

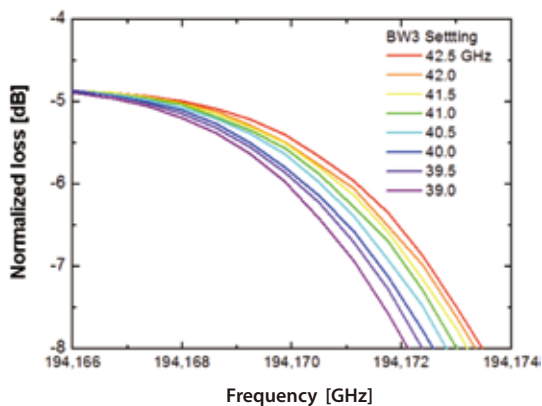
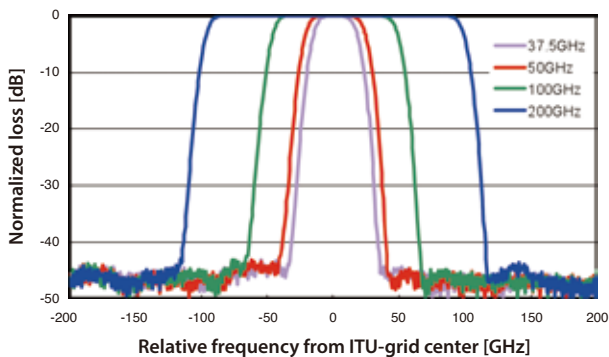
NEW

# Arbitrary Tunable Filter WSS-1000

The WSS-1000 is a LCOS based Arbitrary Tunable Filter. Santec's proprietary LCOS (Liquid Crystal on Silicon) technology inside the WSS-1000 offers the ultimate in flexibility, enabling the user to program a limitless range of optical filtering, attenuation and switching schemes. The WSS-1000 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



Bandwidth and frequency tuning

## Features

- ▶ Programmable arbitrary spectral shaping
- ▶ C or L-band operation
- ▶ Fine frequency and bandwidth control  
Setting resolution 1GHz (typ.)
- ▶ Excellent optical filtering with steeper edge  
400dB/nm (typ.)
- ▶ Switching function optionally  
1, 2, 4, or 9 outputs

## Applications

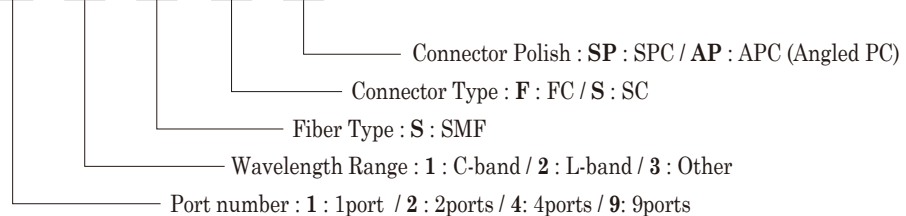
- ▶ Optical equalizer for high-speed optical signals
- ▶ 100Gb/s, 400Gb/s transmission test
- ▶ Adjustable and adaptive DWDM,  
OFDM channel filtering
- ▶ Flexible test and measurement
- ▶ Next generation bundle wavelength OXC
- ▶ Pulse shaping

## ■ Specifications

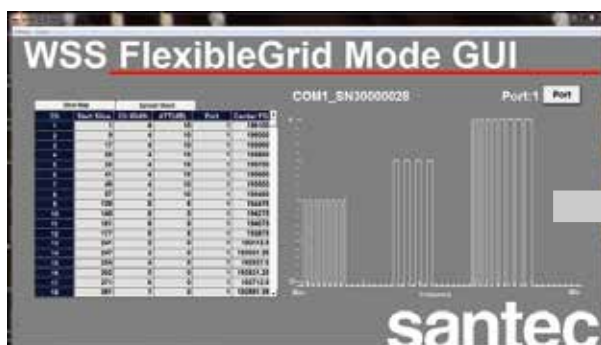
Category	Parameter	Unit	Min.	typ.	Max.	Notes
Filter	Operating frequency range	THz	191.325		196.125	
	Operating wavelength range	nm	1528.579		1566.928	
	Frequency setting accuracy	GHz	-2.5		2.5	
	Frequency setting resolution	GHz		1		
	Operating bandwidth range	GHz	12.5		4800	
		nm	0.1		38	
	Bandwidth setting accuracy	GHz	-5		5	
	Bandwidth setting resolution	GHz		1		
	Attenuation control range	dB	0		20	
	Attenuation setting resolution	dB		0.01		
	Attenuation setting accuracy 1	dB	-0.2		0.2	Attenuation 1.0-2.0dB
Attenuation setting accuracy 2	dB	-0.5		0.5	Attenuation 2.1-5.0dB	
Attenuation setting accuracy 3	dB	-2.8		2.8	Attenuation 5.1-15.0dB	
Filter edge slope	dB/nm		400			
Switching	Number of input ports			1		
	Number of output ports			1, 2, 4, or 9		
Loss	Insertion loss	dB		5.5	6.5	Bandwidth@-3dB > 25GHz
	Insertion loss uniformity	dB		1.1	2.5	
	Polarization dependent loss (PDL)	dB			0.8	Attenuation 0-10.0dB
	Return loss	dB	30	35		
	Extinction ratio	dB	35	40		
Optical power	Maximum total input power	dBm			27	
	Maximum per-channel optical power	dBm			13	
Environmental	Operating temperature	degC	15		35	
Electrical	Power supply	V	Input AC 100-240V 50-60Hz			
	Power consumption	VA			12	
	Communication interface		USB, Ethernet			
Mechanical	Dimensions (W) x (D) x (H)	mm	210 x 350 x 88			
	Weight	kg	4			

## ■ Ordering Code

**WSS-1000 - A - B - C - D - E**



## ■ GUI of Control Software



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