

WaveMaster

POWER & ENERGY

Power & Energy Meters

Power Sensors

Energy Sensors

Power & Energy Accessories

Custom & OEM

Calibration & Service

BEAM DIAGNOSTICS & SPECTRAL ANALYSIS

Beam Diagnostics

Spectral Analysis

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Laser Cross-Reference Index

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- 380 nm to 1095 nm wavelength range
- RS-232 and optional GPIB interfaces
- 0.005 nm accuracy
- 0.001 nm resolution
- Internal self-calibration
- Fiber input with sampling probe

The WaveMaster™ measures the wavelength of both CW and pulsed lasers of any repetition rate. The wavelength can be displayed in GHz, wavenumbers, or nanometers, with vacuum and air readings available. The WaveMaster will read the peak wavelength of sources as wide as 2 nm from 380 nm to 1095 nm. Bandwidths wider than 2 nm can be accommodated at the longer wavelengths.

The WaveMaster is easy to use. Just turn on the readout and get the beam within 10 degrees of normal incidence to the sampling probe. The probe has a 2-meter fiber-optic cable and takes up a minimum of beam path space. Most intensity variances are automatically accommodated, but for the strongest and weakest signals a front panel attenuator adjustment and intensity readout quickly afford accurate readings. No special triggering modes or setups are required for pulse capture.

The large, easy-to-read display is backlit and has adjustable contrast control for easy viewing. Configuration settings are maintained in memory and retrieved on start-up for convenience. Communication with the WaveMaster is also easy with a built-in RS-232. An optional GPIB interface is available.

User-Friendly

The WaveMaster is easy to read with front panel adjustments of contrast and back-lighting for the extra-large display. Parameters that have been set-up are clearly displayed, in addition to signal intensity and pulse retrieved indicators.

Laser Wavelength Meter



When in the CW mode of operation, the display is updated at an easy to read 3 Hz rate. While in the pulse mode, the display is updated at 3 Hz, and maintained for 15 seconds after a pulse for reading single events.

Calibration is maintained by sophisticated algorithms that monitor the WaveMaster's response. Periodically, and upon indication from the algorithms, the WaveMaster is referenced to the fundamental lines of an internal NE source.

Pulse or CW Operation

The operational mode can be changed from CW, to CW with averaging, to pulse. In CW mode the display is updated at 3 Hz. In CW with averaging, the display is updated at 3 Hz with an average of the last 10 readings taken a 3 Hz. For pulse mode, when a valid pulse is received, the display will show the wavelength reading of the pulse for 15 seconds, or until another valid pulse is received.

No Warm-Up Time

When the WaveMaster is first powered on, it will perform a self-test cycle and then enter the auto-calibration mode. After 10 seconds, the AUTOCAL message is cleared from the display and the WaveMaster is ready to make measurements.

Bright, Large Display Area

The display area can be backlit and the contrast adjusted to optimize viewing conditions.



WaveMaster

Accurate

With its self-monitoring algorithms and an internal spectral line source, the WaveMaster auto-calibrates the internal spectrometer to maintain accuracy.

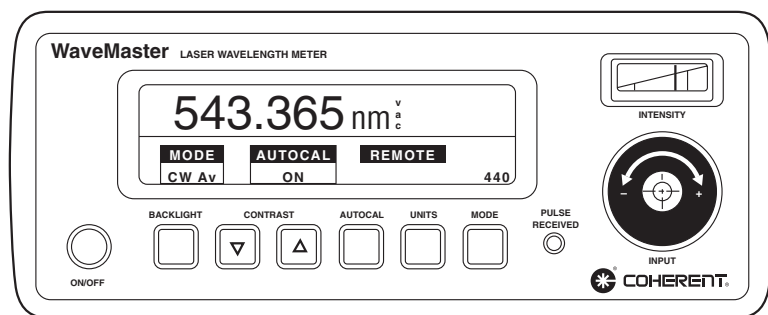
Easy Set-up

Feedback from the WaveMaster is straightforward with ease of use in mind. Once the signal is applied to the probe, the unit begins sampling to simplify set-up. In CW mode, the

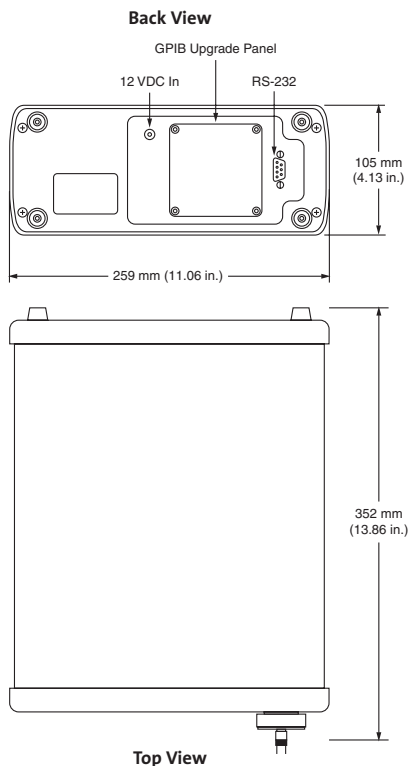
WaveMaster will auto-range to adjust the sensor integration time to match the incoming signal. This allows the quickest set-up and greatest versatility.

Selected Display Units

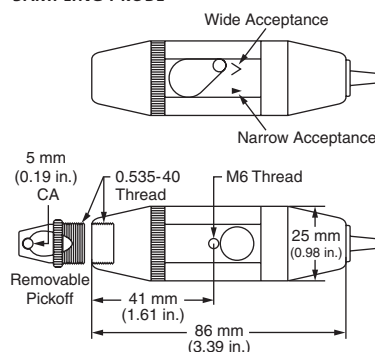
The wavelength readings can be displayed in nanometers in “air” at standard temperature and pressure (STP), or shown as a calculated conversion from STP to nanometers in a “vacuum”, or displayed as wavenumbers (cm^{-1}), or as frequency (GHz).



Front View



Top View

SAMPLING PROBE**Specifications**

Specifications	WaveMaster
Wavelength Coverage	380-1095 nm
Accuracy	0.005 nm
Resolution	0.001 nm
Min. Pulse Rep. Rate	Single shot
Max. Pulse Rep. Rate	CW
Max. Signal Bandwidth	2 nm @ 400 nm 3 nm @ 600 nm 5 nm @ 1000 nm
Min. Signal	20 μW CW @ 632 nm 2 mJ pulsed @ 1064 nm
Max. Signal	100 mW CW @ 632 nm 100 mJ pulsed @ 1064 nm
Display Update	3 Hz
Size (W x H x D)	259 mm x 105 mm x 352 mm
Storage Conditions	-10°C to 50°C
Relative Humidity Shock	Non-condensing and <80% >4 g
Use Conditions	-10°C to 40°C
Relative Humidity Shock	Non-condensing and <80% <4 g
Power Supply (incl.)	Universal 90-250 VAC, 40-72 Hz in; 12 VDC out
Part Number	WaveMaster Laser WavelengthMeter WaveMaster Laser WavelengthMeter w/GPIB WaveMaster GPIB Card
33-2650-000	
33-2627-000	
1058562	



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