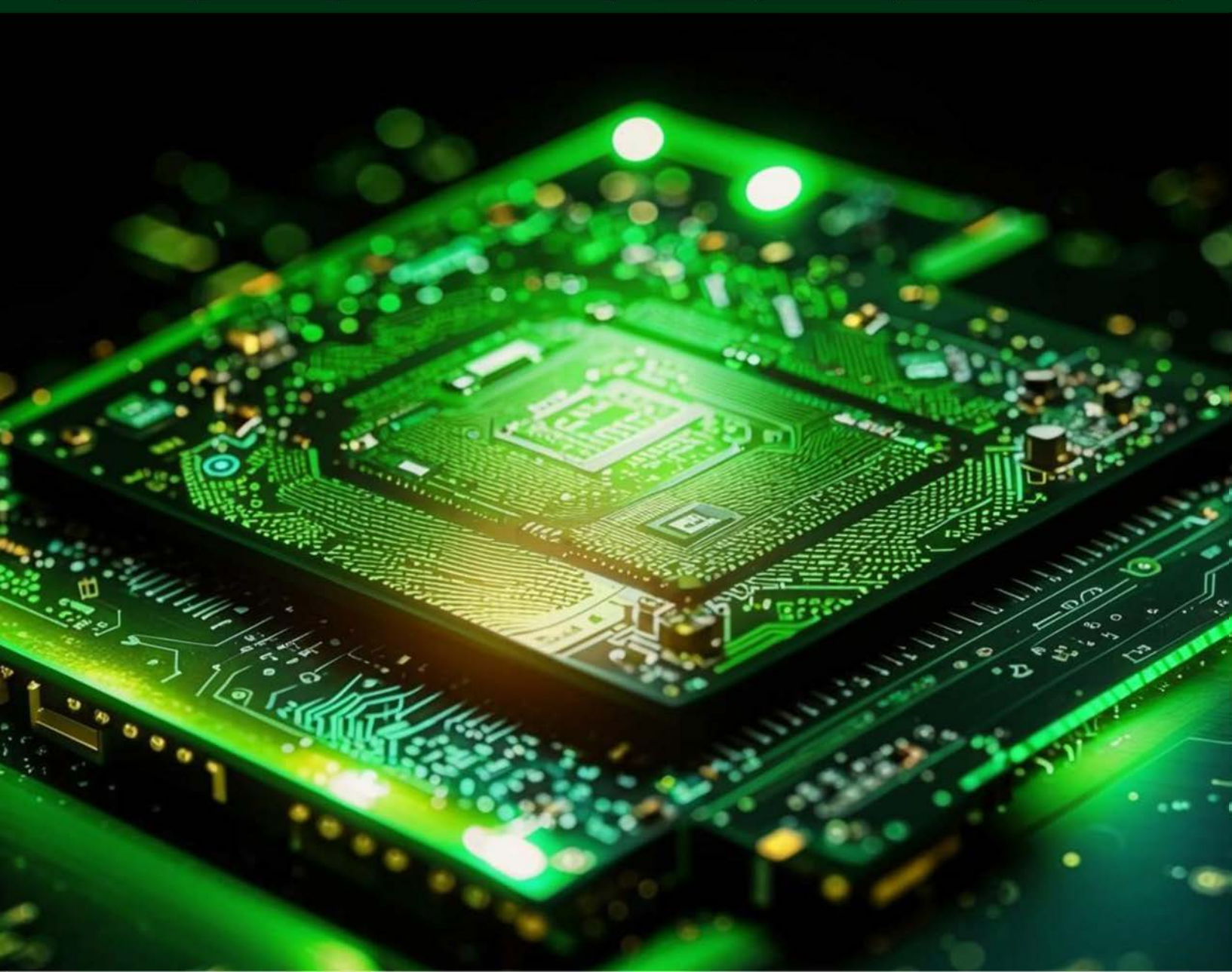


BEST

BEIJING ELECTRONIC SOLUTIONS TECHNOLOGY

Cooled Infrared Detectors



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640x512/15μm-BSI-05

Cooled MWIR Detector

Operating at elevated temperatures, this product achieves a service life $\geq 15,000$ hours, featuring high responsivity, exceptional reliability, rapid cooldown, superior response uniformity, minimal cluster defects, and pixel defect rates below 0.1%.



