

Wavelength Selective Switch (WSS) 5x1



Key Features



- 50 GHz 5x1
- Free space optics and MEMS technology
- Equalize, attenuate, block, switch/route any or all wavelengths
- Flat wide pass bands, low dispersion- cascadability
- Colorless solution
 - Any wavelength/any port
- Telcordia qualified
- High volume manufacturing
 - Automated optics alignment and assembly (high throughput, multi-parameter optimization, high precision/repeatability, operator independent)
 - Fully automated test and calibration facility (auto data logging and monitoring, networked access to data and test status)
- CAPEX – eliminates O-E-O conversions
- OPEX – remote planning and re-configuration
- Faster time to revenue

Applications

- Wavelength routing/grooming
 - Ring inter-connect and add/drop capability
- Dynamic bandwidth management

JDSU's Agile Optical Switch family provides the broadest portfolio of ROADMs solutions designed to match the requirements of major market segments. They are the building blocks of Agile Optical Networks and provide the flexibility to remotely reconfigure any or all wavelengths, thereby reducing time-to-service, simplifying the network and streamlining planning and management. This results in significant Opex and Capex reductions and faster time to revenue. In addition, they enable the cost effective creation and deployment of more complex network architectures.

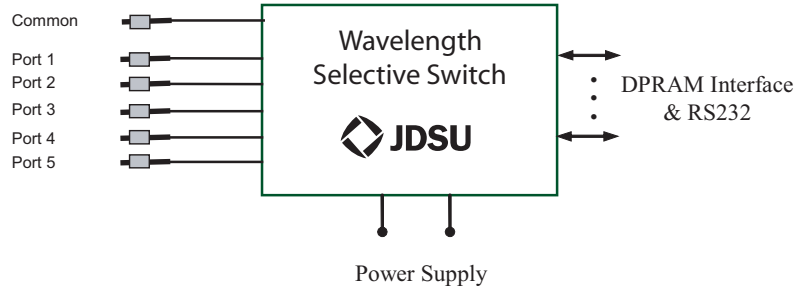
The Wavelength Selective Switch is an N-port module composed of a hermetically sealed optics block and control electronics. The optics block is based on the highly successful free space optics platform developed for the Wavelength Blockers, hence maintaining a common platform solution while evolving to the WSS.

The WSS is used to dynamically attenuate, block switch and route wavelengths independently. Any wavelength/wavelengths can be routed from any port/ports to any other port/ports in any order, resulting in a colorless solution, that is highly flexible and requires no pre-planning.

