

# 4-Port Reconfigurable Optical Add-Drop Multiplexer (ROADM)

(patents pending)

## Product Description

Agiltron 4-port Reconfigurable Optical Add-Drop Multiplexer (ROADM) is based on sophisticated free space and micro-integrated optical design. This 4-port device can selectively drop any one wavelength channel among the transmission optical signals at the IN-port to the DROP-port and direct the rest of channels to the EXP-port. Simultaneously, its ADD-port is able to add an optical signal with the identical spectral ingredients as that in the DROP-port into the EXP-port. Each single device can operate over C- or L-band with 50GHz or 100GHz channel spacing. The design is scalable. By cascading these devices in a network, a multi-channel ROADM can be realized.

The 4-port ROADM products offer unprecedented features of low cost, uniform loss, high reliability and spectral stability, as well as low PDL, low PMD, and high channel isolation.

## Typical Specifications

Parameter	Unit	Specification	
Wavelength Range	nm	C-band or L-band	
Wavelength Spacing	nm	50 GHz	100 GHz
Number of Channels		>80	>40
Passband Width @ -0.5 dB	GHz	20	40
Passband Width @ -3 dB	GHz	30	60
Insertion Loss (over full channel passband, 5°C ~65°C)	dB	6.5	6.0
Insertion Loss Uniformity (channels)	dB	1.0	
Pass Band IL Ripple (Within ITU+/-15GHz)	dB	0.6	
Polarization Dependent Loss	dB	0.50	
Adjacent Channel Isolation	dB	>35	
Non-Adjacent Channel Isolation	dB	>35	
Attenuation Reference Level	dB	6.0	
Attenuation Dynamic Range	dB	20	
Attenuation Resolution	dB	0.1	

## Features

- Wide Bandwidth
- Low/Uniform Insertion Loss
- High Reliability
- Low PDL and PMD
- High Channel Isolation
- Excellent Thermal Stability

## Applications

- Reconfigurable Add/Drop
- Dynamic Wavelength Management
- Dynamic Capacity Provision
- Wavelength switching nodes



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Parameter	Unit	Specification
Attenuation Setting Time	ms	250
Chromatic Dispersion	ps/nm	+/-10
Polarization Mode Dispersion	ps	0.2
Return Loss	dB	>40
Directivity	dB	>55
Max. Input Optical Power	dBm	23
Operating Temperature	°C	0~70
Storage Temperature	°C	-5~80
Tuning Speed	ms	~50
Electric Power Consumption	W	~2.5
Mechanical Dimensions (L x W x H)	mm	160x120x21

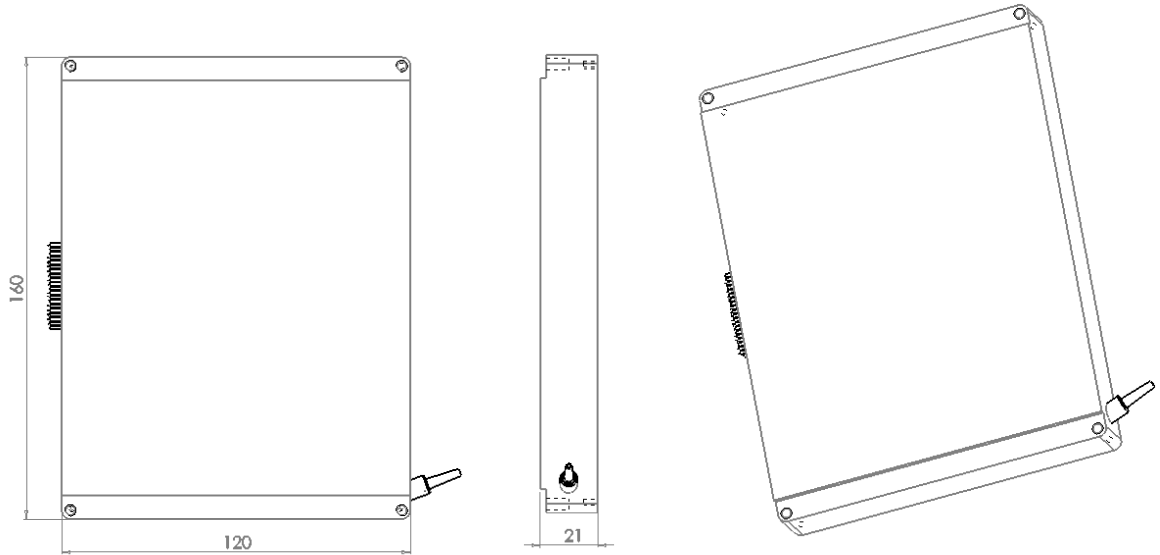
Notes:

- Optical Specifications of a C-or L-band, 4-Port Reconfigurable Optical Add-Drop Multiplexer (ROADM). Parameters are specified for End-of-Life(EOL), over passband, over all channels, over operating temperature, attenuation range, and all polarization states unless stated otherwise.
- Typical specifications refer to 90<sup>th</sup> percentile of population at Beginning-of Life (BOL). Some of the typical values are not guaranteed at high temperature.
- Specifications may be subject to change with development of the product.



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## Mechanical Footprint Dimensions (mm)



## Ordering Information

ROAD -	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Type	Wavelength	Channel spacing	Package Type	Fiber Type	Fiber Length	Connector	
	Add or Drop=12 Add and Drop=22	C band=1 L band=2 Special=0	50 GHz=5 100GHz=1 200GHz=2 Special=0	Standard=1 Special=0	SMF-28=1 Special=0	Bare Fiber=1 900um Loose tube=3 Special=0	0.25m=1 0.5m =2 1.0 m=3 Special=0	None=1 FC/PC=2 FC/APC=3 SC/PC=4 SC/APC=5 ST/PC=6 LC=7 Special=0

