

Infrared Camera Technology Enables Diverse Imaging Applications

LWIR or MWIR: Which is Best for Your Application?

Proper selection of the optimal infrared band can be tricky. [Read more >](#)

Is Your Infrared Camera Measuring Accurately?

Find out here. [Read more >](#)

Now Available: High-Definition Uncooled IR Cameras

These new cameras deliver more than remarkably sharp images. [Read more >](#)

NEW Range, Resolution and FoV Calculator

Determine the optimum detectors and lens combination for your application. [Read more >](#)

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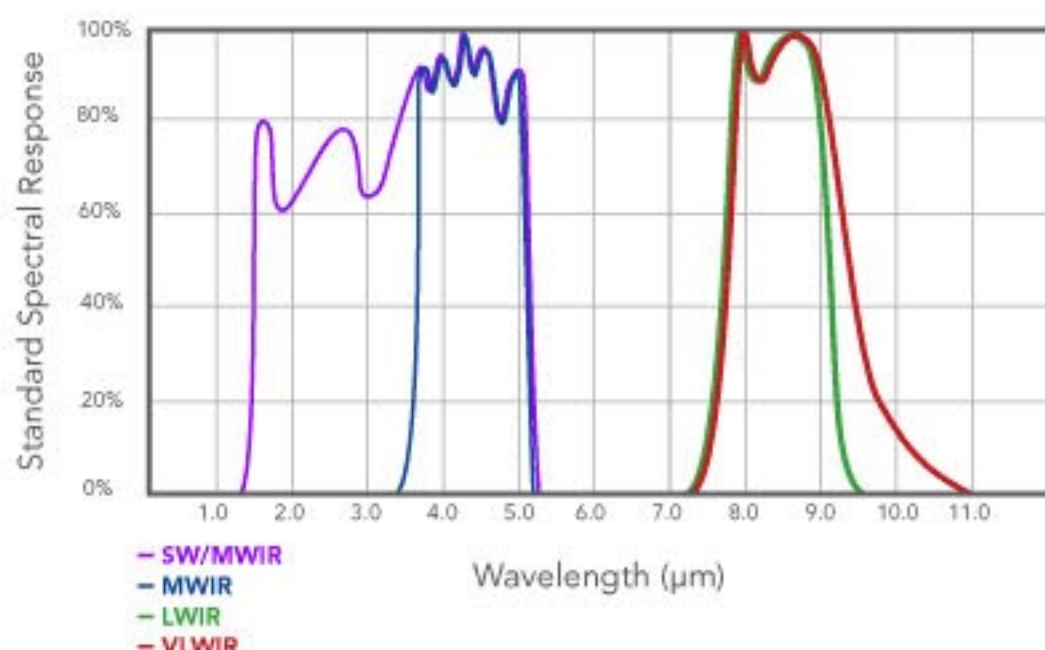
LWIR OR MWIR INFRARED IMAGING: WHICH IS BEST FOR YOUR APPLICATION?

Many commercial imaging applications require the use of infrared cameras having cooled detectors because of their far superior sensitivity, spectral behavior, response time and frame rate. Proper selection of the optimal infrared band can be tricky.

These detectors can be optimized to operate in different spectral bands as a result of the dewar window and cold filter transmission characteristics or the active temperature of the FPA. As shown in the figure to the right, photovoltaic infrared detectors (such as MCT and InSb) are currently available for imaging in several distinct bands, including SW/MWIR (1.5-5.0 μ m), MWIR (3-5 μ m), LWIR (7.5-9.5 μ m) and VLWIR (7.5-11 μ m).

Certain applications may require imaging in a specific infrared spectral band due to the nature of objects being viewed. For example, in spectroscopy, spectral absorption properties may dictate the use of the SW/MWIR band, while laser beam imaging applications may require imaging at 10.6 μ m, for example.

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[The world's most versatile LW and VLWIR infrared cameras](#)

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[High-speed MWIR camera for design, test, and manufacturing](#)

