

SynapsePlus FIUV

High Speed Scientific CCD Camera

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

Front illuminated UV enhanced sensor,
-80°C (-95°C) 2048 x 512 pixels

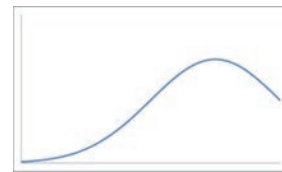
Features and Benefits

- Deep thermoelectric cooling
- Fast acquisition rate of more than 2200 spectra/s
- Ideal for low light level detection without etaloning
- Excellent linearity
- e2V Scientific Grade 1 CCD
- Lifetime vacuum warranty
- USB 2.0 interface: 100% guaranteed data integrity
- HORIBA SynerJY or LabSpec acquisition and analysis software
- LabVIEW VI's and SDK available

Primary Applications

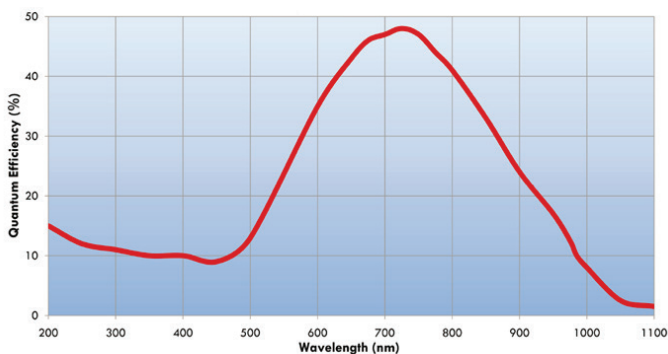
Primarily chosen for broad spectrum analysis such as photoluminescence, it is also well suited for studying fine spectral features on a broad spectral background.

- Absorption
- Raman
- Transmission
- Photoluminescence
- Reflectance
- Fast kinetics



The SynapsePlus FIUV scientific CCD camera is the ideal camera for a variety of spectroscopy applications. Available in a 2048 x 512 chip array format with peak quantum efficiency of 48%, the SynapsePlus FIUV is capable of rapid acquisition speeds, greater than 2200 spectra/s.

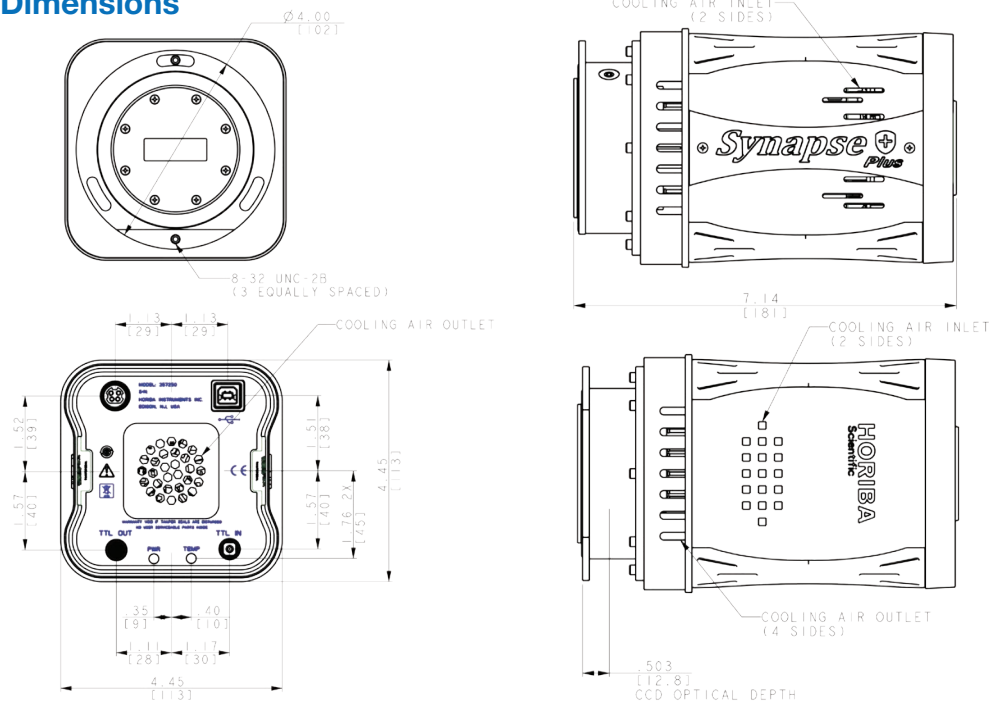
QE Curve, SynapsePlus FIUV CCD



Specifications

Sensor	Front-Illuminated UV-coated (FIUV), Scientific Grade 1		
Active pixels	2048 x 512		
Pixel size	13.5 μm x 13.5 μm		
Image area	27.6 mm x 6.9 mm, 100% fill factor		
Pixel well depth	250,000 e ⁻		
Register well depth	1,000,000 e ⁻		
Non-linearity (Measured at all speeds per camera)	<0.40%		
Readout Noise (e⁻): Typ. (Max)	50 kHz: 2.5 (4)	1 MHz: 7 (12)	3 MHz: 11 (15)
Dark current at -80°C (e⁻/pixel/s)	<0.001		
Maximum spectra per second	Full vertical bin: 181 ROI mode 20 rows: 1795 ROI mode 8 rows: 2247		
Software-adjustable gain (e⁻/count)	Selectable from 1.0 to 13.5		
Digitization	16-bit ADC		
Vertical shift rates (μs)	9.3, 18.4, 36.5 software-selectable		
Cooling at +20°C	Air-cooled: -75°C (guaranteed), -80°C (typical) Liquid-cooling recirculator: -90°C (guaranteed), -95°C (typical)		
Power requirements AC-DC power supply (provided)	AC input 90-264 VAC, 47-63 Hz DC output, +9 V, 6.44 A maximum		
Physical dimensions	Length: 181 mm (7.14")	Width: 113 mm (4.45")	Height: 113 mm (4.45")
Physical weight	2.10 kg (4.64 lb)		

Mechanical Dimensions



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HORIBA
Scientific

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