

## InGaAs HIGH SENSITIVITY NIR DETECTOR

InGaAs solid state image sensing detector. Having high sensitivity from 950nm to 1700nm wavelength range.

## 【Product overview】

**InGaAs high sensitivity NIR detector** is a NIR detector having high spectral sensitivity from 950nm to 1700nm wavelength range. Especially, it has very high spectral sensitivity in 1300nm-1600nm wavelength range, it is best for beam profile measurement and analysis, beam observation, inspection, assembling adjustment of various optical device and module for optical communication. As the image sensing device, InGaAs solid state image sensor (non-cooling type) is used. It has good characteristics in optical input-output linearity, durability to the input light, and free from image lag. In combination with Synos' optical system **M-Scope** series and optical beam analysis module **AP013**, it realizes various optical beam observation and analysis system in NIR spectral range.

## 【Application】

- \* Beam profile observation and analysis of optical device and module for optical communication in 1300-1600nm wavelength range.
  - Lase diode, optical fiber, optical waveguide, Silicon photonics device, optical modules for optical communication
- \* NFP, FFP, collimated beam measurement in 1300-1600nm wavelength range
- \* Optical characteristic measurement and assembly alignment for optical communication module such as fiber module and optical module
- \* Research and development of silicon photonics
- \* Inspection for semiconductor devices
  - Si wafer, compound semiconductor wafer, solar cell device, semiconductor chip
- \* General image observation in NIR range

## InGaAs HIGH SENSITIVITY NIR DETECTOR

## ISA041H2

Standard type InGaAs imaging detector for optical beam profile measurement from 950 - 1700nm wavelength range

## 【Product overview】

InGaAs high sensitivity NIR detector ISA041H2 is a NIR detector using 320 x 256 pixels InGaAs solid state imaging detector. Best suits for beam profile measurement and image processing, NIR image observation in NIR range. ISA041H2 is a standard imaging sensor for NIR beam profile measurement system in combination with Synos' M-Scope series optics and optical beam analysis module AP013U.

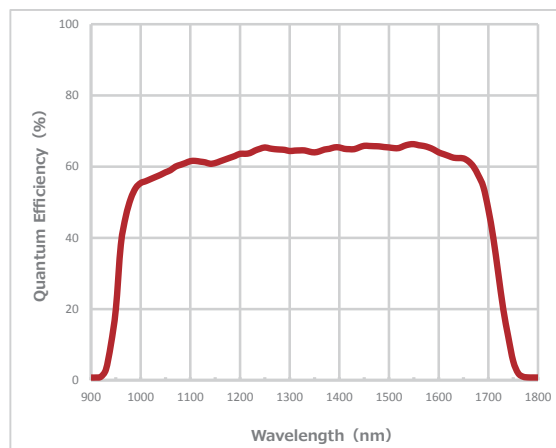


## 【Summary of specification】

\*The specification shown below is for use with the detector alone. The functions shown below may be restricted depending on the hardware/software used.

Summary of specification / imaging device	
Imaging device	InGaAs image sensor
Spectral range	950nm - 1700nm
Pixel number	320(H) x 256(V) pixels
Sensor pitch	20μm x 20μm
Summary of specification / detector	
Sensor mode	Rolling shutter mode / Global shutter mode
Cooling temperature	10°C±0.5°C (at ambient temperature 25°C, forced-air cooling)
Detector interface	USB3.0
Exposure time	4.6ms~33.3ms (100μs step/at rolling shutter mode) 100μs~33.3ms (100μs step/at global shutter mode)
Maximum frame rate	216.6Hz (exposure time 4.6ms/at rolling shutter mode) 214.3Hz (exposure time 100μs/at global shutter mode)
ADC	14bit
External trigger mode	edge trigger, level trigger, start trigger
Camera mount	C mount
Power consumption	16W or less
Input voltage	DC+12V
Ambient operation temp.(recommended)	+25°C ±3°C
Ambient operation temperature/humidity	0°C - +40°C/30% - 80% (no condensation)
Ambient storage temperature/humidity	-10°C - +50°C/under 90% (no condensation)

## 【Spectral sensitivity】



## 【Standard component】

- \* Detector head : 1
- \* AC adapter for ISA041H2 : 1
- \* 12pin camera cable : 1
- \* USB cable for ISA041 : 1

## 【Dimension, weight of ISA041H2 detector head】

- \* Outside dimension : 56(H) x 56(W) x 98(D) mm (excluding projection portion)
- \* Weight : approx. 520g