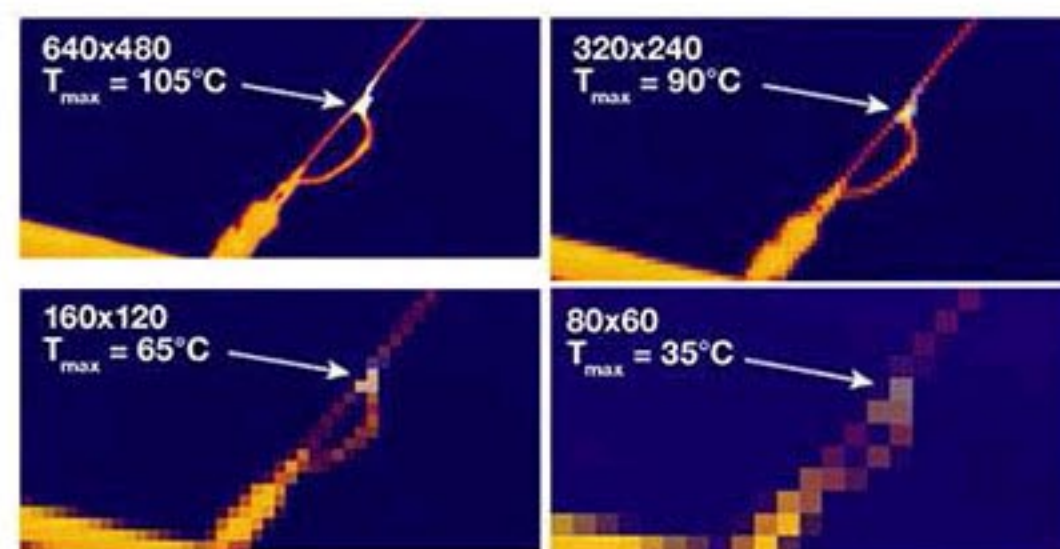
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NOW AVAILABLE: HIGH-DEFINITION UNCOOLED IR CAMERAS

High resolution infrared cameras are quite compelling, producing sharp images with excellent detail.

But, it's important to realize that these new cameras deliver more than remarkably sharp images. Image resolution impacts temperature measurement accuracy, efficiency of performing infrared inspections and safety to the professional thermographer.

The dramatic improvement in overall temperature measurement accuracy is an important benefit of high definition infrared cameras. This is because higher resolution normally results in smaller IFOV (instantaneous field of view) and smaller measurement spot size. As illustrated in the thermal images below, it would be unwise to use a low resolution camera for measuring the temperature of small objects at a distance. For accurate measurements in such situations, high resolution cameras produce the best accuracy and reduce the likelihood of overlooking potential problems.



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NEW RANGE, RESOLUTION AND FOV CALCULATOR

Determine the optimum camera and lens combination for your application.

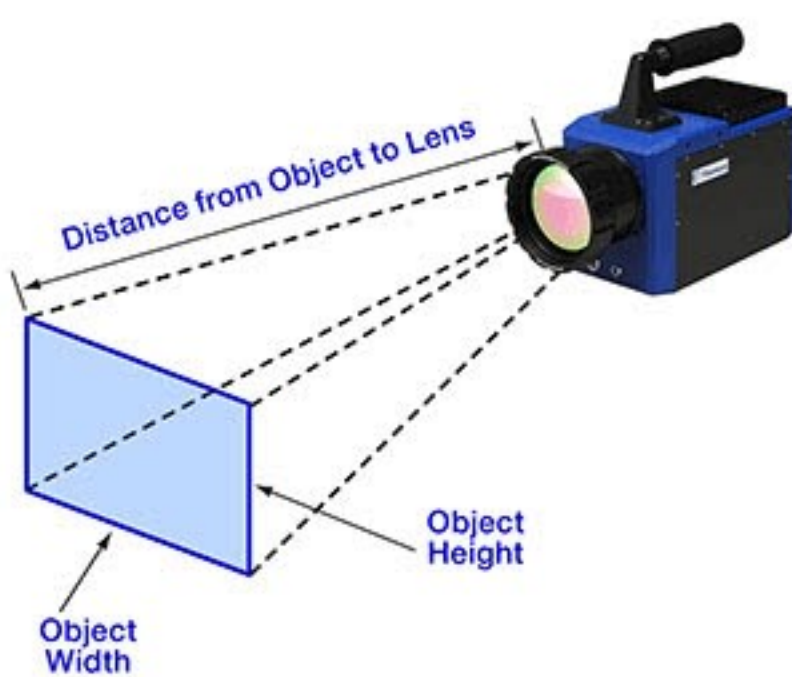
Select from a range of infrared cameras characterized by pixel pitch (e.g. 15 μ m), array size (e.g. 640x512) and objective lens focal length.

The Calculator has the following features:

- **Angular Field of View**
- **Pixel Field of View** (also known as Instantaneous Field of View)
- **Image Dimensional Field of View** (projected image size at a specified range)
- **Pixel Dimensional Field of View** (projected pixel size at a specified range)
- **Object Detection Range** (maximum range for detection, recognition or identification of objects having specified size)

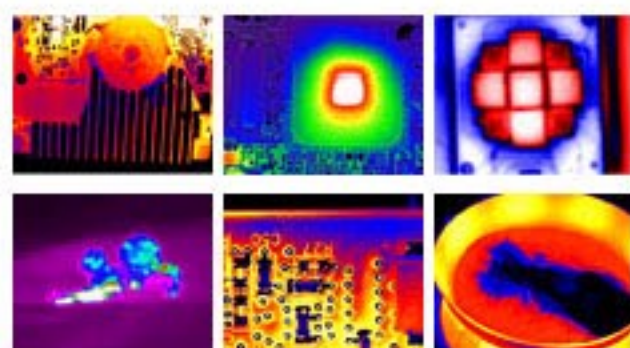
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