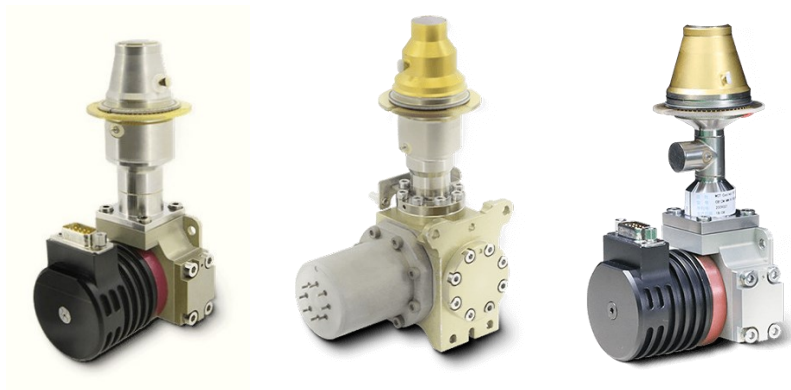


Cooled Infrared Detectors MWIR Series



2022 V1

For customized projects please Contact us:

info@simtrum.com

MWIR Series Cooled Infrared Detectors

The MWIR Series covers more than 300 techniques and 4000 procedures in element purification, substrate, epitaxy, FPAs ROIC, coolers, package and testing, etc.

✓ Sharp and clear imaging

- Good uniformity, effective pixel rate >99.5%
- High sensitivity, the best NETD as low as 8mk.

✓ Guaranteed continuous supply

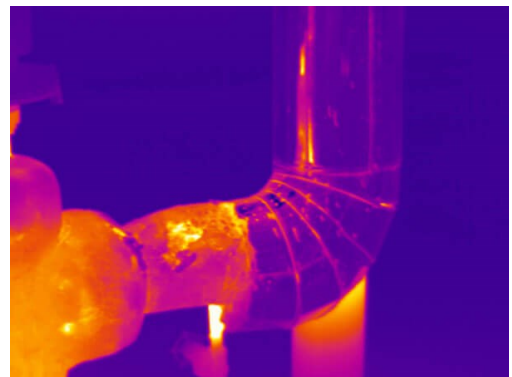
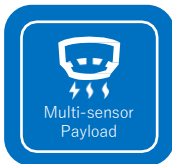
- Interchangeable standard interface.
- Mass production, good consistency.

✓ Designed for specific applications

- Wavelength can be customized.
- F number can be customized.
- Mounting surface can be customized.
- Multiple cryocooler available.



Applications



STC1212M MWIR Cooled Infrared Detector is one of the HgCdTe/MCT cooled infrared detectors offered by SIMTRUM. It is a combination of high resolution, high performance and high reliability.

The STC1212M MWIR MCT FPA detector offers four times as many pixels in the same active image as conventional 640x512 products. With a large array of 1280x1024 resolution, it can realize a wider field of view and provide more image details. The reduced 12um pixel size offers better spatial resolution and matches shorter optical lens focus to achieve the same range mission.

STC1212M MWIR HgCdTe infrared detector is an ideal choice for thermal imaging applications that require superior long-range performance and image details recognition in low size, weight, and power package.

Features

- Resolution: 1280x1024
- Pixel Pitch: 12um
- High Sensitivity
- Compact Design
- Lightweight
- Low Power Consumption

Application

- Hand-Held Reconnaissance System
- Remote Monitoring System
- Search & Tracking System
- Flight Vision Enhancement System (EVS)
- Multi-Sensor Payload
- Gas Detection

Specification	
Model	STC1212M MW
Material	MCT
Resolution	1280x1024
Pixel Pitch	12μm
Spectral Range	3.7um~4.8um MW
Working Mode	Snapshot, ITR/IWR Integration Mode; Windows Mode; Anti-blooming
Charge Capacity	6.75Me-/4.8Me-(ITR) 5.25Me-/3.3Me-(IWR)
Dynamic Range	ITR Mode≥80dB IWR Mode≥76dB
Number of Output	4 or 8; Up to 20Mpixel/s per Output
NETD	≤20mK (F2/F4)
Effective Pixel Rate	≥99.5%
Response Non-uniformity	≤8%
Cryocooler Type	RS058F
Steady Power Consumption	≤7W
Max Power Consumption	≤17W
Power Supply	24V DC
Cooling Time	≤6min
Weight	≤600g
Dimension (mm)	149x58.5x71
Working Temperature	-45°C ~ +71°C

STC615M MWIR Cooled Infrared Detector is one of the HgCdTe/MCT cooled infrared detectors offered by SIMTRUM. It is with the most popular 640x512@15um spec for almost all possible applications like long-range surveillance systems, handheld thermal imagers, gas leakage detection cameras, etc. Its wavelength, F number and mounting surface can be customized, which are specially designed for the customers' requirements.