Applications

Dedicated to medium-and high-temperature infrared target searching, tracking, and identification, including applications in precision guidance, reconnaissance and early-warning, situational awareness, satellite remote sensing, and industrial temperature measurement etc.

Specifications

Categories		Specifications	
Detector Name	F2/4MW640-BSI-05	NETD	$\leq 18\text{mK}$
Format	640x512	Array operability	$\geq 99.9\%$
Pixel Pitch	15μm	Non-uniformity of Resonsivity	$\leq 4\%$
Spectral Range	3.7μm±0.2μm-4.8μm±0.2μm	Cooldown Time	$\leq 4\text{min}30\text{s}$
F#	2/4	Stable Power Consumption	$\leq 3.6\text{W}$
Focal plane temperature	$\leq 120\text{K}$	Max Power Consumption	$\leq 14.4\text{W}$
Weight	$\leq 540\text{g}$	Size (mm)	L141xH70xW59

640x512/15μm-BSI-04

Cooled MWIR Detector

Operating at elevated temperatures, this product achieves a service life $\geq$ 12,000 hours, featuring rapid cooldown, pixel defect rates below 0.1%, and minimal cluster defects.



Applications

Dedicated to UAV mounting, medium-and high-temperature infrared target search, tracking, and identification, including applications in precision guidance, reconnaissance and early warning, situational awareness, satellite remote sensing, and industrial temperature measurement etc.

Specifications

Categories		Specifications	
Detector Name	F2/3/4/5.5MW640-BSI-04	NETD	$\leq$ 18mK
Format	640x512	Array operability	$\geq$ 99.9%
Pixel Pitch	15μm	Non-uniformity of Resonsivity	$\leq$ 4%
Spectral Range	3.7μm $\pm$ 0.2μm-4.8μm $\pm$ 0.2μm	Cooldown Time	$\leq$ 5min
F#	2/3/4/5.5	Stable Power Consumption	$\leq$ 3.6W
Focal plane temperature	$\leq$ 120K	Max Power Consumption	$\leq$ 14.4W
Weight	$\leq$ 350g	Size (mm)	L120xH47xW67

640x512/15μm-BSI-02

Cooled MWIR Detector

Operating at elevated temperatures, this product achieves a service life $\geq 12,000$ hours, featuring rapid cooldown, pixel defect rates below 0.1%, and minimal cluster defects.



Applications

Dedicated to UAV mounting and medium-and high-temperature infrared target search, tracking, and identification, including applications in precision guidance, reconnaissance and early warning, situational awareness, satellite remote sensing, and industrial temperature measurement etc.

