

# etMEMS™ Variable Optical Attenuator Pigtail

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

## Product Description

The etMEMS™ VOA Pigtail 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 VOA Pigtail is driven by an electrical voltage; and the attenuation can be continuously adjusted.

It is designed to be part of laser, WDM package, or TOSA and ROSA.



## Performance Specifications

etMEMS™ VOA Pigtail	Min	Typical	Max	Unit
Wavelength		C-Band		nm
Insertion Loss <sup>[1]</sup>		0.3	0.5	dB
Attenuation Range	20			dB
Polarization Dependent Loss @10dB		0.15	0.3	dB
Wavelength Dependent Loss @10dB		0.2	0.5	dB
Temperature Dependent @10dB		0.3	0.5	dB
Attenuation Resolution		Continuous		
Polarization Mode Dispersion		0.01	0.05	ps
Return Loss	45			dB
Repeatability			0.1	dB
Response Time		2	5	ms
Driving voltage <sup>[2]</sup>		4.5	5.2 <sup>[3]</sup>	V
Power consumption <sup>[2]</sup>		50	80	mW
Optical Power Handling		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			
Notes:				
[1]. Excluding connectors				
[2]. For full dynamic range. Other drive voltages available				
[3]. Over this value will damage the device				

## Features

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

## Applications

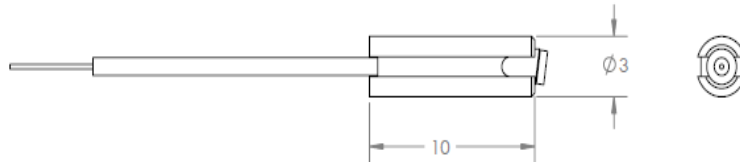
- Laser Power Control
- Power Regulate
- Channel Balance
- Instrumentation



Revision: 04-22-15

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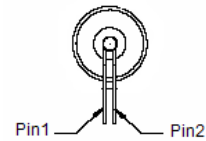
## Mechanical Footprint Dimensions (mm)



All Pin diameter = .45mm

## Electrical Driving Instruction

Pin 1	V+
Pin 2	V-



### NOTES

- Pin1 and Pin2 are for control voltage that are reversible.
- Do not apply more than 5.2V.

## Ordering Information

PTOA-	Type	Wavelength	Off State	Package	Fiber	Fiber Length	Connector	
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Standard	1310=3 1550 = 5 C+L=2 1260-1620= 8 Special = 0	Transparent=1 Opaque = 2	Standard=1 Special=0	SMF-28 =1 Special = 0	Bare fiber=1 900um loose tube=3 Special = 0	0.25m= 1 0.5m = 2 1.0m= 3 Special =0	None = 1 FC/PC = 2 FC/APC = 3 SC/PC = 4 SC/APC = 5 ST/PC = 6 LC = 7 Special = 0

