

# iVMUX™

## VARIABLE MULTIPLEXER MODULE

The iVMUX™ provides a solid-state solution for multi-channel integrated VOA and wavelength multiplexer (VMUX). With this module automatic channel balancing can be done before wavelengths are multiplexed. This allows the multiplexing of optical signals at different power levels such as those from different transmitters, line rates and protocols. This product is bidirectional and can be used as either VMUX or VDEMUX.



### BENEFITS

- Number of channels can be 8 to 96
- Channel spacing can be 200, 100, 50 GHz
- Optional VOA for channel and band balancing
- Optional switch for dynamic load balance at add/drop nodes
- Optical connectors: MPO, LC, FC, SC, etc.
- Electrical interface: RS-232, I2C, DPRAM

### FEATURES

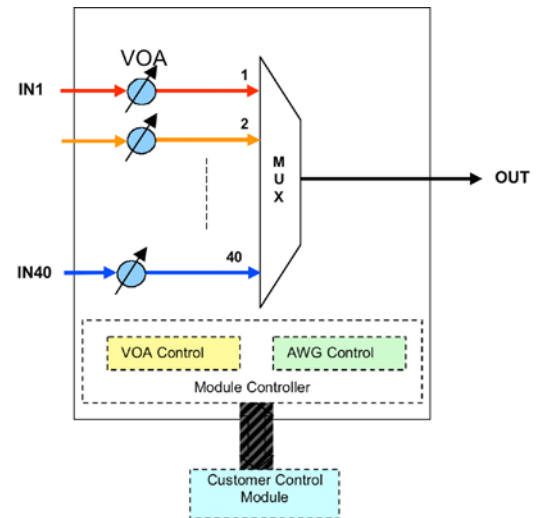
- Voltage controlled variable multiplexing & demultiplexing
- High dynamic range
- Low insertion loss, C & L bands
- Low polarization dependence loss
- Open loop operation with high accuracy
- Power monitor option for closed loop operation
- Low power consumption
- Fast actuation
- Small footprint
- Scalable channel count (8-96)
- Normally bright or normally dark
- Gaussian, flat-top, semi-flat-top multiplexer
- No moving parts
- Telcordia GR-1209/GR-1221 qualified
- Optional integrated tap and switch
- Customizable design

### APPLICATIONS

- WDM, SONET, optical Ethernet, and other optical networking systems for:
  - Dynamic load balancing at add/drop nodes
  - Channel and band balancing
  - Channel blocking
  - Dynamic gain equalization
  - Dynamic attenuation at receivers

**DATA SHEET**

Parameter	Unit	iVMUX™ 4000		
		Gaussian	Flat Top	Semi Flat Top
Operating Band	nm	1528 ~ 1610	1528 ~ 1610	1528 ~ 1610
Channel Count	ch	40	40	40
Channel Spacing	GHz	100	100	100
ITU Passband	GHz	±12.5	±12.5	±12.5
0.5-dB Bandwidth	nm	0.15	0.3	0.2
1-dB Bandwidth	nm	0.25	0.45	0.35
3-dB Bandwidth	nm	0.45	0.6	0.5
Passband Ripple	dB	0.9	0.3	0.5
Insertion Loss	dB	4.5	6.5	5.5
PDL @ Min Attenuation	dB	0.3	0.3	0.3
PDL @ Max Attenuation	dB	0.5	0.5	0.5
VOA Attenuation Range	dB	0 ~ 15	0 ~ 15	0 ~ 15
VOA Open-Loop Attenuation Accuracy	dB	+/-0.5	+/-0.5	+/-0.5
VOA Setting Resolution	dB/step	0.1	0.1	0.1
VOA Setting Delay	ms	6	6	6
Return Loss	dB	40	40	40
Chromatic Dispersion	ps/nm	±3	±10	±5
Polarization Mode Dispersion	ps	0.5	0.5	0.5
Power Dissipation	W	10	10	10
Operating Temperature Range	°C	-5 ~ 70	-5 ~ 70	-5 ~ 70
Storage Temperature Range	°C	-40 ~ +85	-40 ~ +85	-40 ~ +85
Relative Humidity Range	%	0 ~ 95	0 ~ 95	0 ~ 95
Module Dimensions	mm	220x135x31	220x135x31	220x135x31



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