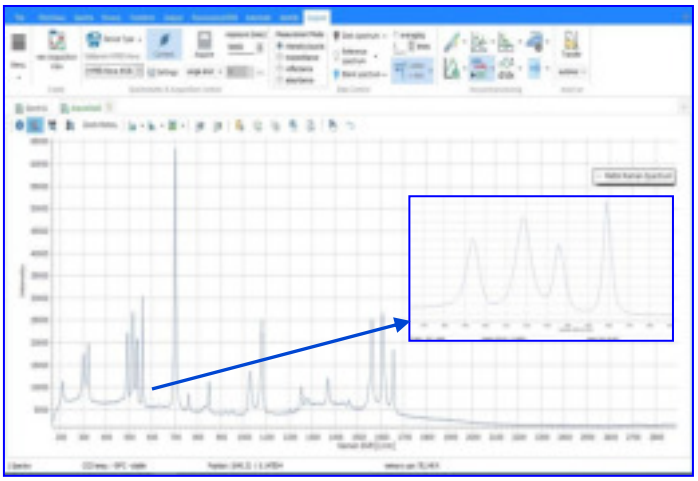
Technical Specification Sheet

**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 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**

## 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 |

HYPER-NOVA

**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**

| 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 | | |

**14390 Carlson Circle,**
**Tampa, Florida, 33626 USA** **www.StellarNet.us**
**Phone: +1-813-855-8687**
**Fax: +1-813-855-0394**