

SynapsePlus BIDD

High Speed Scientific CCD Camera

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

Back illuminated deep depleted sensor,
-80°C (-95°C) 1024 x 256 pixels

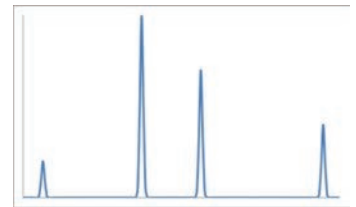
Features and Benefits

- Best QE for all spectroscopy experiments
- Deep thermoelectric cooling
- Fast acquisition rate of more than 2200 spectra/s
- Ideal for low light level detection
- 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

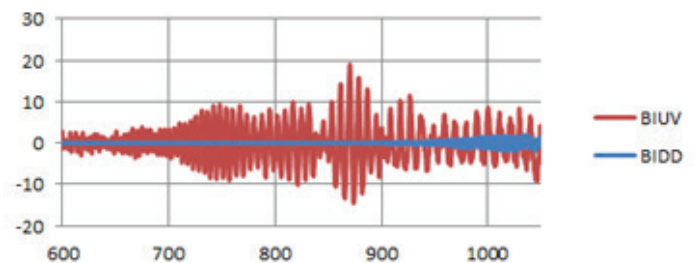
Primary Applications

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

- Raman
- Photoluminescence
- Absorption
- Transmission
- Fast kinetics

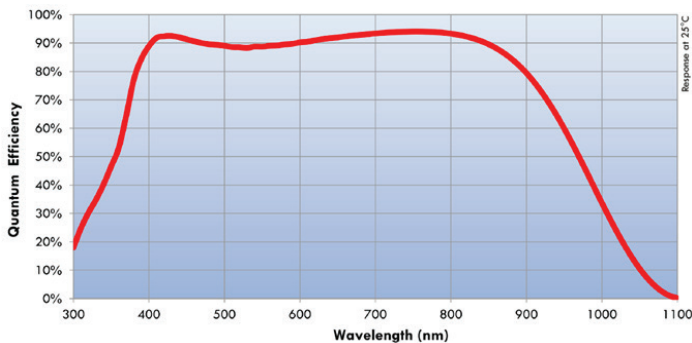


Eliminates etaloning: HORIBA QExtra technology versus traditional back illuminated CCD



The SynapsePlus BIDD scientific CCD camera features HORIBA's unique QExtra QE enhancing and etalon fringe suppression technology. Available in a 1024 x 256 chip array format with peak quantum efficiency over 90%, the SynapsePlus BIDD is the ideal camera for demanding Raman, fluorescence, and photoluminescence spectroscopy.

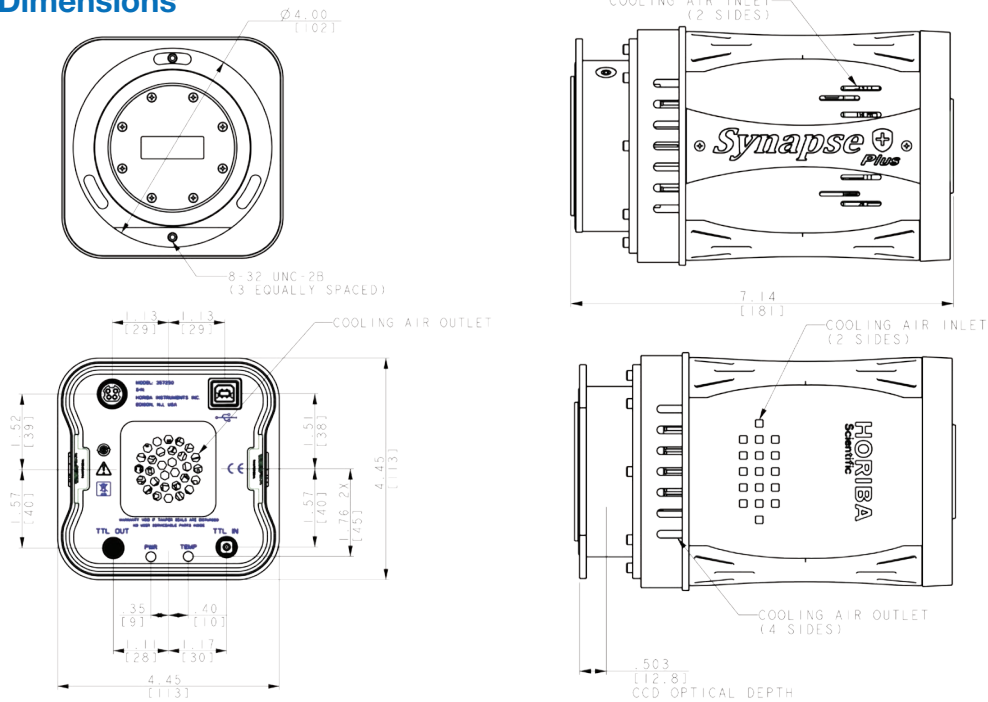
QE Curve, SynapsePlus BIDD CCD



Specifications

Sensor	Back-Illuminated Deep Depletion (BIDD), Scientific Grade 1		
Active pixels	1024 x 256		
Pixel size	26 µm x 26 µm		
Image area	26.6 mm x 6.7 mm, 100% fill factor		
Pixel well depth	700,000 e ⁻		
Register well depth	1000,000 e ⁻		
Non-linearity (Measured at all speeds per camera)	<0.40%		
Readout Noise (e⁻): Typ. (Max)	50 kHz: 4 (7)	1 MHz: 12 (15)	3 MHz: 15 (30)
Dark current at -80°C (e⁻/pixel/s)	<0.01		
Maximum spectra per second	Full vertical bin: 363 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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