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AuraLP
Large-Pixel 1K x 1K High-Speed Thermal Infrared Camera



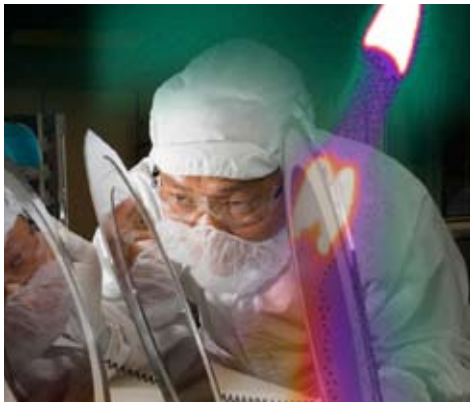
Santa Barbara **Focalplane**

1024 x 1024, >75Hz





PD079-056



PD079-059

AuraLP

AuraLP large-pixel infrared (IR) cameras set the standard for high performance IR imaging with 75Hz frame rate two output and 1024 x 1024 FPA built with Lockheed Martin's advanced indium antimonide (InSb) all-digital focal plane array (FPA) technology.

Santa Barbara Focalplane (SBF) is a merchant vendor of the very latest in thermal infrared components, imaging systems, cameras and technology. SBF specializes in designing and manufacturing the highest quality InSb FPAs in many configurations, from linear to large staring formats. Product groups include FPAs, Integrated Detector/Dewar/Cooler Assemblies, digital camera heads and complete imaging systems.

Specifications

Detector	
Type	InSb
Spectral Range	<1 μm to 5.2 μm (other wavelengths available upon special request)
Resolution	1024 x 1024 (windowable)
Pixel Pitch	25 μm
Electronics & Data Rate	
Integration Type	Snapshot
Integration Time (Elect. Shutter Speed)	1 μs to full frame time
Integration Delay and Jitter after Sync Input	<120 \pm 32 nanoseconds
Dynamic Range	14 bits
Data Rate	80 megapixels/sec
Max Frame Rate at Full Window	75 frames/sec
Subwindowing	Predefined and user selectable
Performance Specifications	
NETD	<20 mK (<14 typical)
Well Capacity	10.0 million electrons
Operability	>99.5
Camera Specifications	
Sensor Assembly f/#	f/2.1, f/4.0, f/8
Standard Spectral Range (Cold Filter)	CO ₂ Notch (3.3 - 4.2 μm and 4.5 - 4.9 μm)
Additional Cold Filter Options	3-5 μm , none
Sensor Cooling	Stirling closed cycle cooler
Lens Mount	Bolt hole patterns and twist-lock bayonet
Power at 24-36Vdc	36 W steady state
Advanced Communication and Data Transfer	
Command, Control and Data Output	Base Camera Link®
Meta-Data	IRIG-B
Software	WinIR™ and Software Development Kit
Physical Characteristics	
Size (width x height x length)	6" x 6" x 11"
Weight	15 lbs
Environmental	Rugged design - 95% non-condensing
Sun Protection (surface and shielding)	Thermal Enamel & Optional Sun Shield
Optics	
Fixed Focal Length	f/4.0

Features

- Very large pixel high-speed FPA
 - 1024x1024 windowable format
 - Standard CO₂ notch cold filter
- Unique all-digital large format camera system
 - High-speed digital output up to 160 MSPS
 - Extremely stable non-uniformity correction compared to analog FPAs
 - No crosstalk
 - Ultra-low noise
 - Excellent uniformity
 - Sensitive from UV to 5.3 μm
- Ultra-fast trigger input synchronization:
 - <120 nsec delay to start of integration with jitter of less than 32 nsec
 - Super-framing and preset sequencing modes
- FPA impervious to direct sun
 - No residual after-image of ultra-bright objects
- Adjustable integration times, frame rates and window sizes
- WinIR™ Software
 - Stream data to disk
 - SDK for custom development
- Digital data output
 - Base Camera Link® with live analog video via video card
- Integrated IRIG-B + metadata stamped on each frame header
- High f/# ideal for telescope relay applications
- Thermal-efficient ruggedized package

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 Front top: PD079-056; Front bottom: PD079-057