

*Designed for use in the NIR, applications include NIR Raman, photoluminescence, emission, and absorbance spectroscopy.*

## Symphony II Linear InGaAs Array

SII-1LS-512-25-17  
SII-1LS-512-50-17  
SII-1LS-1024-25-17



HORIBA Scientific's Symphony II InGaAs arrays are the ideal choice for demanding, low-light-level measurements in the near infrared (NIR) spectral region from 800–1700 nm. Offered in 512 × 1 (25 × 500 μm), 512 × 1 (50 × 500 μm), and 1024 × 1 (25 × 500 μm) pixel formats, these InGaAs detectors provide high resolution while maintaining full well capacity. Symphony II InGaAs arrays feature a 16-bit dynamic range, are liquid-nitrogen cooled to minimize dark noise, and use a mechanical shutter for subtraction of the dark background. Available with a 3-liter dewar for hours of uninterrupted data-collection. A plug-and-play USB 2.0 interface allows portability and easy setup on PC notebooks and desktop computers with 100% data integrity. Applications include near-IR Raman, photoluminescence measurements of semiconductors, SWCNTs, and nanowires. Detectors with sensitivity from 1 μm to 2.2 μm are also available.



Feature	Spectroscopy Benefits
Cryogenic Cooling	Cools the array to -103°C to minimize dark noise
Excellent Linearity	High accuracy of data over the full dynamic range
USB 2.0 Interface	Easy to use; connects to PC notebooks and desktops with 100% data integrity
High Sensitivity (HiS) and High Dynamic Range (HiD) modes	Software selection of acquisition mode to optimize detector for best signal-to-noise ratio
Auxiliary Signal Input	Unique ability to add measurements from single-channel detectors without additional electronics
HORIBA Scientific's SynerJY® Software	Complete control of a Symphony II CCD and HORIBA Scientific Spectrograph system with full analysis capabilities
LabVIEW VIs and SDK Available	Flexible software to integrate a Symphony II CCD into existing apparatus or as an OEM component

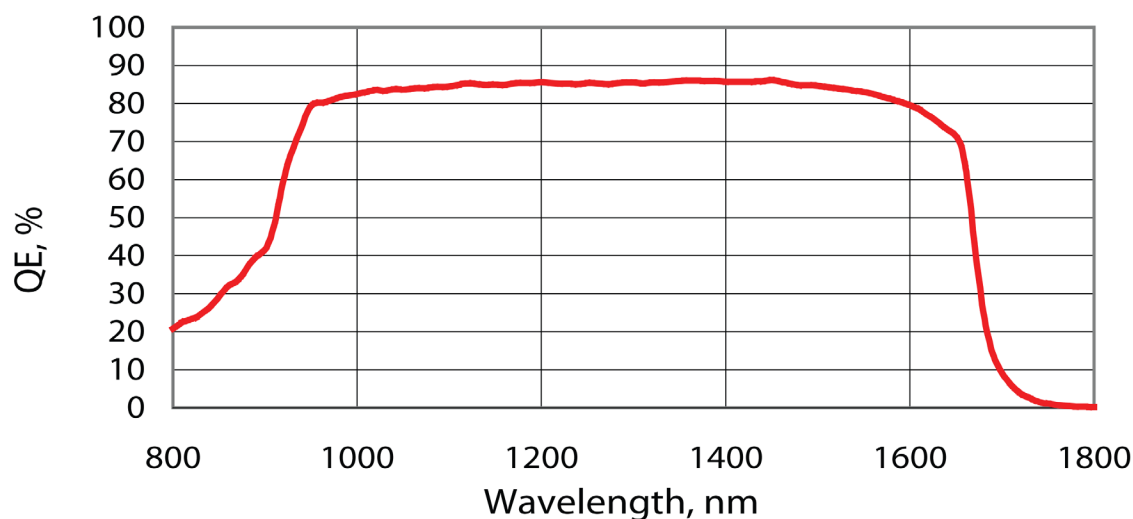


## Specifications\*

Format		512 × 1 (25 × 500)	512 × 1 (50 × 500)	1024 × 1 (25 × 500)
Wavelength Range	Ambient Temp. (25°C)	800–1700 nm		
	Operating Temp. (–103°C)	800–1600 nm		
Operating Temperature (Typical)		–103°C		
		Typical		
Readout	HiS Mode (High Gain)	0.5–0.8 ke <sup>-</sup> rms		
Noise	HiD Mode (Low Gain)	5–8 ke <sup>-</sup> rms		
Full Well Capacity	HiS Mode (High Gain)	5 Me <sup>-</sup>		
	HiD Mode (Low Gain)	130 Me <sup>-</sup>		
Dark Current		8 ke <sup>-</sup> /p/s		
Response Nonuniformity		± 10%	± 5%	± 10%
Response Nonlinearity		< ± 1%		
Gain (Nominal)	HiS Mode (High Gain)	58 e <sup>-</sup> /count		
	HiD Mode (Low Gain)	1545 e <sup>-</sup> /count		
Dynamic Range		16 bit		
Pixel Defects		Max of 5 dark or hot pixels	Max of 5 dark or hot pixels	Max of 10 dark or hot pixels

\*Specifications subject to change without notice.

## Quantum Efficiency at 25 °C



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