

The standard for spectroscopy

Symphony[®] II 1024 × 256 Cryogenic Front-Illuminated CCD Detector

The HORIBA Scientific Front-Illuminated 1024 × 256 CCD is ideal for low-noise acquisitions required in a wide variety of spectroscopic applications. Its 26 μm × 26 μm pixel size offers a high full well capacity, a large dynamic range, and an excellent signal-to-noise ratio. The height of this chip makes it the best choice for multi-tracking measurements or full 6.7 mm binning in the visible to near-IR spectral regions for an increased signal-to-noise ratio.



Feature

Spectroscopy Benefits

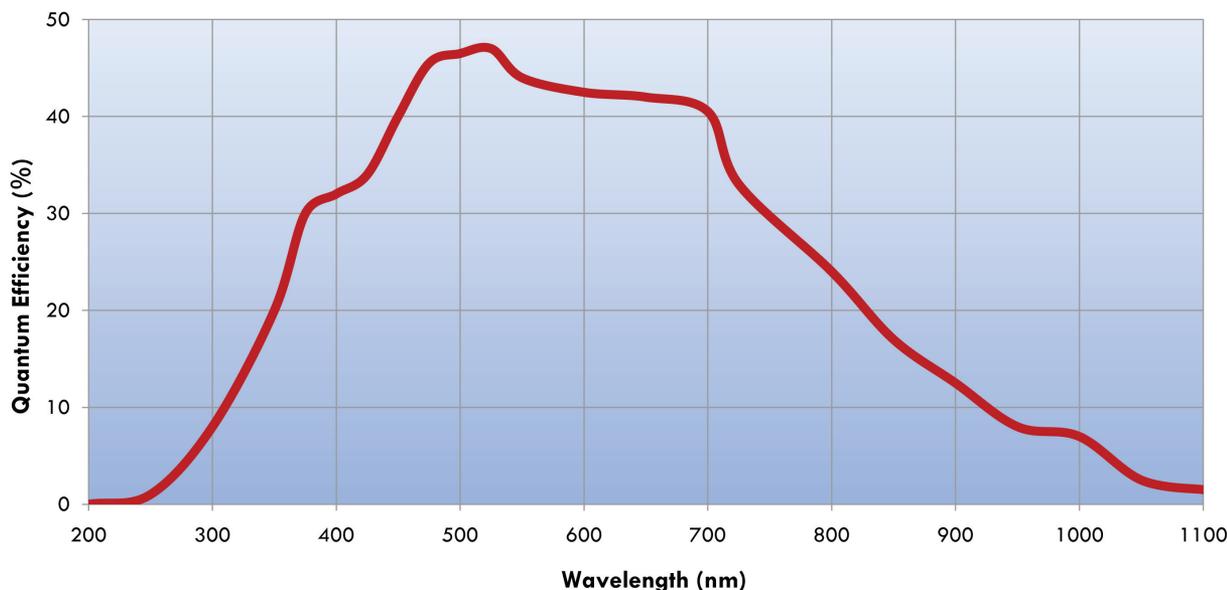
Scientific Grade 1 CCD	Ideally suited for low light level detection in a variety of spectroscopic applications
Liquid-nitrogen Cooling	Extremely low dark signal for extended integration times required with low signals
Excellent Linearity	Increased accuracy of data over the full dynamic range
Software-selectable Scan Rates	Optimize an experiment for the best combination of speed and sensitivity
USB 2.0 Interface	Standard connection to PC notebooks and desktops with 100% data integrity
HORIBA Scientific's SynerJY [®] Software	Complete control of a Symphony II CCD and HORIBA Scientific Spectrograph system with full analysis capabilities
Auxiliary Signal Input	Unique ability to add measurements from single-channel detectors without additional electronics.
LabVIEW [™] VIs and SDK Available	Flexible software to integrate a Symphony II CCD into existing apparatus or as an OEM component



CCD Format	1024 × 256, front-illuminated, Scientific Grade 1			
Pixel Size	26 μm × 26 μm			
Image Area	26.6 mm × 6.7 mm, 100% fill factor			
Cooling System	Liquid nitrogen			
Hold Time	1LS Model	24 hours with 1 L Dewar		
	3LS Model	72 hours with 3 L Dewar		
		Minimum	Typical	Maximum
Readout Noise	20 kHz		3.4 e ⁻ rms	5 e ⁻ rms
	1 MHz		15 e ⁻ rms	20 e ⁻ rms
Pixel Well Capacity		350 ke ⁻	500 ke ⁻	
Register Well Capacity			1000 ke ⁻	
Dark Current			0.3 e ⁻ /pixel/h	
Nonlinearity		< 0.4% at 20 kHz		
		< 1% at 1 MHz		
Scan Rates	20 kHz and 1 MHz, software-selectable			
Software-Selectable Gains	3 software-selectable gains			
Dynamic Range	16 bits			
Vertical Shift Rates	36 μs, 9 μs			
Maximum Spectral Rate	20 kHz	13 Hz		
	1 MHz	278 Hz		

*Specifications subject to change without notice.

