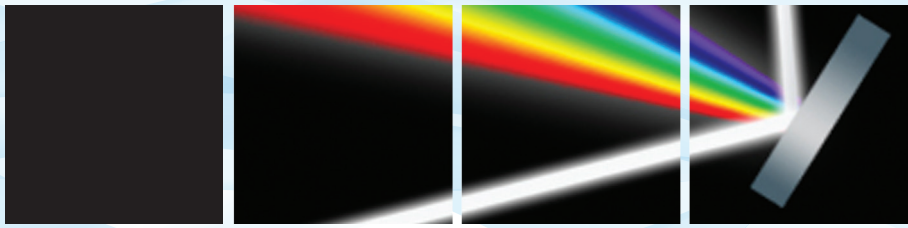
HORIBA Scientific

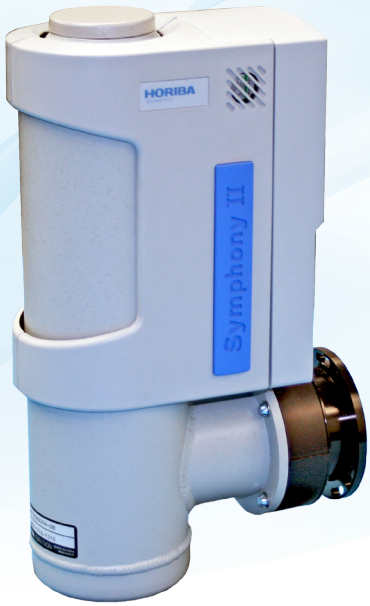
Symphony II BIVS Scientific CCD Camera

Scientific CCD Camera

ELEMENTAL ANALYSIS
FLUORESCENCE
GRATINGS & OEM SPECTROMETERS
OPTICAL COMPONENTS
FORENSICS
PARTICLE CHARACTERIZATION
RAMAN
SPECTROSCOPIC ELLIPSOMETRY
SPR IMAGING

Back Illuminated Visible Sensor, -133°C
Chip formats to choose from:
1024 x 256 pixels, Part #: SII-1LS-1024X256-BV-PS, SII-3LS-1024X256-BV-PS
2048 x 512 pixels,Part #: SII-1LS-2048X512-BV-PS, SII-3LS-2048X512-BV-PS





The Symphony II BIVS scientific CCD camera is the ideal camera low light level and fine spectra applications such as Raman spectroscopy. This series of cameras offers three different chip array formats to choose from with a peak quantum efficiency of 95%.

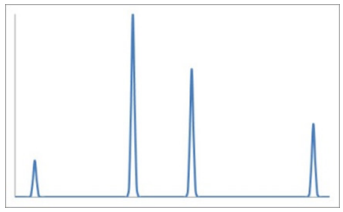
Features and Benefits

- Best QE for ultimate sensitivity
- Deep liquid nitrogen cooling
- Ideal for low light level detection without etaloning
- Excellent linearity
- Single channel detector port extends wavelength range
- E2V Scientific Grade 1 CCD
- Lifetime vacuum warranty
- USB 2.0 Interface
- HORIBA SynerJY acquisition and analysis software
- LabVIEW VI's and SDK available

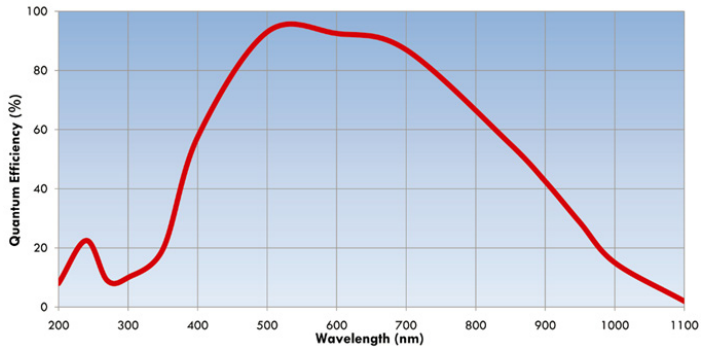
Primary Applications

Primarily chosen for Raman and fine spectrum analysis, it is also well suited for studying weak spectral emissions.

- Raman
- Photoluminescence
- Absorption
- Transmission
- Reflectance



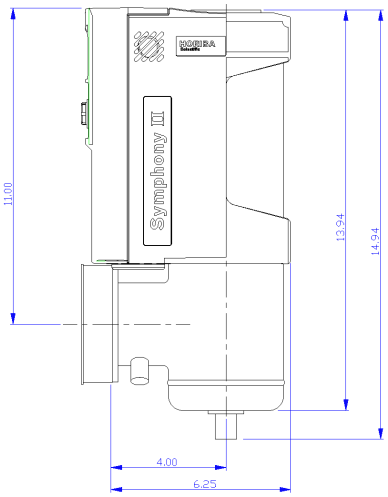
QE Curve, Symphony II BIVS CCD

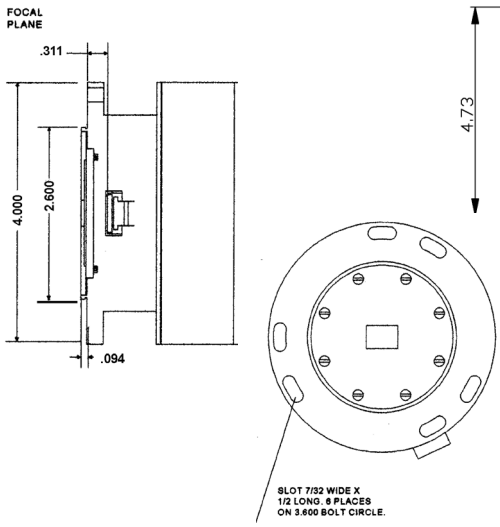


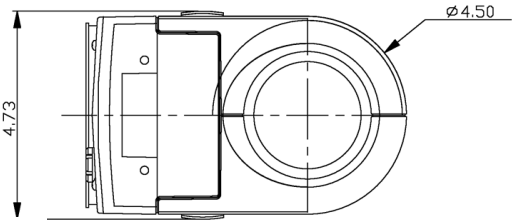
Specifications

CCD format		2048 x 512, back-illuminated, Scientific Grade 1	1024 x 256, back-illuminated, Scientific Grade 1
Pixel size		13.5 µm x 13.5 µm	26 µm x 26 µm
Image area		27.6 mm x 6.9 mm, 100% fill factor	26.6 mm x 6.7 mm, 100% fill factor
Cooling system		Liquid nitrogen	
Hold Time	**1 LS Model**	24 hours with 1 L Dewar	
	3 LS Model	72 hours with 3 L Dewar	
Typical readout noise	**20 kHz**	3 e- rms	5 e- rms
	1 MHz	13 e- rms	20 e- rms
Maximum readout noise	**20 kHz**	4 e- rms	8 e- rms
	1 MHz	15 e- rms	25 e- rms
Minimum pixel well capacity		150 ke-	350 ke-
Typical pixel well capacity		250 ke-	500 ke-
Typical register well capacity		1000 ke-	
Typical dark current		0.5 e-/pixel/h	1 e-/pixel/h
Nonlinearity	**20 kHz**	<0.4%	
	1 MHz	<1%	
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**	6 Hz	13 Hz
	1 MHz	140 Hz	278 Hz

Mechanical Dimensions







Optical Building Blocks

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