



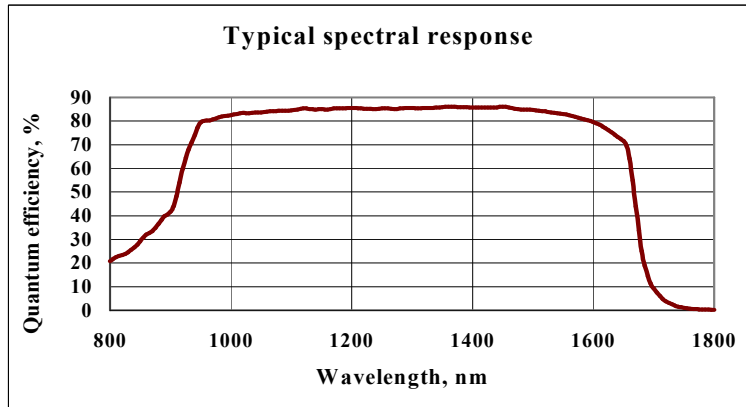
Symphony
IGA-512 x 1 (25 μ m x 500 μ m) Linear InGaAs Array Detector

Small Pixel Array for NIR Spectroscopy

HORIBA Jobin Yvon's Symphony IGA-512 x 1 is the ideal choice for demanding, low light level measurements in the near infrared (NIR) spectral region from 800 nm – 1700 nm. With a 512 x 1 pixel format and 25 μ m x 500 μ m pixel size, this InGaAs detector provides better resolution than standard 50 μ m pixels while maintaining full well capacity. The IGA-512 x 1 features a 16-bit dynamic range, a mechanical shutter for true background subtraction, and is available in a Super TE cooled and Liquid Nitrogen cooled versions. Liquid nitrogen cooling minimizes dark signal and allows users to perform low light level measurements that require extended integration times. A Fast Ethernet connection to the host PC guarantees 100% data integrity.

Ideal for a Variety of Applications:

- NIR Raman Spectroscopy
- Photoluminescence
- Emission
- Fiber Optic Transmission



Typical spectral response for IGA-512 x 1 detector (25 °C)

| Features | Benefits |
|---|---|
| Spectroscopic Grade InGaAs Chip | Ideally suited for low light level detection in a variety of spectroscopic applications |
| Mechanical Shutter | True Background subtraction for performing high precision, low light level spectroscopic applications |
| Liquid Nitrogen Cooling with 1 or 3 liter Dewar Option | Extremely low dark signal operation for extended integration times required with low signal levels |
| High Sensitivity (HiS) and High Dynamic Range (HiD) Acquisition Modes | Optimize the detector for the best signal-to-noise ratio (S/N) |
| Ethernet Connection to Host PC | Standard, easy to use interface with 100% data integrity |
| HORIBA Jobin Yvon SynerJY® Software | Simple and complete control of a Symphony IGA based spectroscopy system with full analysis capabilities |
| LabVIEW VIs and SDK Available | Flexible software to integrate a Symphony IGA into existing apparatus or as an OEM component |

Specifications

| | | | | | |
|------------------------|----------|-----------------------------|-------------------------|-----------------------------|-------------------------|
| Model | | STE | | LN ₂ | |
| Wavelength Range | | 800 nm – 1700 nm | | | |
| Pixel Format | | 512 x 1 | | | |
| Pixel Size | | 25 μm x 500 μm | | | |
| Image Area | | 100% Fill Factor | | | |
| Operating Temperature | | 220 K | | 170 K | |
| | | Typical | Maximum | Typical | Maximum |
| Readout Noise | HiS Mode | 0.5-0.7 ke ⁻ rms | 1 ke ⁻ rms | 0.5-0.8 ke ⁻ rms | 1 ke ⁻ rms |
| | HiD Mode | 5-7 ke ⁻ rms | 10 ke ⁻ rms | 5-8 ke ⁻ rms | 10 ke ⁻ rms |
| Full Well Capacity | HiS Mode | 5 Me ⁻ | | 5 Me ⁻ | |
| | HiD Mode | 130 Me ⁻ | | 130 Me ⁻ | |
| Dark Signal | | 35 ke ⁻ /p/s | 75 ke ⁻ /p/s | 2.5 ke ⁻ /p/s | 10 ke ⁻ /p/s |
| Fixed Pattern Response | HiS Mode | 500 e ⁻ /s | 3000 e ⁻ /s | 200 e ⁻ /s | 500 e ⁻ /s |
| | HiD Mode | 500 e ⁻ /s | 3000 e ⁻ /s | 200 e ⁻ /s | 500 e ⁻ /s |
| Response Nonuniformity | | ± 5 % | ± 10 % | ± 5 % | ± 10 % |
| Response Nonlinearity | | < ± 1% | | < ± 1% | |
| Gain | HiS Mode | 75 e ⁻ /count | | 75 e ⁻ /count | |
| | HiD Mode | 2000 e ⁻ /count | | 2000 e ⁻ /count | |
| Dynamic Range | | 16 bit | | | |
| Spectral Rate | | 300 Hz | | | |
| Pixel defects | | No dark or hot pixels | | | |

* Specifications subject to change without notice.

Ordering Information:

IGA-512x1-25-1700-STE
IGA-512x1-25-1700-1LS
IGA-512x1-25-1700-3LS

Super TE Cooled InGaAs Detector
Liquid Nitrogen Cooled InGaAs Detector with 1 Liter Dewar
Liquid Nitrogen Cooled InGaAs Detector with 3 Liter Dewar

HORIBA JOBIN YVON

(All HORIBA Jobin Yvon companies were formerly known as Jobin Yvon)

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