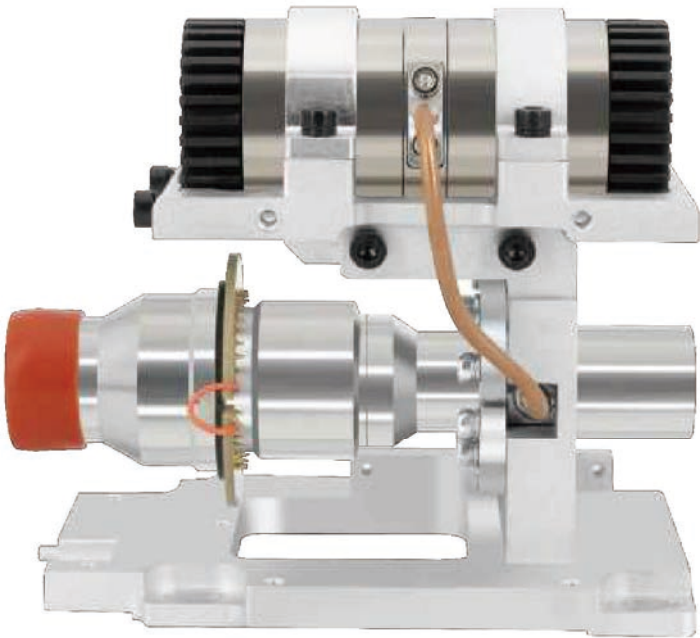
Specifications

Categories		Specifications	
Detector Name	F4/5.5MW640-BSI-02	NETD	$\leq 18\text{mK}$
Format	640x512	Array operability	$\geq 99.9\%$
Pixel Pitch	15μm	Non-uniformity of Resonsivity	$\leq 5\%$
Spectral Range	3.7μm±0.2μm-4.8μm±0.2μm	Cooldown Time	$\leq 4\text{min}$
F#	4/5.5	Stable Power Consumption	$\leq 3.6\text{W}$
Focal plane temperature	$\leq 120\text{K}$	Max Power Consumption	$\leq 12\text{W}$
Weight	$\leq 260\text{g}$	Size (mm)	L94xH65xW45

640x512/15μm-BSS-05

Cooled MWIR Detector

Operating at elevated temperatures, this product achieves a service life $\geq$ 12,000 hours,featuring rapid cooldown, pixel defect rates below 0.1%, and minimal cluster defects.



Applications

Dedicated to UAV mounting and medium-and high-temperature infrared target search, tracking, and identification, including applications in precision guidance, reconnaissance and early warning, situational awareness, satellite remote sensing, and industrial temperature measurement etc.

Specifications

Categories		Specifications	
Detector Name	F2/4/5.5MW640-BSS-05	NETD	$\leq$ 18mK
Format	640x512	Array operability	$\geq$ 99.9%
Pixel Pitch	15μm	Non-uniformity of Resonsivity	$\leq$ 5%
Spectral Range	3.7μm $\pm$ 0.2μm-4.8μm $\pm$ 0.2μm	Cooldown Time	$\leq$ 4min
F#	2/4/5.5	Stable Power Consumption	$\leq$ 5W
Focal plane temperature	$\leq$ 120K	Max Power Consumption	$\leq$ 20W
Weight	$\leq$ 400g	Size (mm)	31x31x98.5 (ϕ 29.5x69.8)

640x512/15μm-BSS-04

Cooled MWIR Detector

Operating at elevated temperatures, this product achieves a service life $\geq 20,000$ hours, featuring rapid cooldown, pixel defect rates below 0.1%, and minimal cluster defects.



Applications

Exceptionally suited for UAV-integrated deployment and medium-to-high temperature IR target search/track (S&T), including precision guidance, threat alerting, multi-domain situational awareness, space-based earth observation, and industrial thermography applications.

Specifications

Categories		Specifications	
Detector Name	F4/5.5MW640-BSS-04	NETD	$\leq 18\text{mK}$
Format	640x512	Array operability	$\geq 99.9\%$
Pixel Pitch	15μm	Non-uniformity of Resonsivity	$\leq 5\%$
Spectral Range	3.7μm±0.2μm-4.8μm±0.2μm	Cooldown Time	$\leq 4\text{min}30\text{s}$
F#	4/5.5	Stable Power Consumption	$\leq 6\text{W}$
Focal plane temperature	$\leq 120\text{K}$	Max Power Consumption	$\leq 15\text{W}$
Weight	$\leq 300\text{g}$	Size (mm)	29.5x29.5x74 (φ28.5x58)

1024x768/10μm-BSI-04

Cooled MWIR Detector

Operating across a broad 3.7-4.8μm spectral band, this detector delivers high spatial resolution, ruggedized compact construction, mission-grade reliability, ≥ 10,000 hours service life, and pixel defect rates below 0.3%.



