



MWM1310 Laser Wavemeter



The Santec Laser Wavemeter is a precision compact laser wavelength measurement device, and optical spectrum analyser, with on-unit display and ethernet/USB connectivity. Use it standalone or with the included Windows GUI software package.

Unlike interferometric wavemeters, our device clearly reveals multimode laser operation, making it particularly suitable for use with external cavity diode lasers and atom cooling and trapping experiments.

Features

- Picometre (<GHz) accuracy
- Picowatt sensitivity
- Any wavelength from 370 – 1120 nm[†]
- Instantly identifies multimode input
- Fast: up to 1250 measurements per second
- CW or pulsed laser input
- Built-in PID feedback with analogue output
- Ethernet and USB standard

Applications

- Laser frequency diagnosis and testing
- Identifying laser multimode behaviour
- Determining absorption lines
- Gas spectrometry
- Raman fluorescence

Laser Wavemeter

Specifications MWM

Wavelength/frequency

Wavelength range	1200 – 1400 nm Supplied calibrated at one wavelength e.g. 1310 ± 15 nm
Input power requirement	up to 10 mW*
Precision	200 MHz (15 pm)
Accuracy	+/-1 pm (+/-200 MHz) at time of calibration, +/-15 pm (+/2 GHz) across 20-45C
Optical resolution	< 0.04 nm
Dynamic range	> 30 dB (>40 dB in HDR mode)
Measurement speed	70 ms with 100 μ W input, 5 ms with 2 mW input

Electronics

Display	Built-in LCD and host computer
Interface	Windows GUI
PID feedback	12-bit DAC output, 0.5 mV resolution, 10 Hz bandwidth
Readout	Typically 20 per second, up to 100 /s, host dependent

Interface

Ethernet	10/100 TP RJ45
USB	USB2.0, plug type USB-B (350 mA with display on)
SMA	Analogue output, ± 2.5 V, for PID feedback control
Power consumption	5 W

Inputs/outputs

Optical input	FC/APC or FC/PC optional. Fibre supplied with unit
DAC	12-bit output, ± 2.5 V, 0.5 mV resolution

Dimensions

Dimensions (approx.)	165 x 85 x 70 mm (LxWxH)
----------------------	--------------------------

*Note: higher input power available with optional optical attenuation

†Note: the MWM operates over a small wavelength range, e.g. 1310 ± 15 nm. Operation in a different wavelength range requires mechanical adjustment and recalibration.



Santec Japan Corporation
Tel: +81-568-79-3536

Santec Europe Ltd.
Tel: +44-20-3176-1550

Santec USA Corporation
Toll-Free: +1-800-726-8321

Santec (Shanghai) Corporation Limited
Tel: +86-21-58361261