MEMS Variable Optical Attenuator

UVOA Series

Product Description

Oplink's MEMS (Micro-Electro-Mechanical Systems) Variable Optical Attenuator (μVOA) uses an electrostatic tilting mirror to change light coupling between input and output fibers. Key features include low IL, fast response and compact size. μVOA is available in Dark or Bright type. Applications include power equalization before optical amplification in multi-channel WDM networks, power control, receiver protection or gain variation in EDFA. The μVOA is designed to withstand diverse environmental conditions and fully comply with Telcordia GR-1221.

Oplink can provide customized designs to meet specialized feature applications. Also, Oplink offers full function modules or subsystems by integrating other components.

Performance Specification

Parameter		Specification	Unit
Operating Wavelength Range	λ_C	1525 ~ 1570	nm
	λ_L	1570 ~1610	
Insertion Loss (@λ_C or λ_L, T_{Op}, all SOP , exclude connectors)		≤ 0.8	dB
Attenuation Range		≥ 30	dB
Blocking State Attenuation (Dark type, IL at power off)		≥ 40	dB
Attenuation Resolution		continuous	
Polarization Dependence Loss	@ 0 dB	≤ 0.15	dB
	@ 20 dB	≤ 0.4	
Wavelength Dependence Loss (within λ_C or λ_L)	@ 0 dB	≤ 0.2	
	@ 20 dB	≤ 0.6	
Ripple (within 0.4nm window within 20dB)		0.05dB typical	
Polarization Mode Dispersion (PMD)		≤ 0.1	ps
Return Loss		≥ 45	dB
Response Speed (90% optical rise/fall)		≤ 20	ms
Driving Voltage		7 V, 16 V, or 20V	VDC
Maximum Optical Power		300	mW
Operating Temperature Range (T_{OP})		- 5 to +70	°C
Storage Temperature Range		-40 to +85	°C

Features

- Low IL, Low PDL, Low WDL
- Fast Response
- Compact Package
- Bright and Dark Type
- Insensitive to Vibration and Shock

Applications

- Optical Power Control or Equalization
- Gain Variation in EDFA
- On/Off Switch

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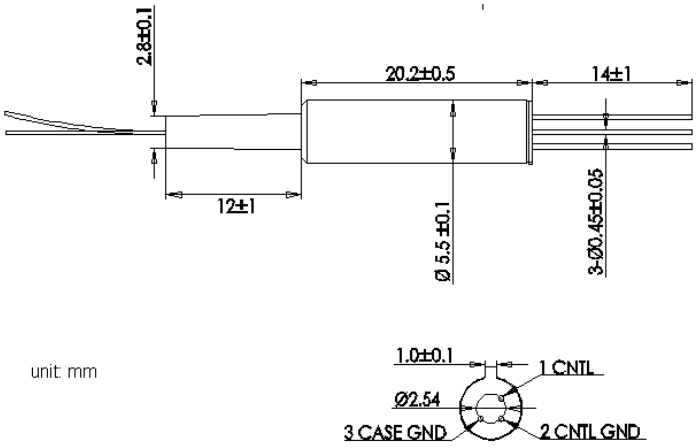
Mechanical Drawing / Package Dimensions (dimension in mm)



Ordering Information

Oplink can provide a remarkable range of customized optical solutions. For detail, please contact Oplink's OEM design team or account manager for your requirements and ordering information (510) 933-7200.

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Attenuation Type
Dark = D
Bright = B

Wavelength Range
C band = C
L band = L

Voltage Type
16 V = 1
7 V = 2
20V = 3

Channel
Single = 1

Package Type
P1 = 1

Fiber Type
SMF-28 250µm = 1
SMF-28 w/ 900µm loose tube = 2

Fiber Length
0.5meter = H
1.0meter = 1
1.5meter = 5
2.0meter = 2

Connector Type
None = 1
FC/PC = 2
FC/SPC = 3
FC/APC = 4
SC/PC = 5
SC/SPC = 6
SC/APC = 7
ST = 8
LC = 9
MU = A

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