



Technical Specification Sheet

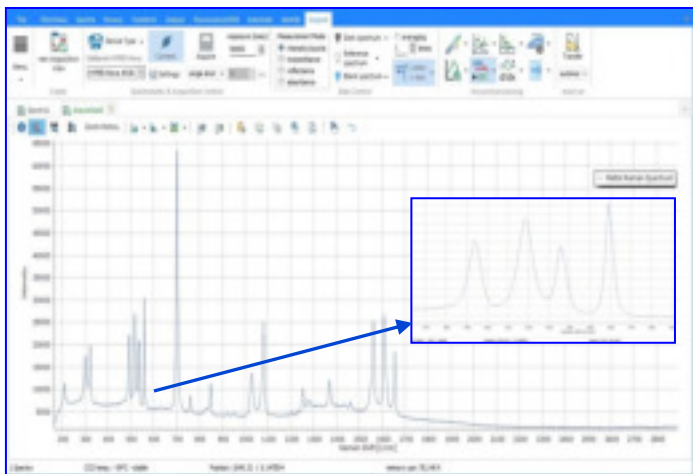
MINI RUGGED SPECTROMETER SYSTEMS

A Universe of Spectrometer Systems

HYPER-Nova High Performance Spectrometer Series

New HYPER-Nova spectrometers offer high performance spectroscopy measurements in a compact form factor. HYPER-Nova spectrometers use a low dark current depletion technology (LDC) to provide lower background noise than is possible with traditional front/back-illuminated technologies. HYPER-Nova's CCD detector is vacuum sealed and cooled to -60 °C with peak quantum efficiencies up to 95%! The HYPER-Nova comes in a variety of wavelength configurations including specialty configurations for Raman spectroscopy and custom low light applications.

HYPER-NOVA



HYPER-Nova Spectrometer configured for 785nm Raman measuring our Maltol Standard Sample. Zooming in on one of the characteristic quadruplets shows the amazing low noise characteristics of this new spectrometer system

New HYPER-Nova back thinned CCD spectrometers provide unmatched noise reduction in a compact system

- Bridging the performance gap between high-end and low cost modular spectrometers
- Low noise, back-illuminated, & LDC CCD
- Deep depletion offers 10x lower dark current than traditional back illuminated spectrometers

Applications

The HYPER-Nova was designed out of necessity to bridge the gap between research lab systems costing > \$100,000 dollars and low cost compact systems. HYPER-Nova is ideal for use with low signal Raman spectroscopy such as those from carbon and biomolecules as well as low intensity signals from fluorescence microscopy.

StellarNet Spectroscopy Pro-tools Software operates the HYPER-Nova spectrometer line with many advanced features:

- **Advanced Baseline Correction**
- **Spectral Pre-processing (SNR & MSC)**
- **Spike removal**
- **Peak Labeling & Advanced Display**



HYPER-Nova Standard Models

| | |
|-----------------|--|
| HYPER-Nova-532 | 200-3500cm-1 |
| HYPER-Nova-785 | 200-2750cm-1 |
| HYPER-Nova-UVIS | 300-1100nm |
| Custom | Contactus@StellarNet.us |

| Specifications | | HYPER-Nova Spectrometers | |
|---------------------|-------------------------------|--------------------------|------------------------|
| Spectrometer: | HYPER-Nova | System Dimensions: | 10 x 9 x 6" |
| Wavelength Range: | 532 & 785 Raman; or wide band | Detector Cooling: | -60 deg C |
| Optical resolution: | 4cm-1 ; 1nm | Spectrometer Interface: | USB2 |
| Detector type: | Low Dark Current CCD | PC Specs: | Win7-10, 32 or 64-bit |
| Active pixels: | 2000 x 256 | Software included: | Spectroscopy Pro-tools |
| Pixel size: | 15x15um | | |
| Integration time: | 1ms-8 minutes | | |

