



HyperFine HN Series Spectrometers

for High Intensity Sources

Compact, < 1pm resolution in the Vis and NIR

The HN series of spectrometers are designed for characterizing high intensity sources such as laser spectra, the HN Series spectrometers from LightMachinery are capable of 1 picometer resolution. These spectrometers achieve the resolution of large gratings spectrometers while covering a larger wavelength range. Simple PC based software allows the user to review spectra in real time and save or export for more analysis. Labview drivers enable the Hornet spectrometer to be integrated into automated experimental setups.

Features

- Simple to use
- Sub picometer resolution
- Fiber optic input
- Quick data acquisition and export
- Simple USB interface
- LabView Drivers
- No moving parts (single shot laser spectrum analysis)

Benefits

- Range - resolution ratio up to 10,000
- Fast
- Ultra-Compact
- Can measure spectra from cw and pulsed sources
- Fast real time measurements
- Ultra-reliable
- LightMachinery's legendary customer support

Applications

- Light source characterization
 - Lasers
 - Diode Lasers
 - Super luminescent diodes
- Monitoring laser modes in real time
- Passive components (Filters, Etalons, Fiber Bragg gratings) characterization to the 25pm level
- Checking the spectral / mode purity of lasers
- Classic undergraduate and graduate experiments

Specifications

- Resolution: 1pm at 532nm (resolving power > 500,000)
- Accuracy: < 200pm for fixed grating units, <20pm for all others following calibration, an external calibration source is required
- Dynamic Range: 100:1 to 500:1 in a single shot measurement, up to 50dB with exposure bracketing
- Wavelength range: Visible to near IR (260nm to 1080nm*)
- Simultaneous range / resolution: >10,000 at 532nm
- Acquisition and processing speed: >10 Hz

Typical Form Factors:

- A: 8 x 8 x 3.6 inches
- B: 10 x 24 x 6 inches
- C: 22 x 13 x 6 inches
- D: 8 x 8 x 5 inches
- E: 5 x 6 x 2 inches

Part Number	Form Factor	Total Range (nm) with manual grating rotation	Simultaneous Range (nm) without grating rotation	Resolution (pm)	Resolution (1/cm)
HN-11457	A	250 - 320	50	<15	1.7
HN-11458	A	280 - 360	80	<15	1.7
HN-9340	A	fixed grating	350 - 450	<25	1.5
HN-9332	E	fixed grating	425 - 700	<30	0.9
HN-8989-1	B	400 - 500	15	1.0	0.05
HN-8989-2	C	500 - 600	15	1.0	0.03
HN-8989-2e	C	525 - 640	15	1.0	0.03
HN-8988*	B	500 - 550	15	15	0.55
HN-8989-3	B	600 - 700	15	1.0	0.02
HN-9353	A	fixed grating	700 - 1050	<30	0.4
HN-8995-1	C	700 - 900	25	2.0	0.03
HN-8991-3	B	800 - 1000	20	2.0	0.02
HN-8995-2	B	900 - 1100	20	2.0	0.02
HN-9354	A	1010nm - 1080	fixed grating	10	0.1
HN-9352	A	YAG, (532 and 1064)+/-10	fixed grating	15	0.1