



# Technical Specification Sheet

## MINI RUGGED SPECTROMETER SYSTEMS

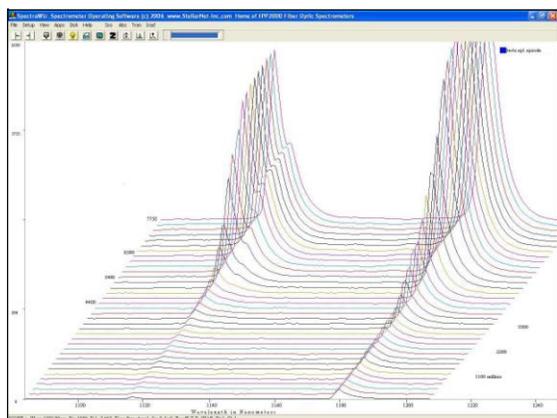
A Universe of Spectrometer Systems

### StellarNet Low Cost Research Spectrometers

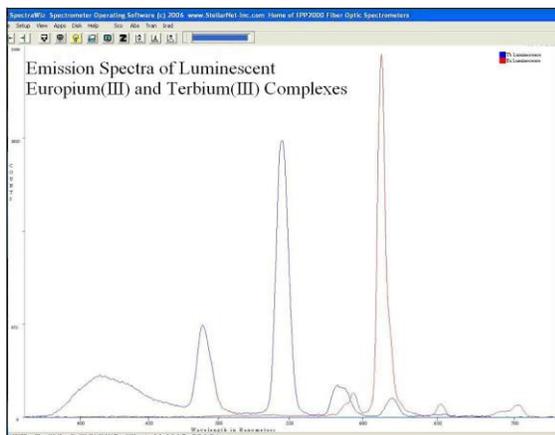
StellarNet miniature research grade spectrometers provide low cost measurements in the UV-VIS & NIR wavelength ranges. These instruments can measure absorption, emission, fluorescence, color, transmission and concentration with **SpectraWiz®** software, free with any spectrometer. **BLACK-Comet** concave grating spectrometers are available in four models – **190-850nm / 280-900nm** (\$3150) or **200-1080nm / 220-1100nm** (\$3595). The units offer uniform resolution, low stray light, improved UV sensitivity and can include an integrated TEC (thermoelectric cooler). The low cost **BLUE-Wave** spectrometer series is available in several models for measurements in the 200-1150nm wavelength ranges. These units are extremely portable (1x3x5 inches) and up to 8 can be daisy chained together. StellarNet spectrometers are coupled with fiber optic sampling accessories to create a rugged, reliable, and ideal configuration for the lab or field!



Dual-DSR UV-VIS & NIR System 200-2300nm



Time series analysis of spectrophotometric titration



Lanthanide complex emission using BLACK-C Fluorimeter

#### ➤ UV-VIS Absorbance / Transmission

- Concave Grating Research Grade Spectrometers
- Dip Probes, Flow Cells, ATR & Reflectance Probes for fast, easy sampling of liquids or solids
- Integrated cuvette-light sources

#### ➤ Reflectance / Colorimetry

- High power UV-VIS & NIR light sources
- High throughput reflectance probes & fixtures
- Dual Channel wide range (190-2300nm) measurement for color & composition analysis

#### ➤ Low Cost Fluorescence

- High Sensitivity research grade fluorimeters with Thermoelectric Cooler (TEC) options
- LED light source – bright, many wavelengths
- Sampling Cuvettes & Fluorescence Probes

#### ➤ ChemWiz Concentration Analyzer

- Concentration calibration - single wavelength PLS
- Episodic data capture for kinetics and time series analysis; file saving capabilities
- Ideal for on-line process monitoring





