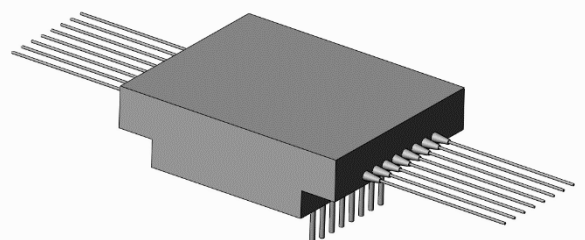


MEMS Fiber-Fiber VOA Array (Multimode) (8, 16, 24 Channels)

(Patent pending)

Product Description

The *Fiber-Fiber*TM series VOA is based on fiber to fiber coupling with a micro-electro-mechanical shutter in between, featuring low loss, broadband, high power, compact size, low cost, easy drive, and excellent optical performance. The *Fiber-Fiber*TM series VOA is compliant with the Telcordia 1209 and 1221 reliability standards. The VOA is driven by directly applying a low electrical voltage.



Features

- Low Insertion Loss
- High Reliability
- Low Cost
- Low power consumption
- Super compact

Performance Specifications

Fiber-Fiber TM series VOA	Min	Typical	Max	Unit
Wavelength	180 ^[1]		2000	nm
Band Width		Broad band without coating		
Insertion Loss ^[2]		0.5	1.0	dB
Temperature Dependent Loss ^[3]	@10dB	0.8	1.2	dB
	@20dB	1.0	1.5	dB
Attenuation Resolution		Continuous		dB
Attenuation Range		20	30 ^[4]	dB
Return Loss		30	45 ^[4]	dB
Response Time		20	30	ms
Power Handling		500	800	mW
Driving Voltage (full range)		3.5	5	VDC
Power Consumption ^[5]		80	120	mW
Reliability		Telcordia 1209 and 1221		
Operating Temperature		-5 ~ 70		°C
Storage Temperature		-40 ~ 85		°C
Fiber Type		50/125, 62.5/125, 105/125		
Package Dimension		See drawing below		mm

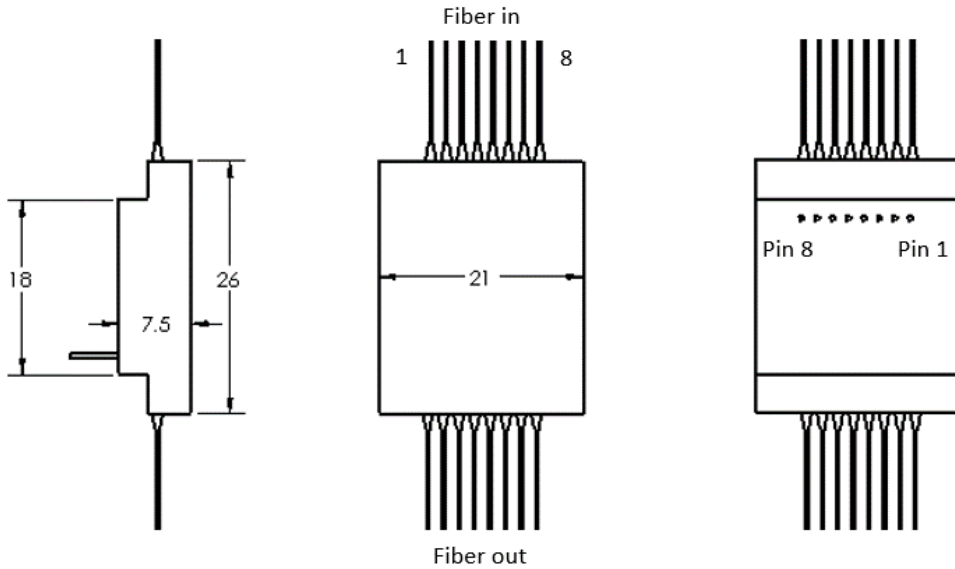
Notes:
 [1] For normal MM fiber, the wavelength is from 400nm to 2000nm
 For a special 105/125 fiber, the wavelength is from 180nm to 1200nm
 [2] Test using CPR<14 lasers and excluding connectors
 [3] Reference to room temperature
 [4] Special order at higher price