Typical Spectral Response



HORIBA

Scientific

Ordering Information:

SII-1LS-256-FV Liquid Nitrogen Cooled CCD System with 1 Liter Side-Looking Dewar

SII-3LS-256-FV Liquid Nitrogen Cooled CCD System with 3 Liter Side-Looking Dewar

Our CCD packages include a CCD shutter for clean CCD charge transfer and background subtraction. To transfer liquid nitrogen to the CCD Dewar, we recommend our appropriately-sized funnel, part # G3200111328.

ELEMENTAL ANALYSIS

FLUORESCENCE

GRATINGS &
OEM SPECTROMETERS

OPTICAL COMPONENTS

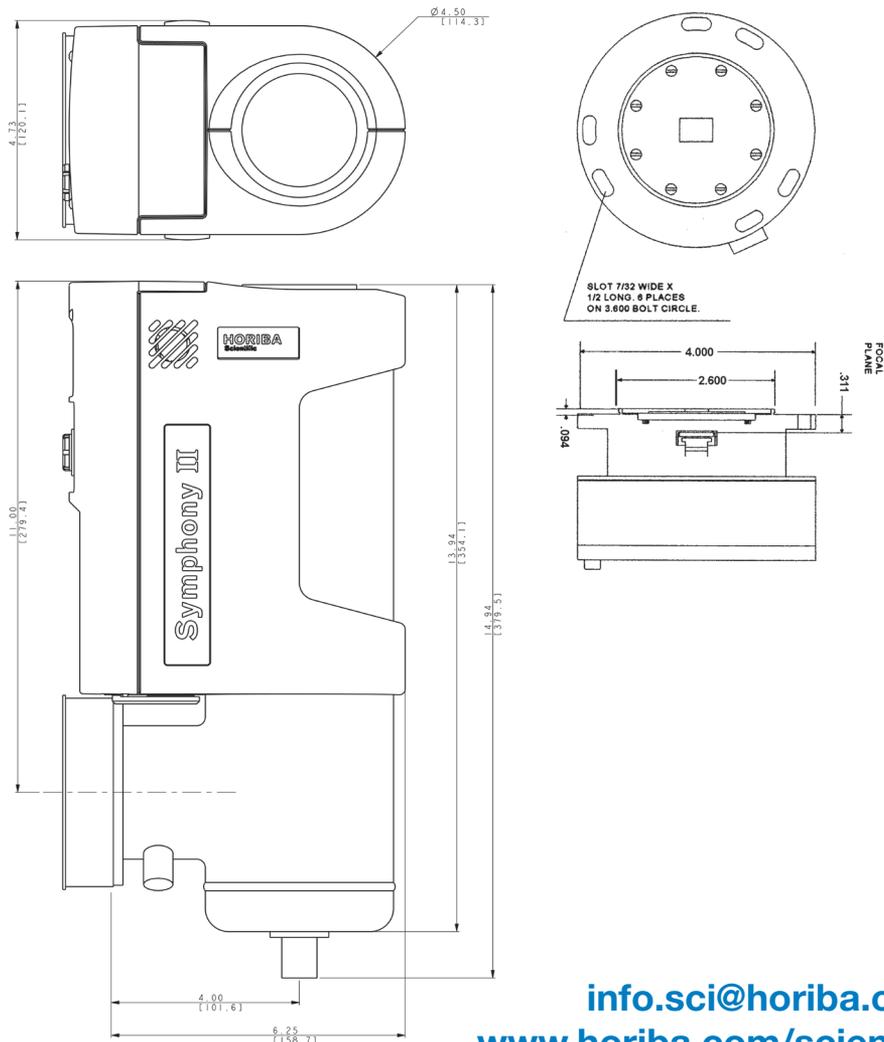
PARTICLE CHARACTERIZATION

RAMAN

SPECTROSCOPIC ELLIPSOMETRY

SPR IMAGING

Mechanical Dimensions



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