Applications

Exceptionally suited for UAV-integrated deployment and medium-to-high temperature IR target search/track (S&T), including precision guidance, threat alerting, multi-domain situational awareness, space-based earth observation, and industrial thermography applications.

Specifications

Categories		Specifications	
Detector Name	F2/4MW1024-BSI-04	NETD	≤30mK
Format	1024x768	Array operability	≥99.5%
Pixel Pitch	10μm	Non-uniformity of Resonsivity	≤8%
Spectral Range	3.7μm±0.2μm-4.8μm±0.2μm	Cooldown Time	≤6min
F#	2/4	Stable Power Consumption	≤3W
Focal plane temperature	≤120K	Max Power Consumption	≤10W
Weight	≤350g	Size (mm)	L120xH48xW68

1280x1024/10μm-BSI-04

Cooled MWIR Detector

Operating across a broad 3.7-4.8μm spectral band, this detector delivers high spatial resolution, mission-grade reliability, ≥12,000 hours service life, pixel defect rates below 0.2%, and minimal cluster defects.



Applications

Particularly well-suited for medium-to-high temperature infrared target search and track (S&T), including precision guidance, early warning alerting, situational awareness, satellite-based earth observation, and industrial thermography applications.

Specifications

Categories		Specifications	
Detector Name	F2/4MW1280-BSI-04	NETD	≤25mK
Format	1280x1024	Array operability	≥99.5%
Pixel Pitch	10μm	Non-uniformity of Resonsivity	≤8%
Spectral Range	3.7μm±0.2μm-4.8μm±0.2μm	Cooldown Time	≤5min30s
F#	2/4	Stable Power Consumption	≤3.6W
Focal plane temperature	≤120K	Max Power Consumption	≤12W
Weight	≤370g	Size (mm)	L121xH48xW67

1280x1024/10μm-BSS-05

Cooled MWIR Detector

Operating across a broad 3.7-4.8μm spectral band, this detector delivers mission-critical reliability, ≥20,000 hours service life, and pixel defect rates below 0.2%. Its split Stirling configuration offers significant advantages in assembly flexibility and mechanical jitter immunity.



Applications

Particularly well-suited for medium-to-high temperature infrared target search and track (S&T), including precision guidance, early warning alerting, situational awareness, satellite-based earth observation, and industrial thermography applications.

Specifications

Categories		Specifications	
Detector Name	F2/4MW1280-BSS-05	NETD	≤25mK
Format	1280x1024	Array operability	≥99.5%
Pixel Pitch	10μm	Non-uniformity of Resonsivity	≤8%
Spectral Range	3.7μm±0.2μm-4.8μm±0.2μm	Cooldown Time	≤5min
F#	2/4	Stable Power Consumption	≤5W
Focal plane temperature	≤120K	Max Power Consumption	≤20W
Weight	≤400g	Size (mm)	φ39.5x100 (φ29.5x69.8)

1280x1024/15μm-BSI-08

Cooled MWIR Detector

Operating at elevated temperatures, this detector achieves $\geq 12,000$ hours service life with superior spatial resolution, enhanced sensitivity, rapid cooldown, extended detection range, pixel defect rates below 0.2%, and minimal cluster defects.



Applications

Particularly well-suited for medium-to-high temperature infrared target search and track (S&T), including precision guidance, early warning alerting, situational awareness, satellite-based earth observation, and industrial thermography applications.

Specifications

Categories		Specifications	
Detector Name	F2/4MW1280-BSI-08	NETD	$\leq 20\text{mK}$
Format	1280x1024	Array operability	$\geq 99.8\%$
Pixel Pitch	15μm	Non-uniformity of Resonsivity	$\leq 8\%$
Spectral Range	3.7μm±0.2μm-4.8μm±0.2μm	Cooldown Time	$\leq 5\text{min}$
F#	2/4	Stable Power Consumption	$\leq 15\text{W}$
Focal plane temperature	$\leq 120\text{K}$	Max Power Consumption	$\leq 40\text{W}$
Weight	$\leq 690\text{g}$	Size (mm)	L154xH79xW57

1280x1024/15μm-BSI-05

Cooled MWIR Detector

Operating across a broad 3.7-4.8μm spectral band with a rotary Stirling cryocooler, this detector delivers rapid cooldown, exceptional thermal stability, extended service life , and high-fidelity imaging performance.



