

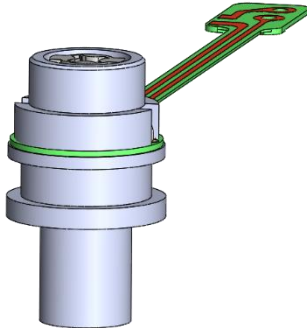
Fiber Tip VOA

(Protected by US patent 8,666,218 and other patents pending)



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Features

- Compact
- Low Cost
- High Reliability
- Low IL, PDL, WDL & TDL
- Low Power Consumption

Applications

- Laser Power Control
- PD Receiving Power Adjust
- Channel Balance
- Instrumentation

The receptacle MEMS VOA is based on a micro-electro-mechanical mechanism featuring simple construction, high reliability, and excellent optical performance. It is available in either normally-open or normally-closed configurations. The receptacle MEMS VOA is driven by an electrical voltage, and the attenuation can be continuously adjusted.

It is designed for TOSA or ROSA. One end is ready for the connector to plug in, and the other end is ready for mounting the laser diode or photodetector.

Specifications

Parameter	Min	Typical	Max	Unit
Wavelength	1260	1550	1620	nm
Insertion Loss ^[1]		0.1	0.3	dB
Attenuation Range	25			dB
Polarization Dependent Loss @ 10dB		0.1	0.2	dB
Wavelength Dependent Loss @ 10dB for 40nm bandwidth		0.2	0.5	dB
Temperature Dependent Loss @ 10dB		0.5	0.7	dB
Attenuation Resolution		Continuous		
Polarization Mode Dispersion		0.01	0.05	ps
Return Loss ^[1]	45			dB
Repeatability			0.1	dB
Response Time		3	6	ms
Driving voltage ^[2]		4	5 ^[3]	V
Power consumption ^[2]		80	130	mW
Optical Power Handling (CW)		300	500	mW
Operating Temperature	-5		75	°C
Storage Temperature	-40		85	°C
Reliability	Telcordia 1209 and 1221			
Fiber Type	Corning SMF28 or equivalent			
Package Dimension	See drawing below			mm

Note:

- [1]. Excluding connector mis-matching
- [2]. For full dynamic range. Other drive voltages available
- [3]. Over this value will damage the device.

