828B High-Speed Optical Wavelength Meter

SPECIFICATIONS

OPTICAL SIGNAL		CW and modulated
WAVELENGTH		
	Range	1250 – 1650 nm (182 – 240 THz)
	Absolute Accuracy [1, 2]	± 0.65 parts per million (± 1 pm at 1550 nm)
	Repeatability [3]	± 0.2 parts per million (± 0.3 pm at 1550 nm)
	Calibration [4]	Automatic with built-in wavelength standard
	Display Resolution	0.0001 nm
	Units [5]	nm, cm^{-1}, THz
POWER		
	Calibration Accuracy	± 0.5 dB (± 30 nm from 1310 and 1550 nm)
	Linearity [6]	± 0.3 dB (1250 – 1600 nm)
	Polarization Dependence	± 0.5 dB (1250 – 1600 nm)
	Display Resolution	0.01 dB
	Units	dBm, mW
OPTICAL INPUT SIGNAL		
	Maximum Laser Bandwidth [7]	10 GHz (80 pm at 1550 nm)
	Sensitivity [8]	1 kHz: -25 dBm (3 µW) 500 Hz: -30 dBm (1 µW) 250 Hz: -35 dBm (0.3 µW) 100 Hz: -40 dBm (0.1 µW)
	Maximum Power **Displayed level** **Safe level**	+ 10 dBm (10 mW) + 18 dBm (63 mW)
	Return Loss [6]	40 dB
MEASUREMENT RATE/TIME [9]		1 kHz streaming over RS-422 serial interface 5 ms (via SCPI command)
INPUTS/OUTPUTS		
	Optical Input	9/125 µm single-mode fiber (FC/UPC or FC/APC)
	Instrument Interface	RS-422, streaming or external TTL trigger SCPI via USB 2.0, Ethernet, and GPIB (optional)
ENVIRONMENTAL [6]		
	Warm-Up Time	15 minutes
	Temperature	+15°C to +30°C (-10°C to +70°C storage)
	Pressure	500 - 900 mm Hg
	Humidity	≤ 90% R.H. at + 40°C (no condensation)
DIMENSIONS AND WEIGHT		
	Dimensions (H x W x D)	3.5" x 17.0" x 15.0" (89 mm x 432 mm x 381 mm)
	Weight	16 lbs (7.2 kg)
POWER REQUIREMENTS		90 - 264 VAC, 47 - 63 Hz, 80 VA max

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

Bristol Instruments reserves the right to change the detail specifications as may be required to permit improvements in the design of its products. Specifications are subject to change without notice.

CLASS 1
LASER PRODUCT

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