

## Cooled VGA Extended Wavelength SWIR InGaAs Camera



The camera uses selected extended wavelength InGaAs focal plane arrays with sensitivity in the 1100 to 2200 nm wavebands.

Thanks to efficient cooling and stable offset, the InGaAs camera allows reproducible acquisition for precise metrology measurements in the extended SWIR spectrum.

Camera Link and Gigabit Ethernet Vision compliant interface enables easy integration into existing systems.

OEM versions with special form factors / cooling options are available for integration into specific instruments / systems.

### **Available with passive cooling**

- Semiconductor inspection
- SWIR handheld vision enhancement
- SWIR airborne payload
- Photoluminescence for solar cells

Spectral response from 1100 to 2200 nm

14-bit digitization / 16-bit image processing

Read out noise  
down to typically 30 electrons

>200 fps  
with region of interest ROI

Excellent linearity  
response to varying intensities and / or exposures

Gigabit Ethernet & Camera Link interface

Software option:  
SDK kit, Labview VI's

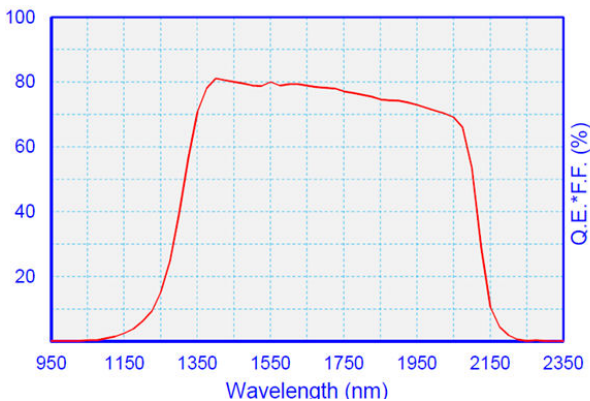
### **Air cooling or water cooling for long exposure**

- Astronomy
- Hyperspectral imaging
- Laser beam profiling
- Spectroscopy

# PHOTONIC

## Cooled VGA Extended SWIR InGaAs Camera

Characteristics	PSEL VGA Extended Wavelength SWIR 15µm
	1100 - 2200 nm
	640 x 512
	9.6 mm x 7.68 mm
	174 fps at full VGA resolution 570 fps at ¼ VGA resolution 7,200 fps at 640x4 resolution (spectroscopy or line mode)
	15µm x 15µm
	20k - 23k electrons (high gain mode) 80k - 105k electrons (mid gain mode) 1.0M - 1.5M electrons (low gain mode)
	28 - 38 electrons (high gain mode) 50 - 77 electrons (mid gain mode) 500 - 800 electrons (low gain mode)
	Integrate Then Read, Integrate While Read
	<300fA with air cooling & <20fA with water cooling (with corrections)
	-25°C with air cooling, -50°C with water cooling (lower dark current)
	Non uniformity, bright pixel, gain, offset, flatfield
	14-bit with 16-bit digital processing
	30 microseconds up to 20 milliseconds
	80%, QE at 2050 nm 70%



Quantum efficiency response of Cooled SWIR InGaAs camera