nW/Hz ^{-1/2}



Aeronautic composite

Applications

Have a sight inside the matter using your IR camera

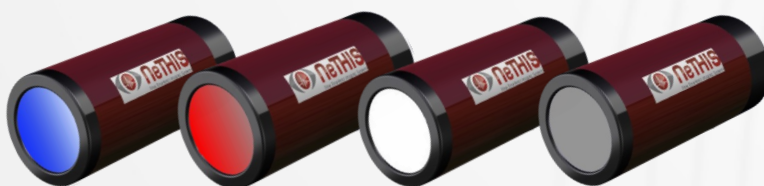
Non-Destructive Testing of insulating opaque materials :

- Multispectral 2D IR/THz imaging
- Multispectral 3D IR/THz tomography
- Physical parameter inspection and cartography (T°, humidity, pressure, ...)

Key benefits

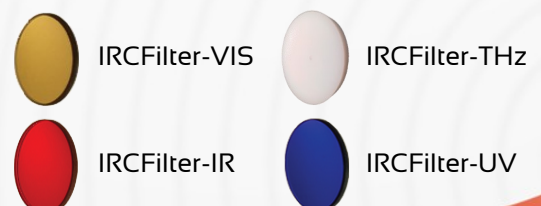
Improve your IR camera performances

- The largest homogeneous spectral response**
- No alignment or calibration needed**
- Keep your same acquisition software/process**
- Easy-to-use and easy-to-plug/unplugged**



IRC-UV 0,05 - 1 μm **IRC-IR** 1 - 25 μm **IRC-THz** 25 - 3000 μm **IRC-MS** 0,1 - 3000 μm

Accessories



Contact us for more info or custom solutions

NeTHIS - NEW TERAHERTZ IMAGING SYSTEMS

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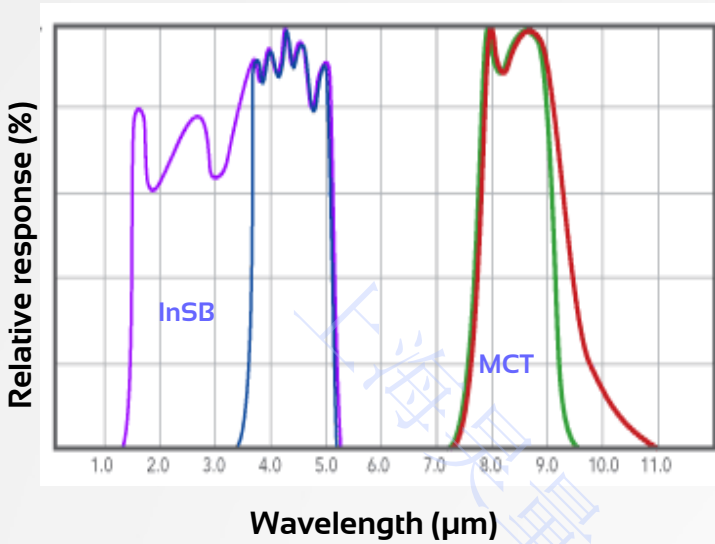


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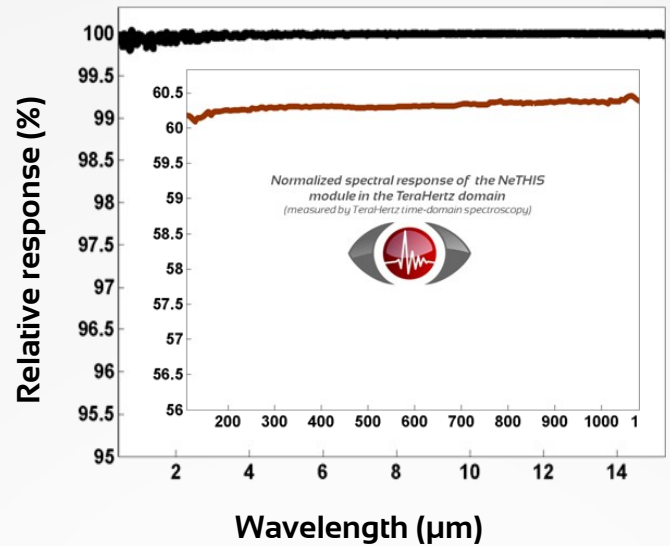
OpenIR-Converter

Improve your infrared thermal camera into a multispectral broadband sensor

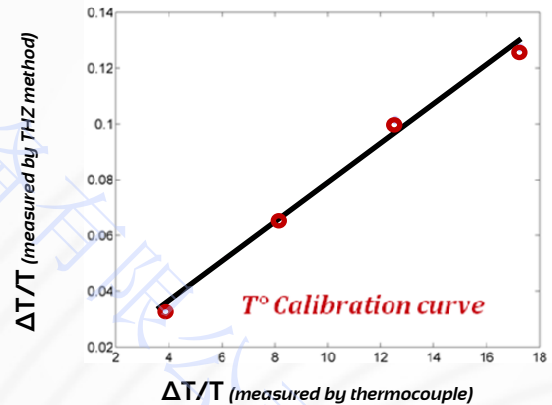
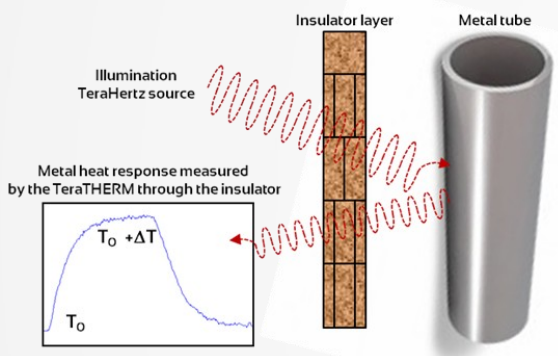
Classical standard infrared sensor



VS NeTHIS sensor response



Temperature measurement through insulator material (TeraTHERM)



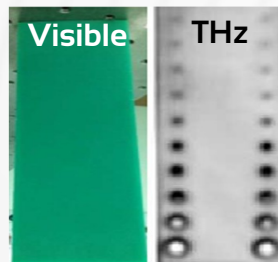
THERMOREFLECTANCE TEMPERATURE MEASUREMENT WITH MILLIMETER WAVE

C. Pradere, Review of Scientific instruments, AIP Publishing LLC, Jun 1, 2014, 078406RSI

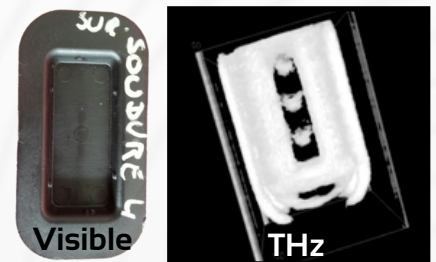
THz 2D and 3D penetrating Imaging examples



Consumer quality example



Propellant inclusion detection



Plastic welding inspection