SWIR Camera
PA320 Fxx



High-Performance SWIR Imaging for Industrial Inspection

High-Sensitivity InGaAs Sensor

Equipped with a high-performance InGaAs sensor, delivering excellent quantum efficiency (QE) across the 900–1700 nm SWIR wavelength range for precise imaging and inspection.

Advanced TEC Cooling Technology

Thermoelectric Cooling (TEC) technology maintains a stable sensor temperature, effectively reducing thermal noise and ensuring consistent, high-quality image acquisition.

High-Speed Imaging – Up to 300 fps

Supports frame rates of up to 300 fps, enabling high-speed image acquisition for industrial automation, machine vision, and precision inspection applications.

APPLICATIONS

• Semiconductor & Solar Cell Inspection

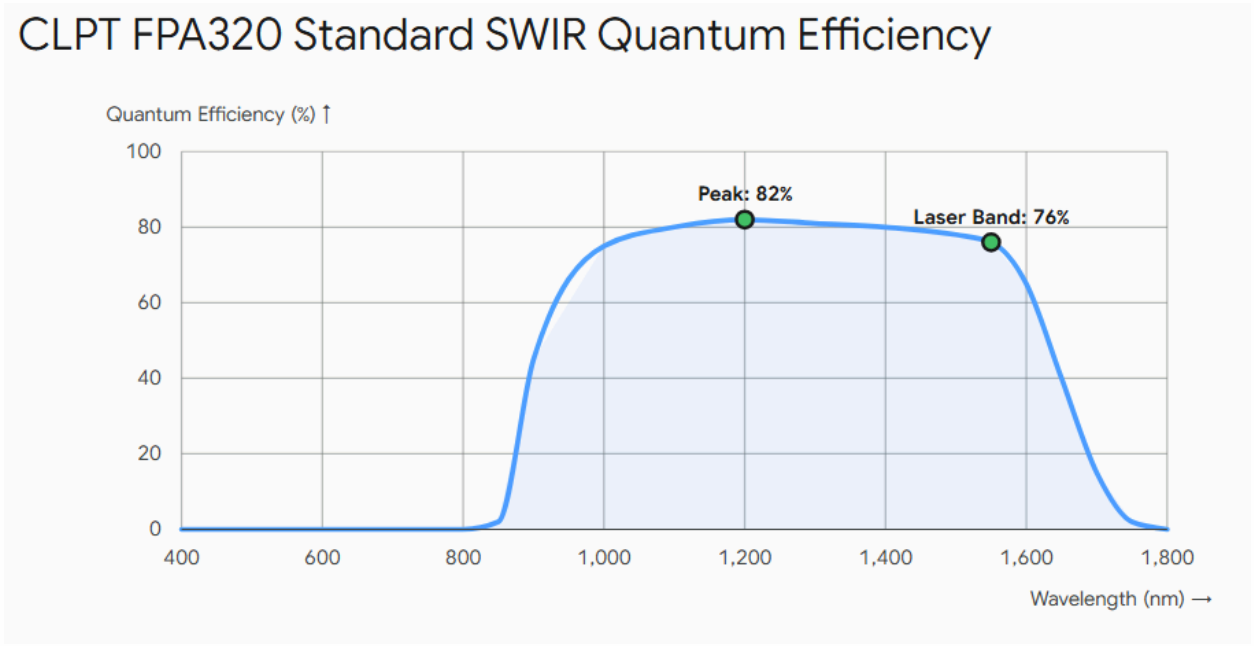
Enables inspection through silicon wafers to detect internal cracks, structural defects, and pattern alignment issues in semiconductor and photovoltaic manufacturing.

• Moisture Detection & Visualization

Supports agricultural quality inspection, including fruit bruise detection and moisture assessment, as well as liquid-level monitoring in compatible packaging containers.

• Material Identification & Classification

Enables identification and sorting of plastics, processed foods, and chemical materials by analyzing their spectral characteristics, supporting contaminant detection and automated quality control when combined with suitable spectral imaging techniques.



SPECIFICATION

Feature	PA320 F100 NCL	PA320 F300 NGE
SWIR Sensor Information		
Maker	Area InGaAs Non-TEC	
Sensor	CLPT FPA320	
Spectral Response	0.9 ~ 1.7㎛(SWIR)	
Pixel Pitch	30㎛	
Focal Plane Array	320 × 256	
Interfaces		
Mode	Camera Link Base	GigE
Pixel Clock / Protocol	40Mhz	GigE Vision
Image Data	14-bit Mono	
Frame Rate	100fps	300fps
Functionality		
Image Acquisition Mode	Free running / External Trigger using +5V TTL or CC1 (for CL only) or Software(for CXP only)	
Image Correction	2-point correction (Gain, Offset) / Bad Pixel	2-point correction (Gain, Offset) / Bad Pixel / FFC
Electrical Interface		
Input Voltage	DC12V or PoCL	DC12V or PoE
Power Consumption	<3.5W	<5.5W
Environmental Conditions		
Operation Temperature	-10°C ~ 40°C	
Operation Relative Humidity	maximum 90% non-condensing	
Storge Temperature	-40°C ~ 85°C	
Storage Relative Humidity	maximum 90% non-condensing	
Mechanical Interface		
Size (W x H x D)	50 × 50 × 50.33mm	56 × 56 × 67.1mm
Weight	170g (without Lens)	290g (without Lens)
Lens mount	M42 or C-mount	
Power connector	6-pin threaded Hirose Mating connector part# HR10A-7R-6PB(73)	

Tel. +82-2-863-3137 **Mail.** sales@ozray.co.kr **Web.** www.ozray.co.kr
D-#1514, GwangMyung SK Technopark, 60, Haan-ro, GwangMyung-si, Gyeonggi-do, Korea

OZRAY
Beyond the Boundaries of Light
OZRAY Co., Ltd. KOREA (Headquarters)