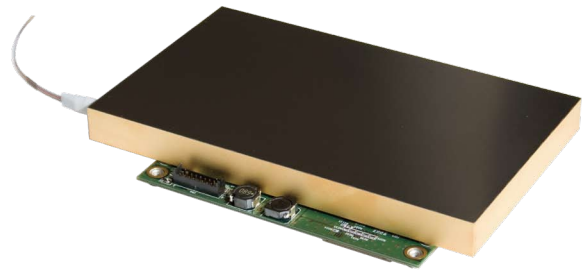


# Flexible-grid Wavelength Selective Switch WSS-100

Santec, a leading design and manufacturer of tunable lasers, optical instruments, OCT products, and fiber-optic components, has developed a LCOS based 1x2&1x4 wavelength selective switches (WSS) for single slot line-card integration. The WSS is based on LCOS (liquid crystal on silicon) technology to adapt for next generation flexible grid ROADMs (reconfigurable add drop multiplexer). The low-port count (LPC) WSS are suitable for deployment in metro edge, access ROADM, and submarine with a cost and size optimized solution.



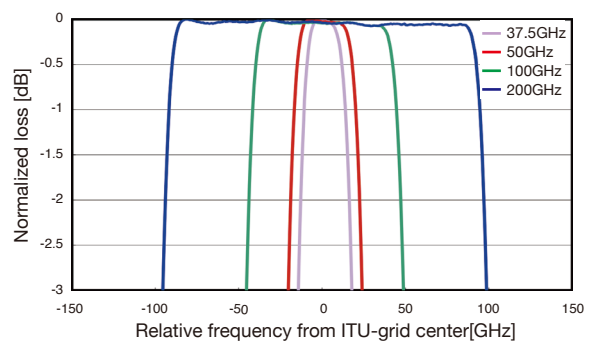
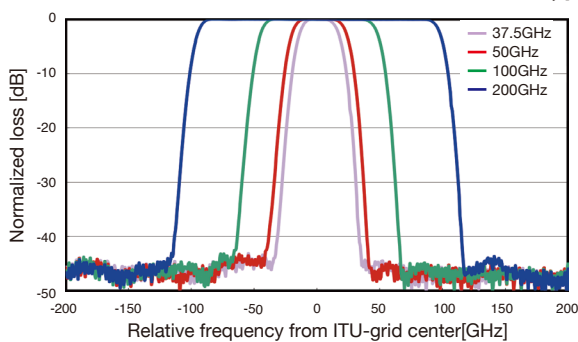
## Features

- ▶ 1 common port, 2 or 4 input/output ports;  
1x2/2x1 WSS, 1x4/4x1 WSS
- ▶ Excellent PDL performance
- ▶ Support 12.5GHz granularity Flexible-grid  
from 37.5GHz grid
- ▶ No moving parts and fast response
- ▶ Compact size for single slot, (W)165x(D)110x(H)20mm
- ▶ RS-232 (LVTTTL) or I2C, (option) DPRAM interface

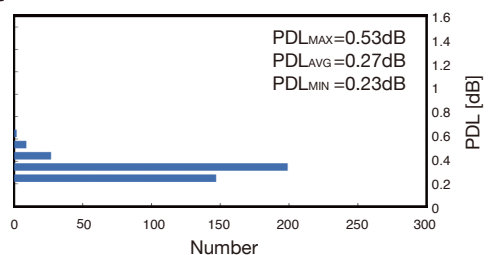
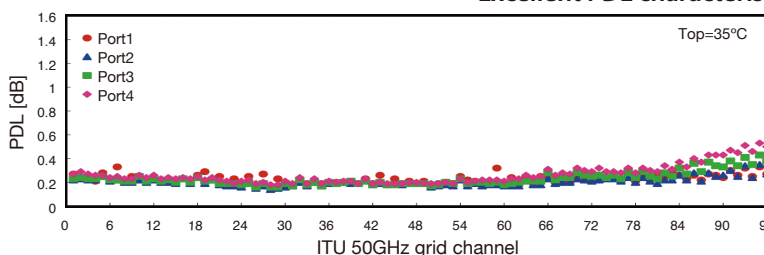
## Applications

- ▶ Bandwidth variables for ~100Gb/s  
(DQPSK / BPSK / QPSK) in future upgrades
- ▶ Grouping filter for channel capacity expansions
- ▶ Adaption for SDN / Openflow architectures