Applications

Particularly well-suited for medium-to-high temperature infrared target search and track (S&T), including precision guidance, early warning alerting, situational awareness, satellite-based earth observation, and industrial thermography applications.

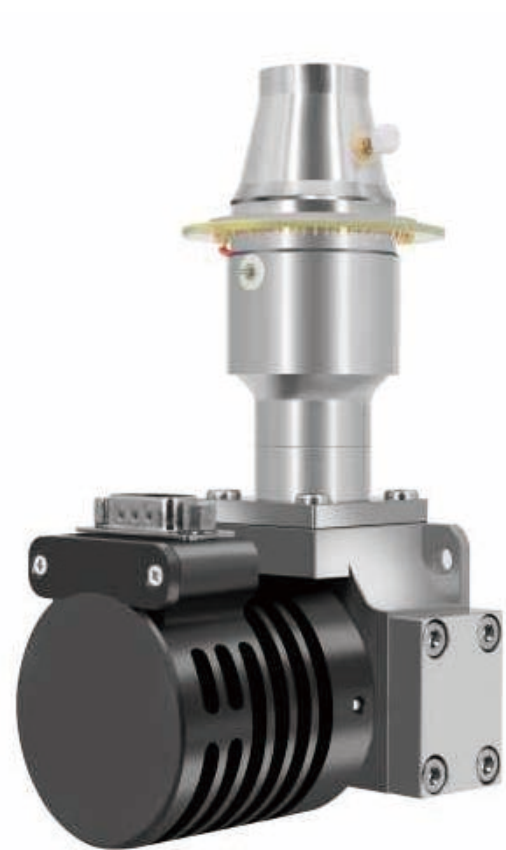
Specifications

Categories		Specifications	
Detector Name	F2/4MW1280-BSI-05	NETD	≤20mK
Format	1280x1024	Array operability	≥99.8%
Pixel Pitch	15μm	Non-uniformity of Resonsivity	≤8%
Spectral Range	3.7μm±0.2μm-4.8μm±0.2μm	Cooldown Time	≤6min
F#	2/4	Stable Power Consumption	≤7.2W
Focal plane temperature	≤120K	Max Power Consumption	≤25W
Weight	≤570g	Size (mm)	L154xH77xW59

320x256/30μm-BSI-05

Cooled LWIR Detector

Operating across a broad 7.7–10.5 μm spectral band, this detector delivers long-wave response, high sensitivity, reduced total cost of ownership (TCO), mission-grade reliability, extended service life, minimal pixel defects, and near-zero cluster anomalies.



Applications

Particularly well-suited for medium-to-high temperature infrared target search and track (S&T), including ground-based targeting optics, maritime search and rescue (SAR), and low-slow-small (LSS) UAV detection. Additionally enables electro-optical warning and targeting engagement against high-speed threats.

Specifications

Categories		Specifications	
Detector Name	F2/3LW320-BSI-05	NETD	≤20mK
Format	320x256	Array operability	≥99.5%
Pixel Pitch	30μm	Non-uniformity of Resonsivity	≤4%
Spectral Range	7.7μm±0.2μm-10.5μm±0.5μm	Cooldown Time	≤5min30s
F#	2/3	Stable Power Consumption	≤4.8W
Focal plane temperature	≤80K	Max Power Consumption	≤14.4W
Weight	≤570g	Size (mm)	L141xH74xW58

640x512

Cooled LWIR Detectors

Operating across a broad 7.7-10.5 μm spectral band, this detector delivers high spatial resolution, extended spectral response, enhanced sensitivity, mission-grade reliability, extended operational lifetime, ultra-low pixel defect rates, and minimal cluster defects.



