SIMTRUM

Dual-Band Infrared Detectors

2022 V1

For customized projects please Contact us:
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STC330S - 320X256 MW/LWIR Cooled Infrared Detector

STC330S MW/LW Dual-color is one of T2SL cooled infrared detectors offered by SIMTRUM. It combines the advantages of both medium and long wave detection in one single 320x256@30μm infrared detector package for high-performance imaging in the 3.7~4.8μm Medium Wave Infrared (MWIR) and 7.7~9.5μm Long Wave Infrared (LWIR) wavebands, which can greatly lower the false warning rate.

Each of the 320x256 pixels in the array can be switched between MWIR and LWIR sensitivity mode by changing the bias voltage on the device, ensuring spatial coherence between the two bands. Images/videos from both bands can be captured and output within a single frame period, optimizing the temporal coherence between bands. The frame frequency of both bands can be up to 100Hz for monitoring the high-speed moving targets.

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	
Model	STC330S MWIR/LWIR
Material	T2SL
Resolution	320x256
Pixel Pitch	30μm
Spectral Range	MW: 3.7μm～4.8μm LW: 7.7μm～9.5μm
Working Mode	Snapshot; ITR Integration Mode; Windows Mode; Anti-blooming
Charge Capacity	MW: 8.9Me-/3Me- LW: 21Me-
Dynamic Range	MW: ≥76dB LW: ≥80dB
Numberof Output	2 or 8; Up to 12 Mpixel/s per Output
NETD	MW≤20mK LW≤25mK
Effective Pixel Rate	≥99.0%
Response Non-uniformity	≤8%
Cryocooler Type	RS058
Steady Power Consumption	< 9W
Max Power Consumption	< 18W
Power supply	24V DC
Cooling Time	< 8min
Weight	≤600g
Dimension (mm)	142x58.5x71
Working Temperature	-45°C ~ +71°C