

moglabs

FZW Fizeau Laser Wavemeter



The MOGLabs FZW Fizeau Laser Wavemeter is a precision compact self-contained wavemeter: *no host computer required.*

It measures from 350 to 1120nm with absolute accuracy better than 600MHz. On-unit display, ethernet and USB connectivity, and PID locking, are standard. Time-series measurements at up to 250 measurements per second can be plotted on the display or on a host computer. The device is easily integrated with common lab data acquisition systems using simple text commands, and wrappers for LabView, python and matlab.

Features

- 600 MHz absolute accuracy, 400 to 1100nm (measurement range 350 to 1120nm)
- Self-contained with colour display
- Solid fused silica etalons
- 350 measurements per second
- Built-in PID feedback with analogue output
- Ethernet and USB standard

Fizeau Wavemeter

Specifications FZW600

Wavelength/frequency

| | |
|-------------------------|---|
| Wavelength range | 350nm – 1120nm |
| Units | nm (vac), nm (air; NTP), THz, cm^{-1} |
| Input power requirement | 10nW @ 10 meas/sec; 500nW at 350 meas/sec (550nm) |
| Accuracy | 600 MHz |
| Resolution | 10 MHz (full speed); 1 MHz (100-sample average) |
| Exposure | 100 μ s to 1 s |
| Measurement rate | 350 /s with 500 μ W or more input power |
| Fizeau interferometers | 4; smallest FSR = 7.5GHz |
| Calibration | Generally not required. Use stabilised HeNe or other well-known laser source, e.g. at 12-month intervals. |
| Warm-up time | Stated accuracy within 10 minutes |

Electronics

| | |
|--------------|---------------------------------------|
| Display | Built-in 320x240 colour TFT LCD |
| PID feedback | 12-bit DAC output, 0.5mV resolution |
| Power | +5V 600mA via USB or separate DC jack |
| On/off | Rocker switch on rear |

Communications

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|----------|---|
| Ethernet | 10/100 TP RJ45 |
| USB | USB2.0, plug type USB-B (also used for power) |
| SPI | Internal; for OEM implementations |

Inputs/outputs

| | |
|--------------------------------|---|
| Optical input | FC/PC, singlemode or 62.5 μ m multimode fibre |
| SMA DAC out | 12-bit output, \pm 2.5V, 0.5mV resolution |
| Power (alternate to USB power) | +5V DC jack, + on centre 2.5mm pin |

Dimensions

| | |
|------------|-------------------------------------|
| Dimensions | 120mm x 146mm x 81mm (DxWxH); 0.7kg |
|------------|-------------------------------------|