MWIR
HKMW640 Series



SCD Pelican-D – Mission-Critical MWIR Imaging Performance

Proven Reliability for Defense & Aerospace Applications

SCD's Pelican-D is a high-performance infrared detector designed for mission-critical defense and industrial systems where exceptional reliability is essential.

An ideal imaging solution for demanding applications, including defense, aerospace, naval systems, armored vehicles, and missile seekers.

Military-Grade Durability & Field-Proven Reliability

Designed to meet demanding military requirements, featuring advanced hermetically sealed Dewar packaging technology for enhanced protection against extreme vibration, mechanical shock, and temperature variations.

Engineered to deliver stable and reliable performance in harsh operational environments.

Superior Image Uniformity with High-Performance InSb Technology

Featuring a high-performance Indium Antimonide (InSb) detector with excellent quantum efficiency (QE) and spatial resolution.

Delivers detailed thermal images with low noise and excellent image uniformity, supporting effective target detection and observation in challenging environments, including maritime haze, smoke, and airborne dust, subject to atmospheric conditions.

Long-Life Integrated Cryocooler Solution

Integrates a high-reliability Stirling cryocooler designed for extended operational life and improved Mean Time to Failure (MTTF).

Helps reduce maintenance requirements, extend service intervals, and maximize system availability for mission-critical defense applications.

APPLICATIONS

- **Armored Vehicle & Gimbal-Mounted Sighting Systems**
  Supports precise long-range target acquisition and tracking, even under severe vibration and shock conditions encountered during armored vehicle operations.
- **Mid-to-Long Range Border & Coastal Surveillance**
  Enables day-and-night detection and real-time tracking of unauthorized vessels and intruders at distances of several kilometers, depending on environmental conditions and system configuration.
- **Air Defense & Target Tracking Systems**
  Enables rapid detection and tracking of thermal signatures from fast-moving aircraft, helicopters, and unmanned aerial vehicles (UAVs).
- **Guided Weapons & Missile Seekers**
  Supports integration into compact, lightweight infrared seeker modules for guided missile applications.

SPECIFICATION

Feature	HKMW640GE	HKMW640IP
Sensor Information		
Sensor	SCD Pelican D	
Focal Plane Array	640x512	
Technology	InSb	
Spectral Response	1 ~ 5.4um	
Pixel Pitch	15um	
FPA Temperature	77K	
F#	5.5	
NETD@70% of the full signal range	<20mk	
Cooling Time	< 7Minute (@23°C) (Max)	
Camera Performance		
Protocol	GigE Vision (UDP protocol)	ONVIF (RTSP protocol)
Image Processing	Image Correction(BPR&NUC&NR) / Image Enhancement(DRC)	
Frame rate	30fps	
Environmental Conditions		
Operation Temperature	-10°C ~ 60°C	
Operation Relative Humidity	maximum 80% non-condensing	
Storge Temperature	-40°C ~ 85°C	
Storage Relative Humidity	maximum 80% non-condensing	
Mechanical Interface		
Size (H x V x D) (w.o Lens)	105 x 96 x 224.9mm	
Weight (w.o Lens)	< 3kg	
Power connector	DC Jack / PoE	
Power Consumption (Max)	< 35W	

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