ADVANTEST

Q8326
Optical Wavelength Meter

Measures Optical Wavelength with High Accuracy of 2 ppm and High Resolution of 0.001 nm.

- Fast sampling: Five measurements/sec.
- Frequency and deviation displays

Q8326

Wavelength Meter Using He-Ne Laser as Reference Wavelength

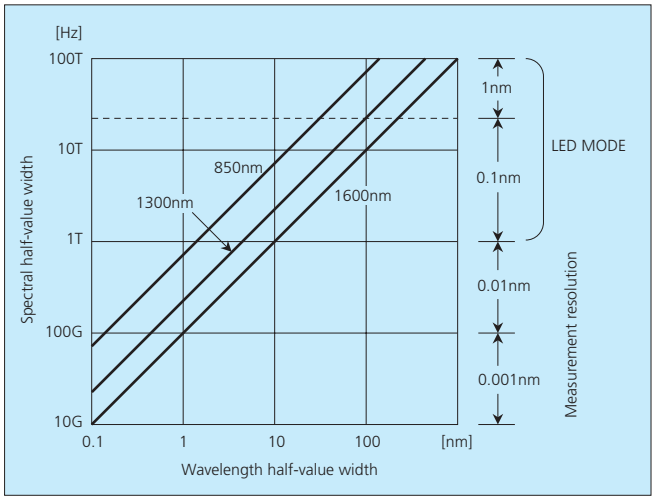
The Q8326 is an optical wavelength meter that measures an emission center wavelength with high resolution.

The Q8326 uses a He-Ne laser for the reference wavelength and uses the Michelson interference method to enable high accuracy measurement. This wavelength meter achieves fast sampling (five per second) which is optimum for oscillation wavelength adjustment of LD for DWDM. With the deviation display function, wavelength fluctuations can also be measured with high resolution and accuracy.

Applications

- Optimum for LD wavelength adjustment for DWDM due to fast sampling measurement.
- Can be used as a wavelength standard for spectroscope calibration due to high accuracy.
- Can be automated to measure the LD wavelength temperature characteristics and wavelength current characteristics.

Half-value width and measurement resolution



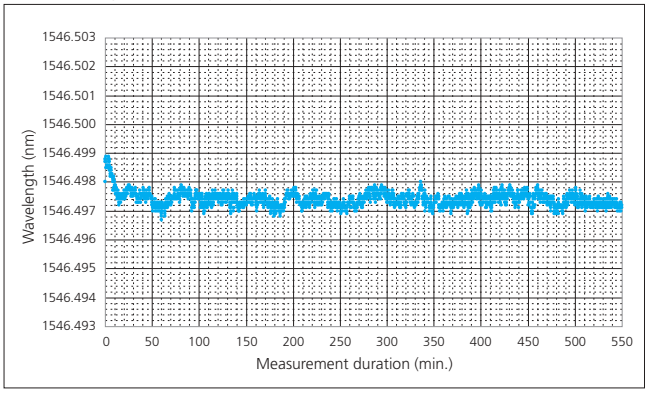
High Resolution

The Michelson interference method allows high resolution measurements of up to 0.001 nm/100 MHz.

High Accuracy Measurements

Use of a He-Ne laser for the reference wavelength enables high accuracy measurements of up to 2 ppm. In addition, since the He-Ne laser oscillates with high stability, a 2 ppm measurement accuracy is guaranteed over a long time period without recalibration.

Sample of Light Source Stability



Wide Bandwidth

The measurement range covers short wavelengths of 480 to 1000 nm and long wavelengths of 1000 to 1650 nm and is selectable via a single switch operation.

High-speed Sampling

The Q8326 can measure wavelengths at a sampling speed of five per second so that wavelength fluctuations caused by temperature variations can be captured precisely.

Frequency and Deviation Displays

The Q8326 can not only display the wavelength but can also be switched to display the frequency of the beam under measurement, which is convenient for adjusting the oscillation wavelength to the ITU-T grid. Since the deviation is displayed using the keyed entry as the reference, wavelength fluctuations of the LD caused by temperature variations can be viewed with high resolution and high precision.

GPIB Provided as Standard

Standard provision of GPIB allows the Q8326 to be used as a component for an automated measuring system utilizing fast sampling.

Performance Parameters

Wavelength

Measurement range:	480 to 1650 nm (181 to 625 THz)
Accuracy:	±2 ppm±1 count*1*2
Display resolution:	1 nm to 0.0001 nm*3

Power Level

Sensitivity:	-15 dBm (480 to 600 nm) -25 dBm (600 to 1650 nm) -30 dBm (1200 to 1600 nm)
Max. input level:	+10 dBm

Measurement Duration

Duration:	0.2 seconds

Functions

Average:	Displays moving average of 10 measurements
Deviation measurement:	Displays deviation from the reference measurement value.

Optical Input

Applicable fiber:	50/125 µm GI fiber 9.5/125 µm SM fiber (recommended)
Connector (user replaceable):	FC (standard), ST, SC (separately available)

I/O Interface

GPIB:	IEEE488-1978
Analog output:	Analog output with lower three digits displayed 0 to +1 V

General Specifications

Operating environment:	Temperature; +10 to +40˚C Relative humidity; 85% or less (no condensation)
Accuracy guaranteed temperature range:	+25 ±10˚C
Storage environment:	Temperature; -10 to +50˚C Relative humidity; 90% or less (no condensation)
Power supply:	100 to 240 VAC, 50/60 Hz, 60 VA or less
Dimensions:	Approx. 300 (W) x 132 (H) x 450 (D) mm
Mass:	10.5 kg or less

Separately Available Accessories

FC connector adapter:	A08161
SC connector adapter:	A08162
ST connector adapter:	A08163
Optical fiber cable:	OCS-F2SFW-2 (GI 50/125 µm, 2 m)
Optical fiber cable:	OCS-F2SPS-2 (SM 10/125 µm, 2 m)
Rack mount kit	
JIS:	A02250
EIA:	A02450

**1) In case of single mode laser of beam width 10 GHz or less*
In other cases, ±Full width [nm] at half maximum x 1/10 [nm] ±2 ppm ±1 count
**2) ±5 ppm for 600 nm or less*
**3) 0.0001 nm display is available for average measurement only.*

Please be sure to read the product manual thoroughly before using the products.
Specifications may change without notification.