



Fiber-based High Resolution Raman System ($< 0.5 \text{ cm}^{-1}$)

The Fiber-based High Resolution Raman System, which incorporates an Acton 750 mm focal length spectrograph and a Princeton Pixis 2KB-eXcelon back-illuminated CCD camera, offers a resolution of $< 0.5 \text{ cm}^{-1}$. With its triple grating turret, the system can be interchanged to use with a 532 nm, 632 nm, 785 nm, or other wavelength laser. The fiber coupling to the entrance slit of the spectrograph, together with various Raman sampling options, allows convenience for macro/micro sampling and easy-of-use to switch lasers. It is an ideal tool for laboratories as well as for on-line monitoring.

Features and Specifications:

Item	Description	Features/Specifications
SP 2756	<ul style="list-style-type: none"> Acton SP-2756 Spectrograph Slit Shutter SP-2750 Holographic Grating 1-240-HVIS Ruled Grating 1-180-500 Ruled Grating 1-120-750 gold coating Adjustable fiber adapter-FC-446-020 	<ul style="list-style-type: none"> 750 mm focal length Micrometer controlled entrance slit Triple grating interchangeable turret Internal Entrance Slit Shutter 68 x 68 mm 2400 G/mm VIS optimized 68 x 68 mm 1800 G/mm, 500 nm blazed 68 mm x 68 mm 1200 G/mm, 750 nm blazed Horizontally adjustable fiber bundle adapter
2KB-eXcelon	<ul style="list-style-type: none"> Princeton PIXIS: 2KB-eXcelon CCD camera system Permanent Vacuum Guarantee Scientific Grade 1 CCD chip Image area Deep cooling Dual speed digitizer System read noise @100 kHz @2 MHz Dark current @ -70°C Software selectable gains I/O signals 	<ul style="list-style-type: none"> Higher QE in the UV and near IR regions Extremely low etaloning 100x lower dark charge than back-illuminated deep depletion Life time guarantee 2048 x 512 13.5 x 13.5 mm back-illuminated 27.6 x 6.9 mm Forced air TE-cooled (-75°C) 16-bit, 2 MHz and 100 kHz read out 3.5 e- rms (typical), 6 e- rms (max) 14 e- rms (typical), 20 e- rms (max) e-/p/sec (typical); 0.006 e-/p/sec (max) 1.5, 3, 6 e- (high sensitivity) 3, 6, 12 e- (high capacity) Two MCX connectors for programmable frame readout, shutter, trigger in
LWD Raman Probe	<ul style="list-style-type: none"> Long Working Distance Raman Probe Collinear design/high throughput optics Built-in laser line clean-up filter Built-in deep narrow notch filter Fiber connector 	<ul style="list-style-type: none"> > 20 mm working distance High collection efficiency No interference from other lights OD > 6: maximum rejection of Rayleigh scattering and high transmission Wide coverage from 40 cm^{-1} to 4400 cm^{-1} Convenient SMA 905
Fiber	<ul style="list-style-type: none"> 98 Round-to-line 50 μm fiber bundle 	<ul style="list-style-type: none"> Match CCD height and maximize signal

W2 Innovations, Inc.

364 Brighton Street, Belmont, MA 02478 USA Tel: (+1) 617.216.3606 info@w2innovations.com
www.w2innovations.com