Applications

Particularly well-suited for medium-to-high temperature infrared target search and track (S&T), including ground-based targeting optics, maritime search and rescue (SAR), and low-slow-small (LSS) UAV detection. Additionally enables electro-optical warning and targeting engagement against high-speed threats.

Specifications

Categories		Specifications		Categories		Specifications	
Detector Name	F2LW640-BSI-05	F2LW640-BSI-08	NETD		$\leq 25\text{mK}$	$\leq 25\text{mK}$	
Format	640x512	640x512	Array operability		$\geq 99.5\%$	$\geq 99.5\%$	
Pixel Pitch	15 μm	25 μm	Non-uniformity of Resonsivity		$\leq 4\%$	$\leq 6\%$	
Spectral Range	7.7 $\mu\text{m} \pm 0.2\mu\text{m}$ -10.5 $\mu\text{m} \pm 0.5\mu\text{m}$		Cooldown Time		$\leq 6\text{min}$	$\leq 5\text{min}$	
F#	2	2	Stable Power Consumption		$\leq 6\text{W}$	$\leq 15\text{W}$	
Focal plane temperature	$\leq 80\text{K}$	$\leq 80\text{K}$	Max Power Consumption		$\leq 14.4\text{W}$	$\leq 40\text{W}$	
Weight	$\leq 540\text{g}$	$\leq 750\text{g}$	Size (mm)		31×31×97 ($\phi 42 \times 124$)	L141xH78xW57	

1024x768/10μm-BSI-05

Cooled LWIR Detector

Operating across a broad 7.7-10.5 μm spectral band with 1024×768 resolution and 10 μm pixel pitch, this detector captures enhanced scene detail within identical fields of view. Featuring high-resolution imaging and mission-critical reliability, it delivers superior target acquisition capabilities for small or long-range objects.



Applications

Particularly well-suited for medium-to-high temperature infrared target search and track (S&T), including ground-based targeting optics, maritime search and rescue (SAR), and low-slow-small (LSS) UAV detection. Additionally enables electro-optical warning and targeting engagement against high-speed threats.

Specifications

Categories		Specifications		Categories		Specifications	
Detector Name	F2LW1024-BSI-05	NETD	≤35mK				
Format	1024x768	Array operability	≥99.5%				
Pixel Pitch	10μm	Non-uniformity of Responsivity	≤8%				
Spectral Range	7.7μm±0.2μm-10.5μm±0.5μm	Cooldown Time	≤5min				
F#	2	Stable Power Consumption	≤7W				
Focal plane temperature	≤80K	Max Power Consumption	≤15W				
Weight	≤350g	Size (mm)	L120xH48xW68				

M-BSI-04 Module

This module is designed for Type-II Superlattice MWIR M-BSI-04 detector, incorporating a high-performance signal acquisition and processing circuit. It outputs 16-bit raw video data via a standard CameraLink interface, enabling rapid secondary development and significantly reducing development cycles for cooled IR detector assemblies and complete systems.



Applications

Handheld reconnaissance, night vision surveillance, electro-optical payloads, search and track (S&T), equipment fault diagnostics, and forest fire monitoring.

Specifications

Categories	Specifications	Categories	Specifications
Format	640x512	Detector Biasing	Single Power Supply: 12V $\pm$ 2V
Pixel Pitch	15 μ m	Max Power	15W
Cryocooler	BS04I	Stable Power Consumption	$\leq$ 7W
Spectral Range	3.7 μ m $\pm$ 0.2 μ m $\sim$ 4.8 μ m $\pm$ 0.2 μ m	Frame Rate	Adjustable from 1Hz to 117Hz with 1Hz step
F#	Nominal: 4, 5.5; Customizable	Size(mm)	119.5mmx58.5mmx74mm
NETD	$\leq$ 18mK @F4, $\leq$ 20mK @F5.5	Weight	$\leq$ 380g
Cooldown Time	$\leq$ 4mins	Operating Temperature	-40 $^{\circ}$ C $\sim$ 70 $^{\circ}$ C
Connector	QSH-30-01-C-D-A, Mating connector part number: QTH-030-01-X-D-A	External Synchronization	External Frame Sync Input: Accepts LVDS Differential / 3.3V LVCMOS / 3.3V LVTTTL Signaling

