

### Wave Processor **WPA-900**

The WPA-900 is a system programmable to generate arbitrary filter shapes with santec's unique LCOS (Liquid Crystal on Silicon) technology. It can be used as an optical equalizer for high-speed signals, as an adaptive DWDM channel filtering, or as a flexible test and measurement system.



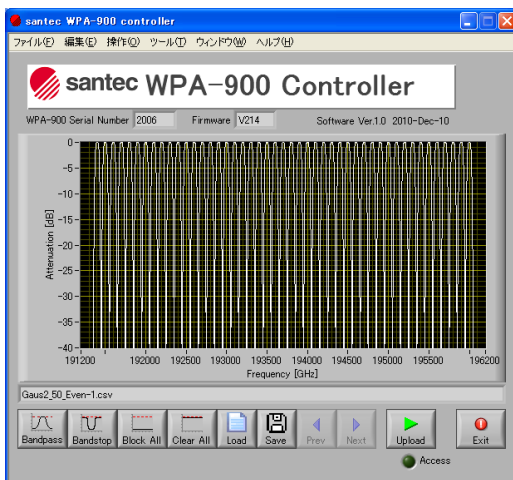
#### Features

- ▶ Programmable arbitrary spectral shaping
- ▶ C-band operation (35nm)
- ▶ Attenuation and bandwidth variable for each individual ITU-T grids, up to 50GHz spaced 89 channels.
- ▶ Excellent frequency resolution, 1GHz (typ.)
- ▶ No moving parts

#### Applications

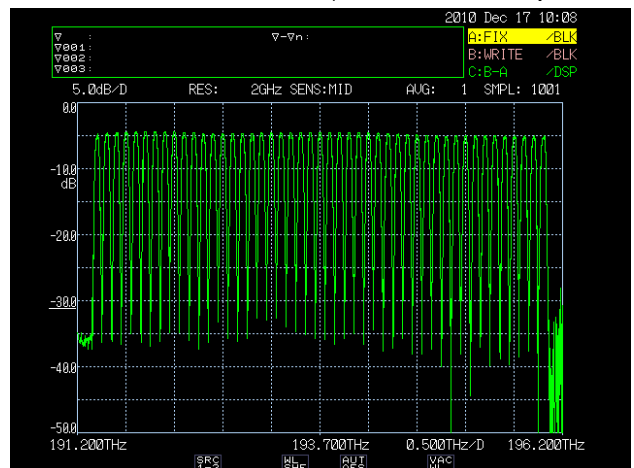
- ▶ Optical equalizer for high-speed optical signals
- ▶ 40Gb/s, 100Gb/s transmission test
- ▶ Adjustable and adaptive DWDM channel filtering
- ▶ Flexible test and measurement
- ▶ Next generation bundle wavelength OXC
- ▶ Pulse shaping

#### WPA-900 Control Software Screen



Programmable arbitrary spectral shaping utilizing both the Excel file and the stored file in the control software

#### Measurement result (50GHz Interleaver)



■ Specifications

Parameter	Unit	Min.	Typ.	Max.	Notes
Operating range (OR)	THz	191.650	-	196.00	
	nm	1529.6	-	1564.3	
Insertion loss (IL)	dB	-	4.5	6.5	including connectors
Bandwidth at 3dB (BW3) *1	GHz	10		4350	
	nm	0.08		35	
Bandwidth setting accuracy *1	GHz		+/- 3	+/- 6	
Center frequency setting resolution *1	GHz		1	3	
Center frequency setting accuracy *1	GHz		+/- 3	+/- 6	
Attenuation control range	dB	0		15	
Attenuation setting resolution	dB			0.1	
Attenuation setting accuracy *2	dB			+/- 1	
Optical return loss *3	dB	30			
Polarization depend loss (PDL) *4	dB		0.4	0.7	
Chromatic dispersion (CD)	ps/nm		± 10		
Polarization mode dispersion (PMD) *5	ps		0.3		
Maximum total input power	dBm			23	

\*1: Measured from filter 3dB points on 100 GHz flat top filter aligned to ITU grid.

\*2: Accuracy is between requested and actual attenuation value.

\*3: Measured with unpolarized broadband source.

\*4: Measured over 0.5dB passband on a 100GHz flat-top filter.

\*5: Difference between phases averaged across 0.5dB passband on a 100GHz flat-top filter.

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