

InGaAs HIGH RESOLUTION NIR DETECTOR ISA041HRA / ISA041HRVA

Pixel pitch 5µm high resolution type InGaAs detector, having 400nm ~ 1700nm spectral range

InGaAs high resolution NIR detector **ISA041HRA / OSA041HRVA** are NIR detectors using 5µm square pixels pitch InGaAs high resolution image sensor, having 400nm ~ 1700nm wide spectral range. Having wide spectral sensitivity from visible to NIR, these detectors can be widely applied to image observation in visible to infrared range. There are two models, **ISA041HRA** with 1280 (H) x 1024 (V) pixels and **ISA041HRVA** with 640 (H) x 512 (V) pixels.



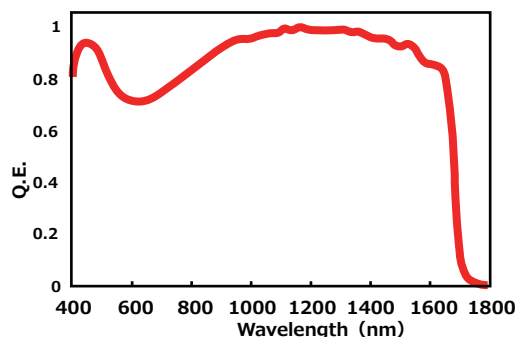
[Summary of specification]

Model	ISA041HRA	ISA041HRVA
Imaging device	InGaAs image sensor	
Spectral range	400nm ~ 1700nm	
Pixel number	1280(H) x 1024(V) pixels	640(H) x 512(H) pixels
Sensor pitch	5µm x 5µm	
Effective device size	6.4mm(H) x 5.12mm(V)	3.2mm(H) x 2.56mm(V)
Cooling temperature	+15°C (peltier cooling setting temperature)	
Detector interface	Gigabit Ethernet (1000BASE-T)	
Shutter mode	Global shutter	
Frame rate (ADC)	30.0 fps (12bit) 60.0 fps (8bit)	120.0 fps (12bit) 240.0 fps (8bit)
Exposure time	6µsec ~ 10msec (6µsec ~ 9.99sec settable)	
S/N ratio	54 dB	
Camera mount	C mount	
Power consumption	approx. 7W	
Input voltage	DC+12V ~ +24V ±1V	
Ambient operation temp.(recommended)	+25°C ±3°C	
Ambient operation temperature/humidity	0°C ~ +45°C / 20% ~ 80% (no condensation)	
Ambient storage temperature/humidity	-15°C ~ +65°C / 20% ~ 80% (no condensation)	

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

* With this detector, bright pixels, dark pixels, and unevenness may appear depending on the exposure time setting and environmental temperature. Please note that this is due to the characteristics of the InGaAs sensor and is not a defect or failure.

[Spectral sensitivity]



[Standard component]

- Detector head: 1
- Camera adapter for ISA041HRA/HRVA: 1
- 12pin camera cable: 1
- LAN cable: 1

[Dimension, weight of ISA041HRA/HRVA detector head]

- Outside dimension : 58(H) x 58(W) x 90(D) mm (excluding projection portion)
- Weight : approx. 400g

[InGaAs NIR detector model selection ISA041H2/VH · ISA041HRA/HRVA]

ISA041H2/VH have AR coat (antireflection coating) in 1300nm ~ 1550nm spectral range on the cover glass of InGaAs element, so it is most suitable for the sensor for laser beam profile measurement. On the other hand, **ISA041HRA/HRVA** use high-definition InGaAs element with spectral sensitivity in 400 ~ 1700nm, so it is suitable for general-purpose infrared image observation and image processing.

16000 PIXELS InGaAs NIR DETECTOR ISA041M

Small pixel number/low cost type general-purpose InGaAs imaging detector, mainly for purpose of observation in NIR range.

16000 pixels InGaAs NIR detector **ISA041M** is low cost type NIR detector using 128x128 pixels InGaAs solid state imaging detector. Best suits for beam monitor, beam observation in NIR spectral range.

[Summary of specification]

Summary of specification / imaging device	
Imaging device	InGaAs image sensor
Spectral range	900nm - 1700nm
Pixel number	128 x 128 pixels
Sensor pitch	20µm
Sensor size	2.56 x 2.56mm
Summary of specification / Detector	
Detector control I/F	USB2.0 bulk transfer
Synchronization mode	Internal synchronization
Frame rate	258fps
ADC	14bit
Camera mount	C mount
Power consumption	20W or less
Power supply	DC12V
Operation environment	0°C - 35°C/10-80% (no condensation)

[Standard component]

- Detector head: 1
- AC adapter for ISA041M: 1
- USB cable for ISA041M: 1

[Dimension, weight of ISA041M detector head]

- Outside dimension : 71.5(W) x 61.5(H) x 51.8(D) mm
- Weight : approx. 250g



[Spectral sensitivity]

