

### Applications:

- Raman Spectroscopy
- Fluorescence Spectroscopy
- VIS-NIR Spectroscopy
- Low Light Detection
- Pharmaceuticals
- Medical Diagnostics



Confocal Raman Microscope equipped with the Nunavut™ Back-Thinned CCD Detector



### Ramspec-785™

Raman Instrument with Nunavut™ Deep-Cooled Detectors



A Custom 532nm Raman Spectrometer equipped with the deep cooled CCD detector

**Nunavut™** Series Back-Thinned CCD Detector/Cameras are designed to meet real-world challenges for best-in-class performance, long-term reliability, compact size and ultra-low power consumption. Benefiting from experience manufacturing high-volume optical devices for the telecommunications industry, BaySpec's CCD cameras utilize low-cost field proven components. For the first time in instrumentation history an affordable, accurate and ruggedized spectral device is a reality.

The **Nunavut™** Series employs the latest in opto-electrical components to bring you the very best capability at a very affordable price. When matched to the **Nunavut™** Raman spectrograph or photoluminescence spectrograph you have a compact, high performance, cost effective instrument. Each camera is calibrated in the factory after extensive thermal cycling. The control electronics read out the processed digital signal to extract required information. Both the raw data and the processed data are available to the host.

### Key Features

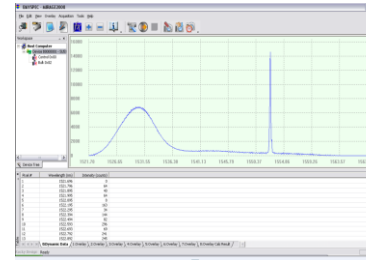
- Real-time spectral data acquisition
- Design for ultra-low power consumption and improved reliability
- Hermetic-sealing ensures reliable operation in harsh environments
- Deep cooling to -55°C
- Covers wavelength ranges from 200-1100nm



Parameter	Specification
<b>PERFORMANCE</b>	
Wavelength Range	200-1100nm
Integration Time	10 ms to 1800 seconds
Dimensions	118 x 118 x 162 mm <sup>3</sup>
<b>OPTICS</b>	
Window	single window design
<b>DETECTOR SPECS</b>	
Detector Array	1024X64 or 2048X64 - 14μ <sup>2</sup>
CCD Node Sensitivity	6.5μV/e <sup>-</sup>
Quantum Efficiency @λpk Min.	75%
Response Non-uniformity	±3% typical, ±10%Max
Readout Noise	6 e <sup>-</sup> rms typical, 15 e <sup>-</sup> rms Max.
Dark Current	50 e <sup>-</sup> /pixel/s @ 25°C
Stray Light	0.05%
Detector	4 stage TEC deep cooled CCD
A/D Converter	16bit
Power	3.5 A@12 V
<b>COMPUTER</b>	
Data Ports	USB 2.0
Software	BaySpec "Spec 20/20" GUI package
Operating System	Windows 2000 or later
<b>OPERATION &amp; STORAGE</b>	
Operating Temperature	0 to 40°C
Relative Humidity	75% (non condensing)
Storage Temperature	-25 to 60°C

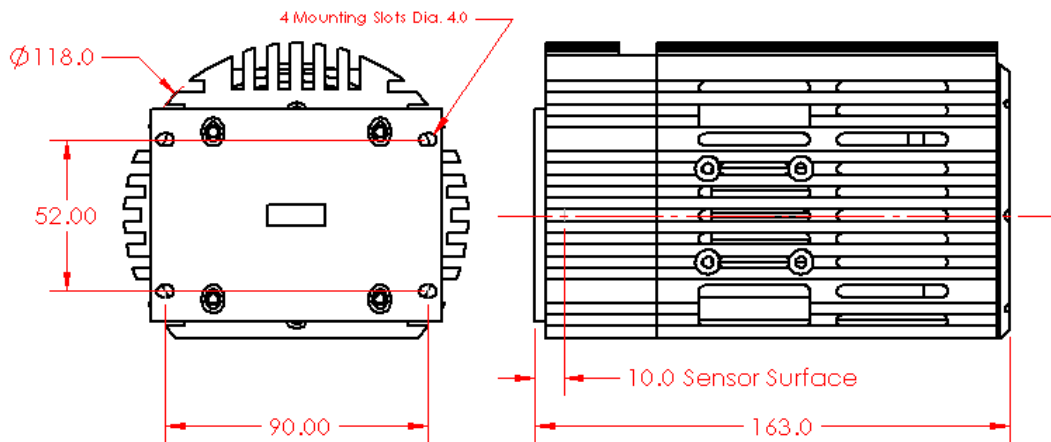
Specifications are subject to change without notice

### "Spec 2020" Software

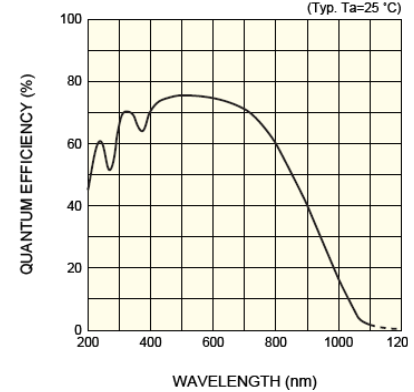


BaySpec's "Spec 2020" software included, a Windows-based package with flexible data acquisition, processing and output functionality

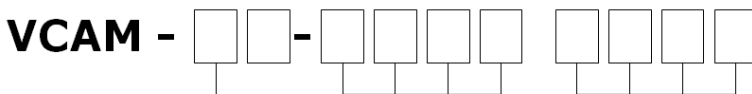
BaySpec SDK, a software development kit for new applications development and integration into to your host software systems.



### Quantum Efficiency (%)



### Part Number Selection:



Code	Type
10	1024x64μ
20	2048x64μ

Code	Starting λ
Please specify the starting wavelength i.e. :	
200	200 nm
xxxx	customer specify

Code	Ending λ
Please specify the ending wavelength i.e. :	
1100	1100 nm
yyyy	customer specify