Multiple cryocoolers are available for STC615M MWIR cooled thermal detectors. It is interchangeable with most mainstream products when configured with an RS058 integrated Stirling cooler. For applications that require compact design, small size and low power consumption, the STC615M MWIR cooled IR detector with RS046 detector dewar cooler is an ideal choice. The configuration with split cooler RS046H dewar cooler assembly is suitable for the design of the whole system which needs flexible space arrangement and strict size requirements such as handheld, UAV load, pod and other applications.

Features

- Resolution: 640x512
- Pixel Pitch: 15um
- High Sensitivity
- Compact Design
- Lightweight
- Low Power Consumption

Application

- Hand-Held Reconnaissance System
- Remote Monitoring System
- Search & Tracking System
- Flight Vision Enhancement System (EVS)
- Multi-Sensor Payload
- Gas Detection

Specification	
Model	STC615M MW
Material	MCT
Resolution	640x512
Pixel Pitch	15um
Spectral Range	3.7um~4.8um MW
Working Mode	Snapshot, ITR/IWR Integration Mode; Windows Mode; Anti-blooming
Charge Capacity	9.1Me-/6.5Me-(ITR) 7.8Me-/5.2Me-(IWR)
Dynamic Range	≥75dB
Number of Output	4; Up to 10Mpixel/s per Output
NETD	F2: ≤17mK F4: ≤18mK
Effective Pixel Rate	≥99.5%
Response Non-uniformity	≤8%
Cryocooler Type	RS058/RS046
Steady Power Consumption	≤6W@RS058 ≤5W@RS046
Max Power Consumption	≤12W @ RS058 ≤11W @ RS046
Power Supply	RS058: 24V DC RS046: 32V DC
Cooling Time	≤6min @ RS058 ≤5min30s @ RS046
Weight	≤600g @ RS058 ≤350g @ RS046
Dimension (mm)	RS046: 122x46.3x82 RS058: 147x58.5x71
Working Temperature	-45°C ~ +71°C

STC330M MWIR Cooled Infrared Detector is one of the HgCdTe/MCT cooled infrared detectors offered by SIMTRUM. It is the most classical 320x256@30um spec. Its wavelength, F number, and mounting surface can be customized and multiple cryocoolers are available.

STC330M MWIR cooled MCT detector is interchangeable with most mainstream products when configured with RS058 integrated Stirling cooler. It can be used for almost all possible applications like long-range surveillance systems, handheld thermal imagers, gas leakage detection cameras, etc.

Features

- Resolution: 320x256
- Pixel Pitch: 30um
- High Sensitivity
- Compact Design
- Lightweight
- Low Power Consumption

Application

- Hand-Held Reconnaissance System
- Remote Monitoring System
- Search & Tracking System
- Flight Vision Enhancement System (EVS)
- Multi-Sensor Payload
- Gas Detection

Specification

Specification	
Model	STC330M MW
Material	MCT
Resolution	320x256
Pixel Pitch	30μm
Spectral Range	3.7μm ~ 4.8μm MW
Working Mode	Snapshot, ITR Integration Mode; Windows Mode; Anti-blooming
Charge Capacity	36Me-/12Me-
Dynamic Range	≥80dB
Number of Output	1 or 4; Up to 6.6Mpixel/s per Output
NETD	F2: ≤9mK, F4: ≤15mK
Effective Pixel Rate	≥99.5%
Response Non-uniformity	≤8%
Cryocooler Type	RS058/RS046H
Steady Power Consumption	≤6W @ RS058 ≤6W @ RS046H
Max Power Consumption	≤12W @ RS058 ≤11W @ RS046H
Power Supply	RS058: 24V DC RS046H: 32V DC
Cooling Time	≤6min @ RS058 ≤5min30s @ RS046H
Weight	≤600g
Dimension (mm)	142x58.5x71
Working Temperature	-45°C ~ +71°C