



LASER CHARACTERIZATION

Power • Wavelength • Bandwidth – All at Once

In modern photonics and quantum science, maintaining precise control over the wavelength and power of lasers is critical. Whether in ultra-stable laser locking systems for quantum computing, high-resolution spectroscopy or laser cooling and trapping setups, even minor fluctuations in wavelength can compromise experimental stability, fidelity and reproducibility.

Today, labs rely on a range of tools for laser monitoring – wavemeters, power meters, high-resolution spectrometers or high-end optical spectrum analyzers (OSAs). Each of these systems comes with trade-offs in terms of cost, complexity, calibration and real-time usability. The Coher Sense KISA sensor offers an easy to use, precise and quick solution.

Solution	Wavelength Accuracy	Intensity Measurement	Cost	Integration
Power Meter Only	None	Yes (but unfiltered)	Low	Limited scope
High-Resolution Spectrometer	High (sub-pm)	Not optimized for lasers	Expensive	Expert setup + requires fitting
Laser Wavemeter	Very high	Not optimized	Expensive	Frequent calibration
Optical Spectrum Analyzer (OSA)	Ultra high	Yes	Very expensive	Complex + bulky
KISA Sensor	High (sub-pm)	Direct + Precise	Affordable	Plug-and-play



Why Choose a KISA Sensor?

Sr. Scientist: "We needed something to track wavelength and intensity without buying two separate systems. KISA gives us real-time data with no overhead."

Quantum Engineer: "Any frequency drift can kill our signal. KISAs act as our front-line monitor during laser lock and experiment runtime."

Lab Manager: "It's cost-effective and easy to deploy across multiple setups without training everyone to use an OSA."

Parameter	Specification
Wavelength Range	400 – 700 nm*
Power Range	1 mW – 500 mW
Dynamic Range	96 dB
Free Spectral Range	10 nm or 300 nm*
Wavelength Resolution	1 pm or 0.1 nm*
Wavelength Precision	100 pm or 0.3 nm*
Signal-to-Noise Ratio	20,000:1 (16-bit)
Data Rate	~1 – 15 Hz
Size	67 x 32 x 70 mm
Weight	180 g
Interface	USB

*customizable