

Swept Test System STS-510

The Santec Swept Test System, STS-510, has been developed to streamline photonic testing, providing a complete solution where high-speed analysis with high resolution and accuracy is key. Combining Santec's 5th generation tunable laser, TSL-510, with a Santec Swept Processing Unit SPU-100 and custom software the complete STS-510 system optimizes WDL measurement for use in both R&D and production environments. Using real-time referencing, while simultaneously acquiring output power from TSL-510 and the transmitted optical power through the DUT, provides high accuracy in WDL analysis. Over-sampling and a rescaling algorithm are used to maximize testing throughput while maintaining measurement integrity. The system is particularly suited to transmission spectra characterization such as that required for DWDM components and Hi-Q photonic devices. Rapid sweep and accurate measurement saves time and ensures the integrity and validity of your device characterization.



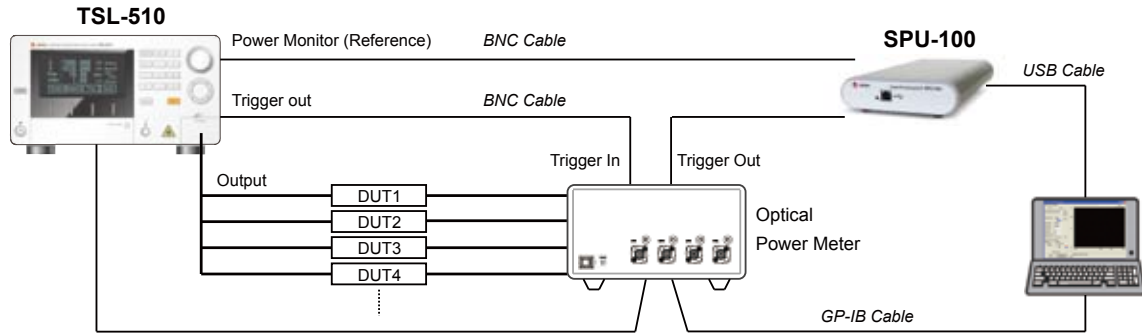
Features

- ▶ Accurate WDL characteristics measurement (high power repeatability $\pm 0.02\text{dB}$)
- ▶ Automatic normalization of laser source power
- ▶ High wavelength resolution & accuracy
- ▶ Reduced measurement time
- ▶ Simultaneous multi-channel measurement
- ▶ Measurement system can be combined easily with any basic power meter
- ▶ Supporting LabVIEW control software
 - Convenient set up of measurement parameters
 - Data analysis

Applications

- ▶ Optical components and modules characterization
 - Tunable Filters, Interleavers, Couplers, Splitters, Isolators, Switches, Fiber Bragg Gratings (FBGs)
 - WSS, Wavelength Blockers
 - DWDM components
- ▶ Photonic material characterization
- ▶ Optical spectroscopy

Typical configuration



Specifications

Parameter	Unit	Specifications				Notes
		Type A	Type B	Type C	Type D	
TSL-510 Type	-					
Dynamic range *1,5	dB	50	70	50	70	Bandpass filter
	dB	30	70	30	70	Notch filter
Absolute wavelength accuracy *2,5	pm	+/-57		+/-4.8		at 10nm/s
Relative wavelength accuracy *5	pm	+/-27		+/-3.3		at 10nm/s
Wavelength repeatability *5	pm	+/-11		+/-1.5		at 10nm/s
Scan speed	nm/s	5 to 40				
Wavelength resolution	pm	1				
Power resolution	dB	0.01				
Power repeatability *3,5	dB	+/-0.02				
Outputs from DUT measured *4	-	1				
Communication	-	USB (USB 2.0 High Speed)				SPU-100 / PC
		GP-IB (IEEE488.2)				TSL-510 / OPM / PC
Operating Temperature	degC	15 to 35				
Operating humidity	%	<80				non condensing

* All specifications are quoted after 1 hour warm-up period.

All specifications applies when Agilent optical power meter 816x+816xx.

*1 This value depends on scan speed.

The measurement condition is within wavelength resolution 1pm, wavelength range 40nm for 1 channel.

*2 Temperature within 25°C±5°C

*3 Averaging time 100us

*4 Multi channel is available.

*5 Typical value

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