

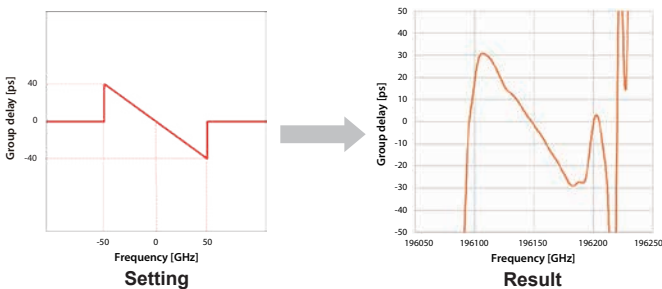
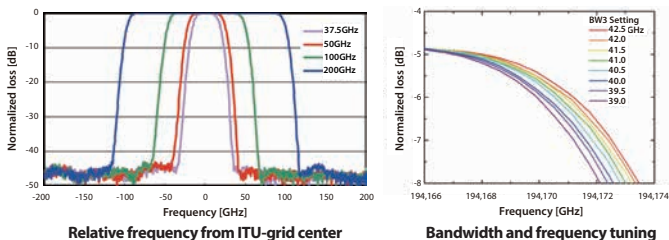
NEW

LCOS Programmable Processor WSS-2000

The WSS-2000 is a LCOS based Programmable Optical Filter. Santec's proprietary LCOS (Liquid Crystal on Silicon) technology inside the WSS-2000 offers the ultimate in flexibility, enabling the user to program a limitless range of optical filtering, attenuation and switching schemes. In addition, the phase control function is also available. The WSS-2000 is an enabling technology for investigating next generation optical networks by utilizing the filter as an optical equalizer of high-speed signals, as an adaptive channel filter for advanced optical transmission systems (DWDM, OFDM), as a WSS emulator or as a flexible test and measurement system.



Measurement Data



The following items can be set as parameters for the phase control function

- Phase Setting
- Group delay Setting
- Chromatic dispersion Setting

Features

- ▶ Programmable arbitrary spectral generation and spectral shaping
- ▶ Fine frequency and bandwidth control using LCOS. Setting resolution 0.78 GHz (typ.)
- ▶ Excellent optical filtering with steeper edge 400 dB/nm (typ.)
- ▶ Optical switching configuration (1x1, 1x2, 1x4)
- ▶ Optical phase control function (Option)

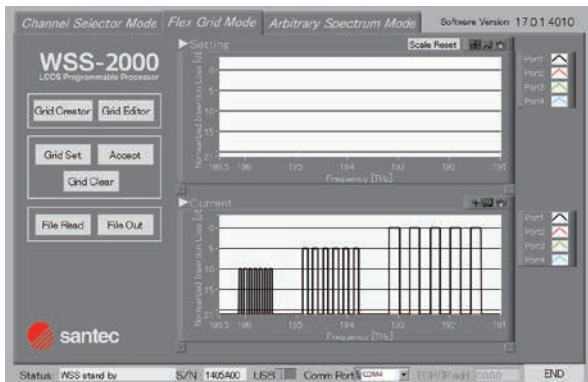
Applications

- ▶ Optical amplifier testing and evaluation with optical equalizer for high-speed optical signal
- ▶ 100 Gb/s, 400 Gb/s high speed transmission test
- ▶ Adjustable and adaptive DWDM, OFDM channel filtering
- ▶ Flexible test and measurement
- ▶ Next generation bundle wavelength OXC
- ▶ Pulse shaping
- ▶ Optical comb generation
- ▶ Wavelength Selective Switch (WSS) emulator

Specifications

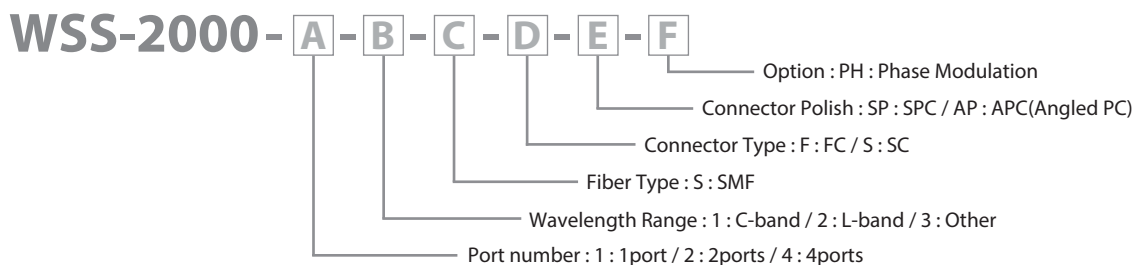
Category	Parameter	Unit	Min.	typ.	Max.	Notes
Filter Control	Operating frequency range	THz	191.250		196.150	
	Operating wavelength range	nm	1528.383		1567.543	
	Frequency setting accuracy	GHz	-2.5		2.5	
	Frequency setting resolution	GHz	0.78			
	Operating bandwidth range	GHz	10		4900	
		nm	0.08		39	
	Bandwidth setting accuracy	GHz	-5		5	
	Bandwidth setting resolution	GHz	1.56			
	Attenuation control range	dB	0		20	
	Attenuation setting resolution	dB	0.01			
	Attenuation setting accuracy 1	dB	-0.2		0.2	Attenuation 1.0-2.0 dB
Attenuation setting accuracy 2	dB	-0.5		0.5	Attenuation 2.1-5.0 dB	
Attenuation setting accuracy 3	dB	-1		1	Attenuation 5.1-15.0 dB	
Filter edge slope	dB/nm		400			
Group Delay Control Range	ps	-25		25	Option	
Switching	Number of input ports		1			
	Number of output ports		1, 2 or 4			
	Setting time	msec	500			Depending on setting spectrum
Loss and Dispersion	Insertion loss	dB		5.5	6.5	Bandwidth@-3 dB > 25 GHz
	Insertion loss uniformity	dB		1.1	2.5	
	Polarization dependent loss (PDL)	dB			0.8	Attenuation 0-10.0 dB
	Return loss	dB	30		35	
	Extinction ratio	dB	35		40	
Optical power	Differential Group Delay (DGD)	ps		0.2	0.5	
	Maximum total input power	dBm			27	
Environmental	Maximum per-channel optical power	dBm			13	
	Operating temperature	degC	15		35	
Electrical	Power supply	V	Input AC 100-240 V 50-60 Hz			
	Power consumption	VA			15	
	Communication interface		Ethernet			
Mechanical	Dimensions (W) x (D) x (H)	mm	210 x 350 x 88			
	Weight	kg	4			

GUI of Control Software



Optical Spectrum Analyzer

Ordering Code



www.santec.com/en/

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