Applications

- Dynamic gain equalization
- Variable MUX/DeMUX
- Instrumentation

8~24 Channel *Fiber-Fiber*TM VOA Array

Mechanical Dimensions-Package Type 1

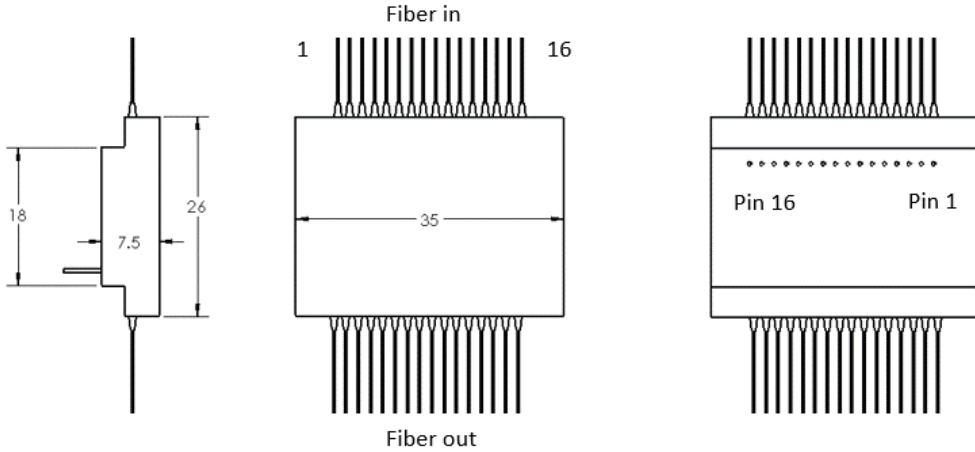


Electrical Driving information

Pin No.	Definition	Voltage(V)	Pin No.	Definition	Voltage(V)
1	VOA 1	0 ~ 5	5	VOA 5	0 ~ 5
2	VOA 2	0 ~ 5	6	VOA 6	0 ~ 5
3	VOA 3	0 ~ 5	7	VOA7	0 ~ 5
4	VOA 4	0 ~ 5	8	VOA 8	0 ~ 5

8~24 Channel *Fiber-Fiber*TM VOA Array

Mechanical Dimensions-Package Type 2

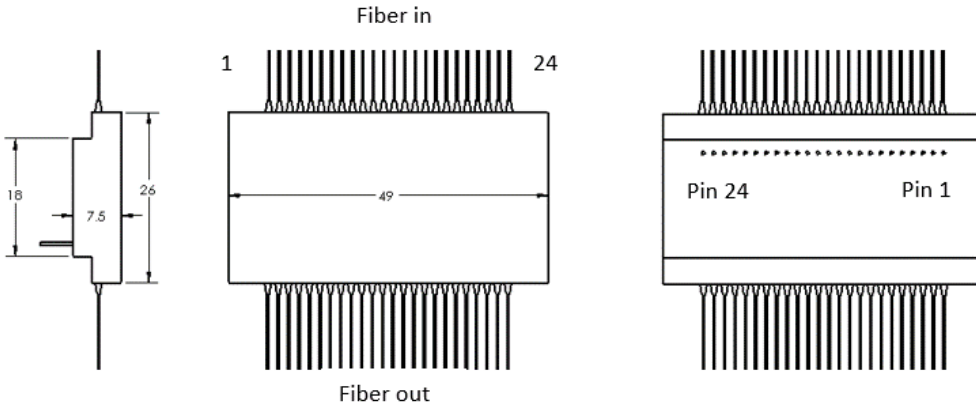


Electrical Driving Information

Pin No.	Definition	Voltage(V)	Pin No.	Definition	Voltage(V)
1	VOA 1	0 ~ 5	9	VOA 9	0 ~ 5
2	VOA 2	0 ~ 5	10	VOA 10	0 ~ 5
3	VOA 3	0 ~ 5	11	VOA 11	0 ~ 5
4	VOA 4	0 ~ 5	12	VOA 12	0 ~ 5
5	VOA 5	0 ~ 5	13	VOA 13	0 ~ 5
6	VOA 6	0 ~ 5	14	VOA 14	0 ~ 5
7	VOA 7	0 ~ 5	15	VOA 15	0 ~ 5
8	VOA 8	0 ~ 5	16	VOA 16	0 ~ 5

8~24 Channel *Fiber-Fiber*TM VOA Array

Mechanical Dimensions-Package Type 3



Electrical Driving Information

Pin No.	Definition	Voltage(V)	Pin No,	Definition	Voltage(V)
1	VOA 1	0 ~ 5	13	VOA 13	0 ~ 5
2	VOA 2	0 ~ 5	14	VOA 14	0 ~ 5
3	VOA 3	0 ~ 5	15	VOA 15	0 ~ 5
4	VOA 4	0 ~ 5	16	VOA 16	0 ~ 5
5	VOA 5	0 ~ 5	17	VOA 17	0 ~ 5
6	VOA 6	0 ~ 5	18	VOA 18	0 ~ 5
7	VOA 7	0 ~ 5	19	VOA 19	0 ~ 5
8	VOA 8	0 ~ 5	20	VOA 20	0 ~ 5
9	VOA 9	0 ~ 5	21	VOA 21	0 ~ 5
10	VOA 10	0 ~ 5	22	VOA 22	0 ~ 5
11	VOA 11	0 ~ 5	23	VOA 23	0 ~ 5
12	VOA 12	0 ~ 5	24	VOA 24	0 ~ 5

8~24 Channel *Fiber-Fiber*TM VOA Array

Ordering Information

VOAA-	<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	Off State	Package	Fiber	Fiber Length	Connector	
	8 channel =08 16 channel=16 24 channel =24	400-2000nm=1 180-1200nm=2	Transparent=1 Opaque = 2	Standard=1 Special=0	50/125 =1 62.5/125=2 105/125=3 Special = 0	Bare fiber=1 900um loose tube=3 Special = 0	0.25m= 1 0.5m = 2 1.0m= 3 Special =0	None = 1 FC/PC = 2 FC/APC = 3 SC/PC = 4 SC/APC = 5 ST/PC = 6 LC = 7 Special = 0