

# Newton CCD

## The world's fastest spectroscopy CCD

When it comes to access simultaneously the best spectral resolution, acquisition rates and detection range flexibility, the Newton CCD cameras always come first.

### Fast spectral acquisitions

The Newton MHz readout platform allows spectral rates up to 1,600 spectra per second with crop mode, ideal for fast microspectroscopy chemical mapping or microfluidics analysis.

### High resolution and high dynamic range spectroscopy

13.5  $\mu\text{m}$  pixel option allows access to the highest spectral resolution, while 26  $\mu\text{m}$  pixel matrix boasts larger photoelectrons storage capacity and greater dynamic range.

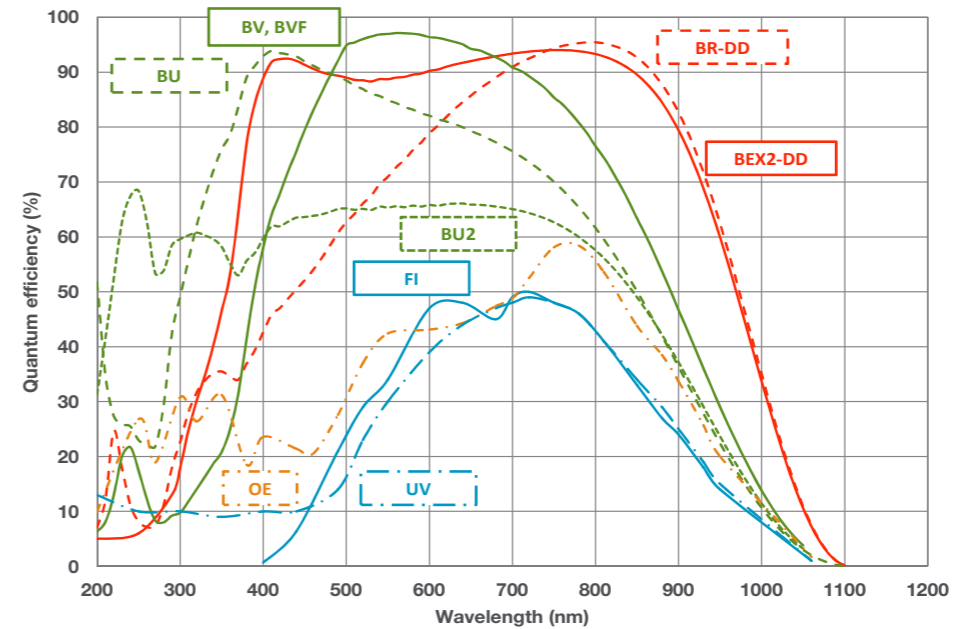
### Key Applications

Absorption - Transmission - Reflection  
 Raman (244, 532, 785 and 833 nm)  
 Fluorescence - Luminescence - Photoluminescence  
 Plasma studies  
 Plasmonics  
 Fast Transient phenomena study



More information at [andor.com/learning](http://andor.com/learning)

**Application Note**  
 'Fiber Probe Based Raman spectroscopy Bio-sensor for Surgical Robotics'



### Features

Multi-megahertz readout  
 TE cooling to -100°C  
 UltraVac™ - guaranteed hermetic vacuum seal technology  
 Down to 13.5 x 13.5  $\mu\text{m}$  pixel size  
 Crop mode operation  
 Deep-depletion sensor options  
 Software-selectable output amplifiers (DU940)  
 Simple opto-mechanical coupling interface  
 Simple USB 2.0 connection

### Benefits

High repetition rates achievable with low noise electronics - ideal for transient phenomena study  
 Negligible dark current without the inconvenience of LN<sub>2</sub>  
 Permanent vacuum integrity, critical for deep cooling and best sensor performance access  
 Optimized pixel size for achievement of high resolution spectroscopy  
 Achieve the highest possible spectral rates of over 1,600 spectra per second  
 High NIR QE, virtually etalon-free - ideal for NIR Raman  
 Superior broadband detection with Dual-AR technology option (BEX2-DD)  
 Choice of High Dynamic Range (HDR) or High Sensitivity (HS)  
 Readily integrate with Andor Kymera and Shamrock spectrograph series  
 User friendly plug and play connection directly to the back of the camera

Model	Active pixels ( $\mu\text{m}$ )	Pixels size ( $\mu\text{m}$ )	Sensor options
DU920	1024 x 255	26 x 26	BU, BU2, BV, OE, BVF
DU920-BX-DD	1024 x 256	26 x 26	BR-DD, BEX2-DD
DU940	2048 x 512	13.5 x 13.5	BU, BU2, BV, FI, UV