

Avanex's Fixed Optical Add/Drop Modules, offered as four-channel or eight-channel devices, are designed for use in advanced communications networks. These Telcordia-qualified devices enable system designers to add or drop channels. Based on dielectric filters manufactured with a patented thin-film deposition process, they offer low insertion loss and high isolation in a totally passive device. They are available using standard micro-optic technology or with patented MultiPort technology.<sup>1</sup>

1. Patents Pending

### FEATURES

- 100 GHz or 200 GHz Spacing
- Uniformity, Repeatability and Rapid Delivery Provided Through Automated Assembly Process
- Totally Passive
- No Epoxy in the Optical Path
- Low Insertion Loss and High Isolation
- Transport-Protocol-Independent
- Telcordia Qualified

### APPLICATIONS

- Bi-Directional and Uni-Directional Networks
- Long Haul and Metropolitan Networks
- Adding or Dropping Four Channels or Eight Channels

### MULTIPOINT TECHNOLOGY

MultiPort technology uses innovative, submicron precision alignment to enable multiple, independent optical paths to pass through the same filter simultaneously. MultiPort technology dramatically reduces the overall installation costs of DWDM communications systems, while offering improved performances in the network.

### PATENTED THIN-FILM PROCESS

Avanex thin-film filters are manufactured with a patented thin-film deposition process that deposits hard, refractory metal oxide thin films a bulk density. The result - passive filters that are impervious to humidity and provide extremely low insertion losses. The passive nature of Avanex's Optical Add/Drop Modules simplifies network design by eliminating the need for thermal control mechanisms required by other types of technology.

### KEY OPTICAL PARAMETERS

Module Type	Conditions			
	4100 OADM	8100 OADM	4200 OADM	8200 OADM
Channel Passband	$\geq \pm 0.11$ nm ( $\geq \pm 13.75$ GHz)		$\geq \pm 0.2$ nm ( $\geq \pm 25$ GHz)	
Channel Spacing	100 GHz		200 GHz	
Insertion Loss (In to Out)	< 2.0 dB	< 4.0 dB	< 2.0 dB	< 4.0 dB
Insertion Loss (In to Drop and Add to Out)	< 3.0 dB	< 5.0 dB	< 2.5 dB	< 4.5 dB
Ripple	< 0.5 dB		< 0.5 dB	
Adjacent Channel Isolation	> 25 dB		> 25 dB	
Non-Adjacent Channel Isolation	> 40 dB		> 40 dB	
Isolation of Drop Channels (In to Out)	> 25 dB		> 25 dB	
Directivity	> 55 dB		> 55 dB	
Return Loss	> 50 dB		> 50 dB	
Polarization Dependent Loss	< 0.2 dB		< 0.2 dB	
Polarization Mode Dispersion	< 0.15 ps		< 0.15 ps	
Optical Power	< 25 dB		< 25 dB	
Thermal Drift	< 1.2 pm/C		< 1.2 pm/C	
Channel Plan	Available over C-Band and L-Band			

### KEY ENVIRONMENTAL PARAMETERS

Parameters	Conditions
Operating Temperature Range	-5 °C to 65 °C
Storage Temperature Range	-40 °C to 85 °C

### PHYSICAL DIMENSIONS AND DESIGN

Parameters	Conditions
4-Channel OADM	133 x 95 x 12.25 mm
8-Channel OADM	133 x 95 x 15.5 mm



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