## Typical spectrum



## Excellent PDL characteristic

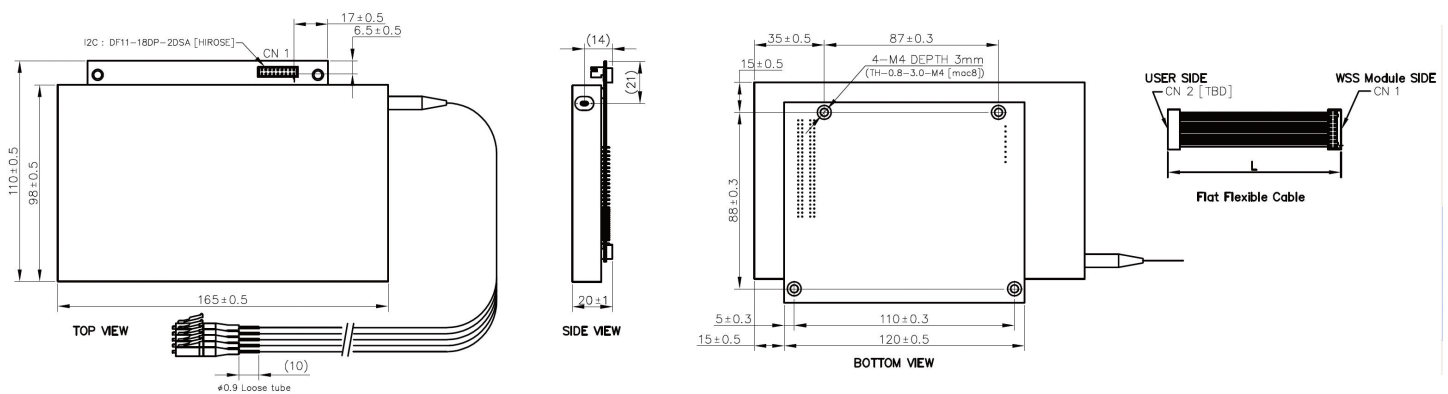




## Specifications

Item	Parameter	Conditions	Unit	Min	Typ	Max	Note
1	Operating range (OR)		THz	191.325	-	196.125	ITU-Grid Center
2	Channel spacing (CS)		GHz	37.5 / 50 / 100 / Flexible-grid			Software Programmable
3	Increment BW (IBW)		GHz	12.5			
4	Increment center frequency (ICF)		GHz	6.25			
5	Number of frequency slot (NFS)	Flexible-grid mode	-	384			in operating range
6	Number of frequency slot per ch (NFC)		-	3	-	16	NFC = 4 corresponds to ITU-T 50GHz grid
7	Clear passband (CPB)		GHz	+/- ((NFC-4)*6.25+10.0)			
8	Insertion loss (IL)	Excluding connectors	dB	-	5	6.5	
10	Extinction ratio (ER)	in CPB, Single Ch ON / OFF	dB	35	40	-	
11	Port isolation (PXT)		dB	35	40	-	
12	Bandwidth at 0.5dB (BW0.5)	NFC=4, 50GHz spacing	GHz	+/- 14.0	-	-	
13	Bandwidth at 3dB (BW3)	NFC=4, 50GHz spacing	GHz	+/- 20.0	-	-	
14	Attenuation control range (ACR)		dB	0	-	15	Setting range is 0.0 - 20 dB
15	Attenuation resolution (AR)		dB	-	0.1	-	Setting resolution
16	Polarization dependent loss (PDL)	0 ~ 10dB, in ACR, in CPB	dB	-	0.2	0.8	
		10.1 ~ 15dB, in ACR, in CPB	dB	-	0.3	1.0	
17	Return loss (RL)		dB	30	35	-	
18	Remote interface		-	LVTTTL serial, 115,200bps			
19	Power consumption		W	-	8.4	26	
20	Operating temperature (OT)	no condensation	degC	-5	-	65	
21	Storage temperature (ST)	no condensation	degC	-40	-	85	

## Dimension



www.santec.com E-Mail : sales@santec.com

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### SANTEC CORPORATION

5823 Ohkusa-Nenjyozaka, Komaki, Aichi 485-0802, Japan Tel. +81-568-79-1959 Fax +81-568-79-1718

### SANTEC U.S.A. CORPORATION

433 Hackensack Ave., Hackensack, NJ, 07601, U.S.A. Toll Free +1-800-726-8321 (santec-1) Tel. +1-201-488-5505 Fax +1-201-488-7702

### SANTEC EUROPE LIMITED

Magdalen Centre, Robert Robinson Ave., The Oxford Science Park, Oxford OX4 4GA, U.K. Tel. +44-1865-784960 Fax +44-1865-784961

### SANTEC (SHANGHAI) Co., Ltd.

No.800 Zhangyang Road Changhang Tower, Pudong District, Shanghai 200122 China Tel: +86-21-58361261, +86-21-58361262 Fax: +86-21-58361263