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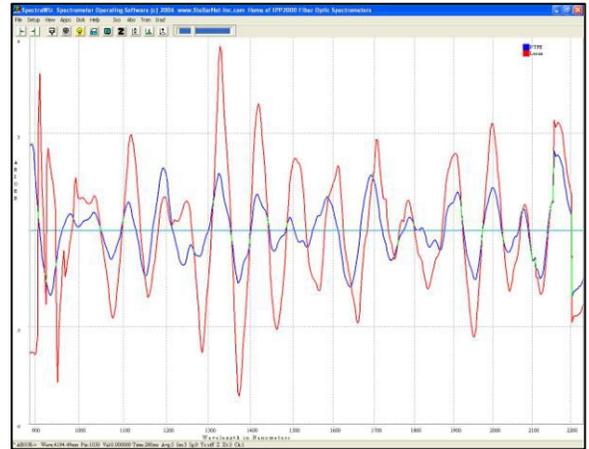
## MINI RUGGED SPECTROMETER SYSTEMS

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### Low Cost Near Infrared Spectrometers

The DWARF-Star NIR InGaAs spectrometers cover the 900-1700nm & 900-2300nm wavelength ranges with optional 512 or 1024 pixel cooled photodiode arrays. These units capture some of the most valuable absorption bands in the near infrared for qualifying and quantifying species such as water, proteins, fats & low molecular weight hydrocarbons, and much more! StellarNet offers sampling accessories to facilitate these measurements.

NIR applications include chemical ID, moisture analysis, Spectroradiometry and optical power measurements, laser characterization, thin film thickness determination, plastic identification, process monitor and quality control.



2<sup>nd</sup> Derivative data of various plastics, used for identification in recycling plants

Item	Description
<b>BLACK-Comet</b>	Concave Grating spectrometer for UV-VIS. <b>C</b> (190-850nm) or <b>CXR</b> (280-900nm)
<b>BLACK-Comet-SR</b>	Super Range Concave Grating spectrometer for UV-VIS-NIR. <b>C-SR</b> (200-1080nm) or <b>CXR-SR</b> (220-1100nm)
<b>Thermoelectric Cooler(TEC)</b>	Temperature Regulator unit maintains detector at constant 15 Degree F below ambient.
<b>SILVER-Nova</b>	Super Range UVN model for 200-1100nm with Dual Grating and w/ 2048 pixel CCD
<b>BLUE-Wave</b>	Low cost spectrometer designed for teaching labs – several wavelength ranges
<b>DWARF-Star NIR</b>	NIR Spectrometer, range 900-1700nm, with cooled 512 element PDA detector
<b>RED-Wave NIRX</b>	NIRX spectrometer for 900-2300nm with 512 element cooled PDA
<b>Fiber Optic accessories for Transmission/Absorbance/Fluorescence</b>	
CUV2	4-way fiber optic cuvette holder for measuring absorbance, transmittance, or fluorescence.
CUV-F	Fiber optic cuvette holder for SL1-LED excitation with 2 collimating lens. F600Y fiber included for dual pickup.
TXF-4	Adjustable pathlength Transmission Fixture with 2 LENS-QCOLS
RFX-3D	VIS-NIR reflectance fixture with integrated 20 watt halogen bulb and lens
DP400-VISNIR	Dip Probe for Vis-NIR with optional pathlength tip (for UV-VIS-SR add \$85)
R600-8-UVVIS-SR	Fluorescence / Reflectance Probe Armored 600um, 7 illuminate: 1 read fiber(s)
F600-UVVIS-SR	Armored Solarization Resistant 600um fiber optic cable - 2 meters
<b>Fiber Optic Light Sources</b>	
SL1-Filter	SL1 10,000 hour halogen light source with color equalization filter and nosecone.
SL1-CUV	SL1 10,000 hour halogen light source with integrated cuvette holder
SL1-LED	Miniature fiber optic light source with replaceable LED. Includes set of 6 LED's
SL3	Fiber optic deuterium light source with 4,000 hour Hamamatsu L2D2 bulb
SL5	Deuterium + Tungsten UV/Vis/NIR Lamp ( integrated cuvette holder add \$250)