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Rev 02/08/25

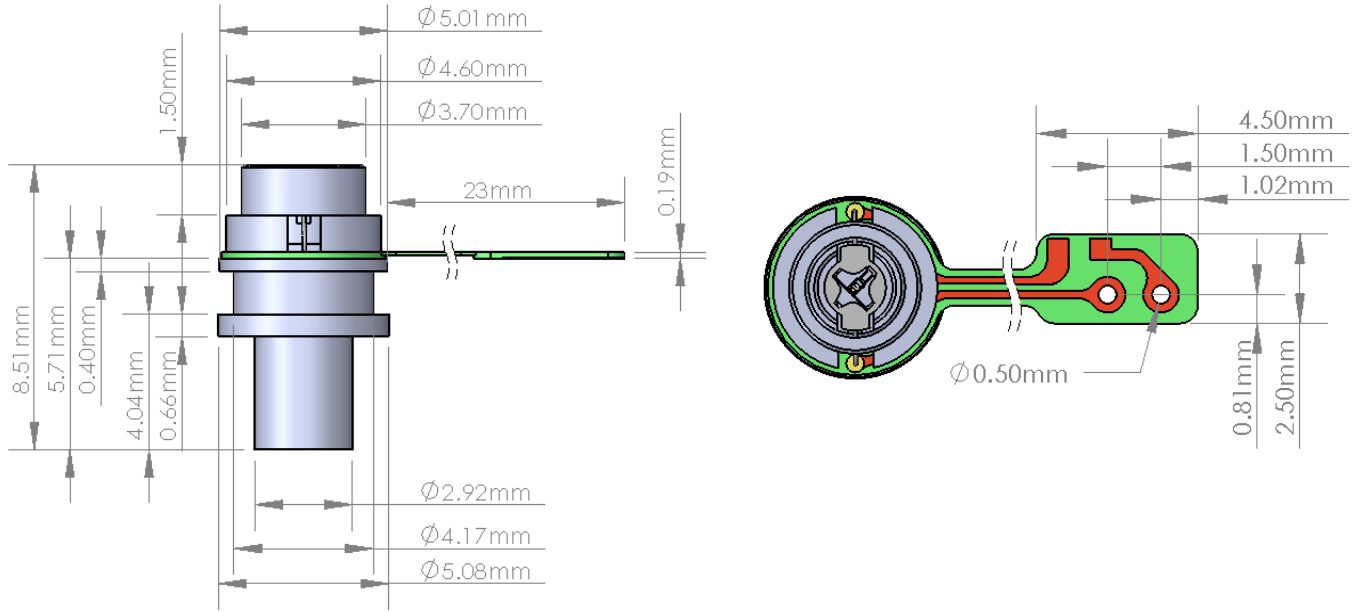
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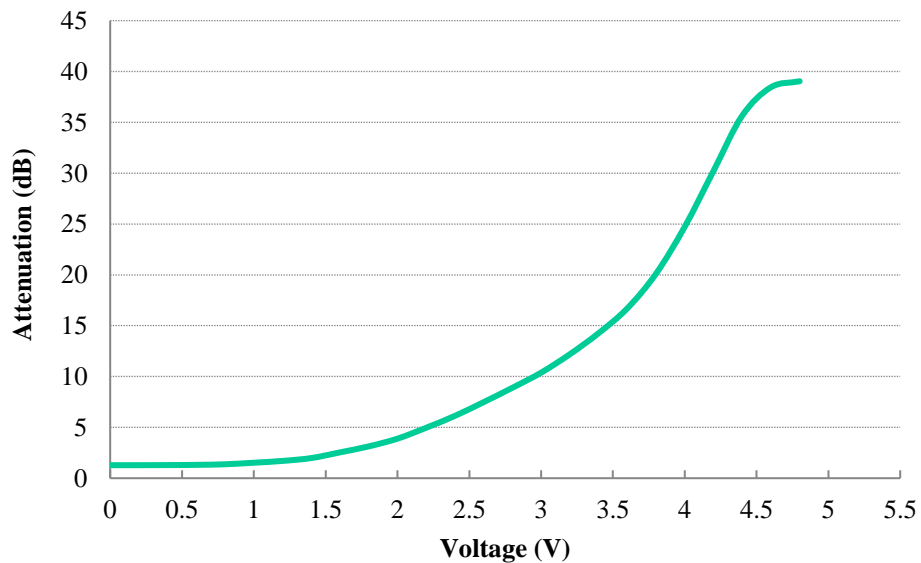
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Mechanical Footprint Dimensions (mm)



*Product dimensions may change without notice. This is sometimes required for non-standard specifications.

VOA Performance



Fiber Tip VOA



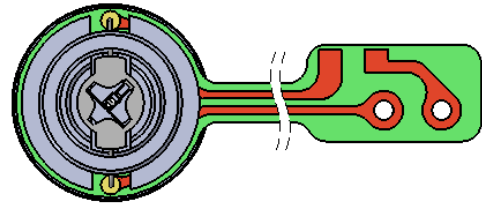
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Electronic Driving Instruction

NOTES:

- Pin1 and Pin2 are for control voltage
- Non-polarity device, reversible voltage
- Gap is for temperature compensation resistor
- Do not apply more than 4.5V.



All Pin diameter = 0.45mm

Ordering Information

Prefix	Type	Wavelength	Off State	Package	Fiber Type	Plug in Connector Type
RTOA-	Standard = 11 Special = 00	C+L = 2 1310 = 3 1550 = 5 1260~1620 = 8 Special = 0	Transparent = 1 Opaque = 2	Standard = 1 Special = 0	SMF-28 = 111 Special = 000	LC = 7 Special = 0

Note:

“transparent” means no attenuation without applying a controlling voltage, the “opaque” means the highest attenuation without applying a controlling voltage.

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Typical Insertion Loss vs Wavelength (1240-1630nm)

1x2 MEMS Switch

