

828系列高速波分复用专用单波长计

特点：

- 波长测量精度可达 ± 1 pm
- 内置标准稳频HeNe激光器实现连续校准
- 测量置信水平 $\geq 99.7\%$ ，NIST可追溯
- 可以同时实现光功率测量，准确度可达 ± 0.5 d。
- 高灵敏度-40 dBm (0.1 μ W)
- 可以用于测量连续激光器或者调制信号
- 测量速率可达1 kHz，时间分辨率1 ms
- 便捷的触摸屏显示测量数据
- 可采用USB、Ethernet、GPIB、RS-422进行通讯
- 内置数据存储可以实现百万次测量
- 设计用于生产环境的坚实结构



828系列波长计采用独特费佐标准具设计，得到 ± 1 pm的波长测量精度与1 kHz的测量速率，设计用于WDM测试应用的快速波长量。通过降低测试时间，实现WDM部件生产的效率提升。更重要的是，1 ms的时间分辨率可以实现对可调谐激光器的详尽分析。

技术参数

MODEL	828B
OPTICAL SIGNAL	CW and modulated
Wavelength Range	1250 – 1650 nm (182 – 240 THz)
Wavelength Accuracy ^{1,2}	± 0.65 parts per million (± 1 pm at 1550 nm)
Repeatability ^{3,4}	± 0.2 parts per million (± 0.3 pm at 1550 nm)
Calibration ⁵	Automatic with built-in wavelength standard
Units ⁶	nm, cm-1, Thz
Power Calibration Accuracy	± 0.5 dB (± 30 nm from 1310 and 1550 nm)
Power Units	dBm, mW
Maximum Laser Bandwidth ⁷	10 GHz (80 pm at 1550 nm)
Sensitivity ⁸	1 kHz:-25 dBm (3 μ W) 500 Hz:-30 dBm (1 μ W) 250 Hz:-35 dBm (0.3 μ W) 100 Hz:-40 dBm (0.1 μ W)
measurement rate / time ⁹	1 kHz streaming over RS-422 serial interface 5 ms (SCPI commands)
Optical Input	9/125 μ m single-mode fiber (FC/UPC or FC/APC)
Instrument Interface	Streaming via RS-422 (internal or external TTL trigger) Library of commands (SCPI) via USB 2.0, Ethernet, GPIB (optional) Internal data storage for up to 1 million measurements

1. Defined as measurement uncertainty, or maximum wavelength error, using a coverage factor of 3 providing a confidence level of $\geq 99.7\%$.
 2. Traceable to an NIST standard (SRM 2517a).
 3. For a 10 minute measurement period given at three times the standard deviation (3 σ).
 4. Characteristic performance, but non-warranted.
 5. Laser diode locked to acetylene absorption (NIST Special Publication 260-133).
 6. Data in units of nm and cm-1 are given as vacuum values.
 7. Bandwidth is FWHM.
 8. Dependent on frame rate of the photodetector array.
 9. Measurement time using SCPI commands dependent on PC/network timing.