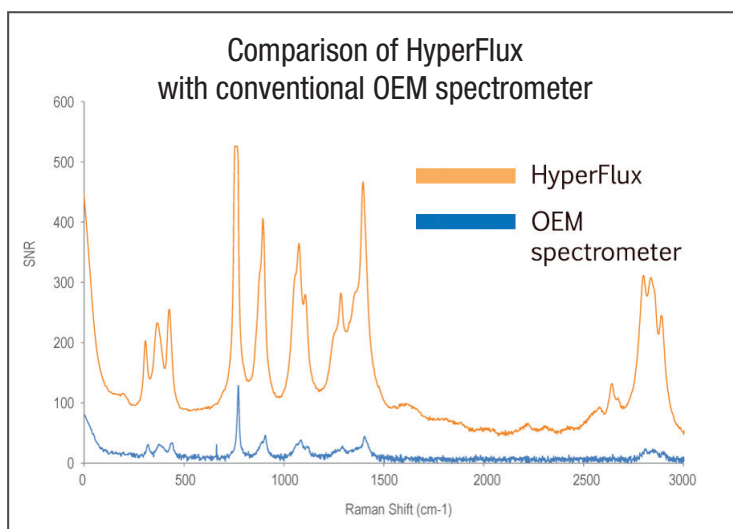


HyperFlux™ PRO Plus Raman Spectroscopy System



Tornado's HyperFlux PRO Plus is a complete Raman spectroscopy system including a proprietary HTVS-enabled spectrometer, a high-quality stabilized laser, multiple laser safety interlocks, temperature monitoring and dynamic re-calibration, and automated system health monitoring and fault detection. This powerful, reliable, and easy-to-use instrument is contained in a small, lightweight, cost-effective package which is readily deployed in both in-line process and laboratory settings.

The PRO Plus is compatible with a broad range of probes, chemometric software packages, and hazardous environment configurations. All these features combine to provide unequalled Raman sensitivity, quality, and convenience for process and laboratory applications.



HIGHER RAMAN SENSITIVITY THAN EVER BEFORE POSSIBLE

Sensitivity, Speed and Safety



MORE ACCURATE IDENTIFICATION AND QUANTITATION

For challenging mixtures and low concentration levels



FASTER MEASUREMENT

For precise tracking of rapid changes and transient features



LOWER LASER POWER OPERATION

Allows ATEX compliant laser power (i.e. 35 mW) with better sensitivity

HIGH THROUGHPUT VIRTUAL SLIT (HTVS™)

Tornado's proprietary HTVS design eliminates spectrometer slit losses while maintaining high spectral resolution. This allows for the best possible combinations of signal strength and spectral resolution in a dispersive spectrometer and results in an order of magnitude improvement in sensitivity.

- Robust, reliable, and easy to use
- Broad selection of probes
- Pharma-ready: 21 CFR Part 11 and IQ/OQ protocols
- ATEX configured
- Equal spectral resolution across entire spectra
- Global support
- Chemometric software compatibility

Uses an optimized HTVS design to provide
GREATER THAN 10X PHOTON THROUGHPUT
 when compared to other Raman systems



Specifications:

LASER WAVELENGTH	785 nm
LASER POWER	20 mW up to 495 mW
SPECTRAL RANGE	200 cm ⁻¹ to 3300 cm ⁻¹ (Raman shift from 785 nm excitation)
PROBES	Immersion and Non-Contact
INPUT POWER REQUIREMENTS	100 V to 240 V AC line power
FIBER LENGTH	3 meters standard - Different lengths are available upon request
DIMENSIONS	18.4 x 8.5 x 5.4 in (46.7 x 21.6 x 13.7 cm)
WEIGHT	22 lbs (9.8 kg)



Plastics and Polymers

Process Development

Speciality Chemical

Pharmaceuticals

Bio Processing

Oil and Gas

Pilot and Production

Food and Beverage Process Control



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