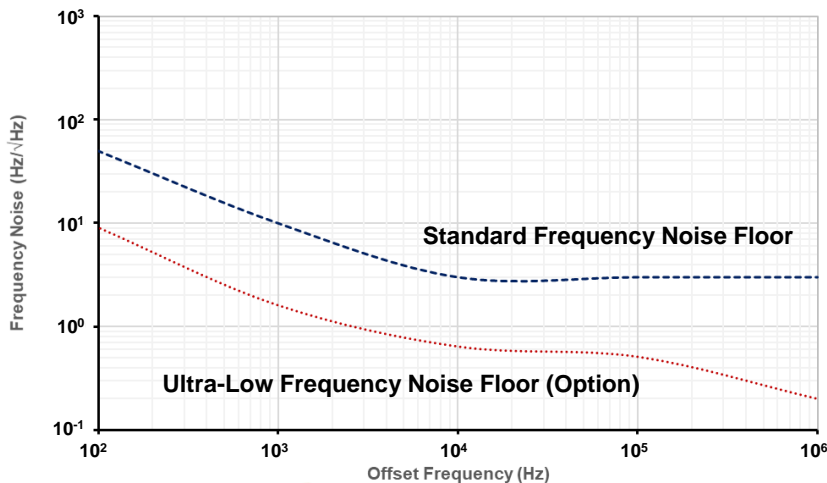


Using a homodyne methodology, HI-Q™ Optical Test Measurement System (TMS) offers a fully automated measurement of ultra-low phase noise CW laser sources.



HI-Q™ Optical TMS is capable of rapidly measuring laser phase noise and estimating its FWHM linewidth down to < 3 Hz without complex setup or reference lasers normally required to make such a narrow linewidth measurement.

This homodyne based system is unique in wideband measurement without requiring another low noise reference laser source. The complete system operates with ease, speed and precision via a simple graphic user interface on a dedicated PC. No additional test equipment required. The unmatched ultra-low phase/frequency noise analyzer is scalable to various input wavelength bands and is available with low relative intensity noise (RIN) measurement option.



FEATURES

- Ultra-Low Phase/Frequency Noise Measurement
- Fast Real-Time Measurement
- Instantaneous and Extended FWHM Linewidth Analysis
- No Low Noise Reference Source Required
- User Friendly Interface
- Simple PC-based Operation
- 3U x 19" Rack System
- Customizable Configurations, Upgrades, and Options

OPTIONAL CONFIGURATION

- Multiple Input Wavelength Bands within 630 nm – 2200 nm
- Ultra-Low Noise Floor
- RIN Measurements
- Extended Offset Frequency Range up to 2 GHz
- Extended Input Power Range
- Remote Operation
- Performance Level and Frequency
- Range Options and Upgrades

HI-Q™ OPTICAL TEST MEASUREMENT SYSTEM

OE4000



SPECIFICATIONS

1530 – 1565 nm

Frequency Noise Offset	10 Hz	100 Hz	1 kHz	1MHz
▪ Standard Noise Floor*	250 Hz / $\sqrt{\text{Hz}}$	50 Hz / $\sqrt{\text{Hz}}$	10 Hz / $\sqrt{\text{Hz}}$	3 Hz / $\sqrt{\text{Hz}}$
▪ Ultra Low Noise Floor Option**	50 Hz / $\sqrt{\text{Hz}}$	10 Hz / $\sqrt{\text{Hz}}$	2 Hz / $\sqrt{\text{Hz}}$	0.2 Hz / $\sqrt{\text{Hz}}$
* Requires a laser with RIN below -100 dBc / Hz @ 10Hz, -130 dBc / Hz @ 1 kHz and -140 dBc / Hz @ 1 MHz				
** Requires a laser with RIN below -100 dBc / Hz @ 10Hz, -130 dBc / Hz @ 1 kHz and -150 dBc / Hz @ 1 MHz				
Lorentzian Linewidth Sensitivity	<10 Hz; <10 μS (Standard Noise Floor) <0.5 Hz; <10 μS (Ultra Low Noise Floor Option)			
Dynamic Range	60 dB			
Phase Noise Floor	-140 \pm 2 dBc / Hz > 1 MHz			
FWHM Linewidth Estimated Range	Standard Noise Floor: 1 kHz to 10 MHz (<10 ms) Ultra Low Noise Floor Option: 3 Hz – 30 kHz (< 10 ms)			
Optical Input Power Range	+5 to +15 dBm (PM-FC/APC)			
Offset Frequency Range	10 Hz – 1 MHz			
Measurement Types	Frequency Noise / Homodyne Phase RIN Option (Noise Floor: -158 \pm 2 dB / Hz > 1 MHz)			
Data Storage and I/O	HDD / USB Port			
Resolution Bandwidth	0.1 Hz – 200 kHz			
Operating Temperature Range	15°C to 35°C			
Power	110 / 120 or 220 / 240 V _{ac} ; 50 / 60Hz			
Size	3U x 19: Rack Mount			

OPTIONS

Low or High Input Power Range	Up to 15 dB within -10 to +20 dBm
Wavelength Ranges Available	740 – 935 / 965 – 1065 / 1000 – 1100 / 1260 – 1360 / 1530 – 1625 / 1950 – 2150 (nm) (Consult factory for multi-wavelength range options and custom wavelength ranges)
Extended offset Frequency Range	Frequency / Phase Noise Down to 1 Hz or up to 2 GHz
RIN Measurement	Relative Intensity Noise up to 40 GHz; Size may increase

Note: These specifications are subject to change without notice due to OEwaves ongoing development cycle. Patents Pending.



RIDE THE WAVE OF INNOVATION

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