M-BSS-04 Module

This module is designed for Type-II Superlattice MWIR M-BSS-04 detector, incorporating a high-performance signal acquisition and processing circuit. It outputs 16-bit raw video data via a standard CameraLink interface, enabling rapid secondary development and significantly reducing development cycles for cooled IR detector assemblies and complete systems.



Applications

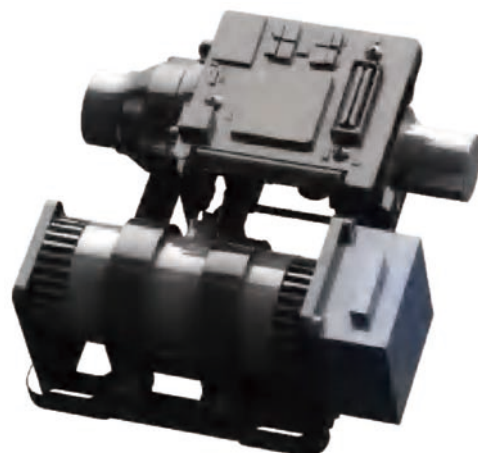
Handheld reconnaissance, night vision surveillance, electro-optical payloads, search and track (S&T), equipment fault diagnostics, and forest fire monitoring.

Specifications

Categories	Specifications	Categories	Specifications
Format	640x512	Detector Biasing	Single Power Supply: 12V±2V
Pixel Pitch	15μm	Max Power	18W
Cryocooler	BS04S	Stable Power Consumption	≤9W
Spectral Range	3.7μm±0.2μm~4.8μm±0.2μm	Frame Rate	Adjustable from 1Hz to 117Hz with 1Hz step
F#	Nominal: 4、5.5; Customizable	Size(mm)	99mmx56mmx99mm
NETD	≤18mK @F4, ≤20mK @F5.5	Weight	≤360g
Cooldown Time	≤4mins	Operating Temperature	-40℃~70℃
Connector	QSH-30-01-C-D-A, Mating connector part number: QTH-030-01-X-D-A	External Synchronization	External Frame Sync Input: Accepts LVDS Differential / 3.3V LVCMOS / 3.3V LVTTTL Signaling

M-BSS-05 Module

This module is designed for Type-II Superlattice MWIR M-BSS-05 detector, incorporating a high-performance signal acquisition and processing circuit. It outputs 16-bit raw video data via a standard CameraLink interface, enabling rapid secondary development and significantly reducing development cycles for cooled IR detector assemblies and complete systems.



Applications

Handheld reconnaissance, night vision surveillance, EO/IR payloads, search & track, predictive maintenance, and wildfire detection.

Specifications

Categories	Specifications	Categories	Specifications
Format	640x512	Detector Biasing	Single Power Supply: 12V±2V
Pixel Pitch	15μm	Max Power	24W
Cryocooler	BS05S	Stable Power Consumption	≤8W
Spectral Range	3.7μm±0.2μm~4.8μm±0.2μm	Frame Rate	Adjustable from 1Hz to 117Hz with 1Hz step
F#	Nominal: 4、5.5; Customizable	Size(mm)	110mmx55mmx100mm
NETD	≤18mK @F4, ≤20mK @F5.5	Weight	≤560g
Cooldown Time	≤4mins	Operating Temperature	-40℃~70℃
Connector	QSH-30-01-C-D-A, Mating connector part number: QTH-030-01-X-D-A	External Synchronization	External Frame Sync Input: Accepts LVDS Differential / 3.3V LVCMOS / 3.3V LVTTTL Signaling



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