2

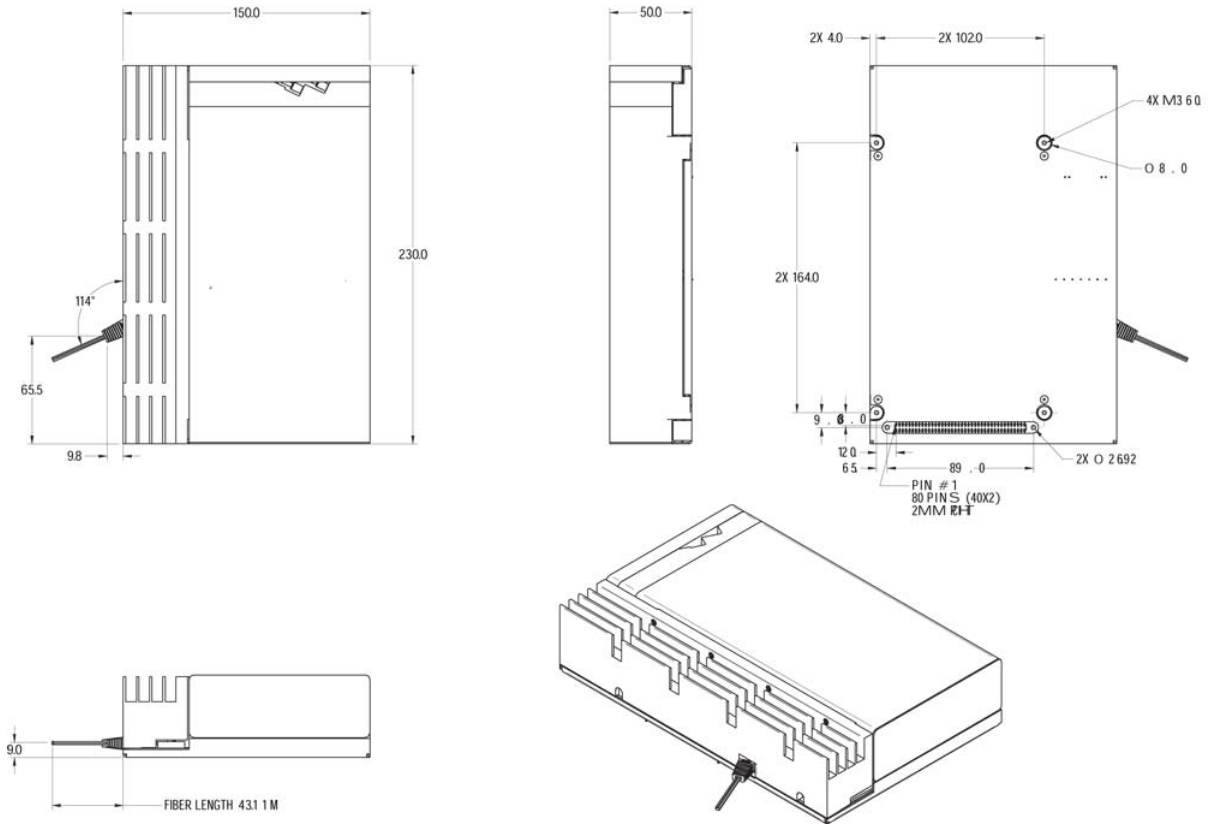
Functional Diagram

(This diagram shows the functionality of the Wavelength Selective Switch only. Diagram does not resemble actual device.)



Module Dimensions

(Specifications in mm unless otherwise noted. Fixed labels within 10 cm of connector tip.)



3

Specifications

Parameter	Condition	Minimum	Maximum
Optical			
Frequency range		191.55 THz	195.90 THz
Wavelength spacing			50 GHz
Number of controllable channels			96
Maximum input power at common		-	24 dBm
Maximum input power single channel		-	13 dBm
Passband		±12.5 GHz	-
Insertion loss		-	6.6 dB
Insertion loss ripple			
over ±10 GHz passband	0 to 10 dB	-	0.3 dB
over ±10 GHz passband	10.1 to 15 dB	-	0.5 dB
Isolation, over ±10 GHz passband		35 dB	-
Attenuation range		15 dB	-
Attenuation resolution		0.1 dB	-
Group delay ripple (GDR)	95% confidence, within ±11 GHz of ITU	-	2 ps
Extinction ratio (crosstalk), over ±10 GHz stop band		40 dB	-
PDL	0 to 10 dB attenuation	-	0.5 dB
	10.1 to 15 dB attenuation	-	0.8 dB
Polarization mode dispersion (PMD)	95% confidence, within ±11 GHz of ITU		0.5 ps
Return loss (at common)	Including connectors	25 dB	-
Environmental and Operational			
Operating case temperature		-5°C	70°C
Operating humidity		5% RH	85% RH
Storage temperature		-40°C	70°C
Storage humidity		5% RH	95% RH
Mechanical and Fiber Labeling			
Module dimensions (W x D x H)	Entire module		230 x 150 x 50 mm
Fiber type	All ports		900 μm tight buffer SMF-28
Fiber length			1.0±0.2 m
Optical connector	All ports		LC
Electrical interface			DPRAM & RS232
Connector labeling	Input ports		Port 1, port 2, port 3, port 4, port 5
	Output ports		Common
Electrical			
Supply voltage A	3.3 V ±5%		0.35 A ¹
Supply voltage B	15 VA ±5%		0.40 A

Note: Parameters are specified for start of life, over passband, over all channels, over operating temperature, attenuation range, and all polarization states unless stated otherwise. Specifications are subject to change during the development cycle of the product.

1. Suggested minimal wattage of 3.3 V power supply is 2 W in order to deal with startup current transient.

4

Ordering Information

For more information on this or other products and their availability, please contact your local JDSU account manager or JDSU directly at 1-800-498-JDSU (5378) in North America and +800-5378-JDSU worldwide or via e-mail at customer.service@jdsu.com.

Sample: MWSW5150C5041

Product Code	Description
MWSW5150C5041	Wavelength Selective Switch 5x1

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