

Voltage Pulse-Controlled Variable Optical Attenuator

Standard VCVOA
High Power VCVOA

STANDARD VCVOA

Features

- Wide operating wavelength
- High reliability
- Latching capability
- Potentiometer feedback to monitor
- Wide attenuation range
- High attenuation resolution
- Mountable on printed circuit board

Applications

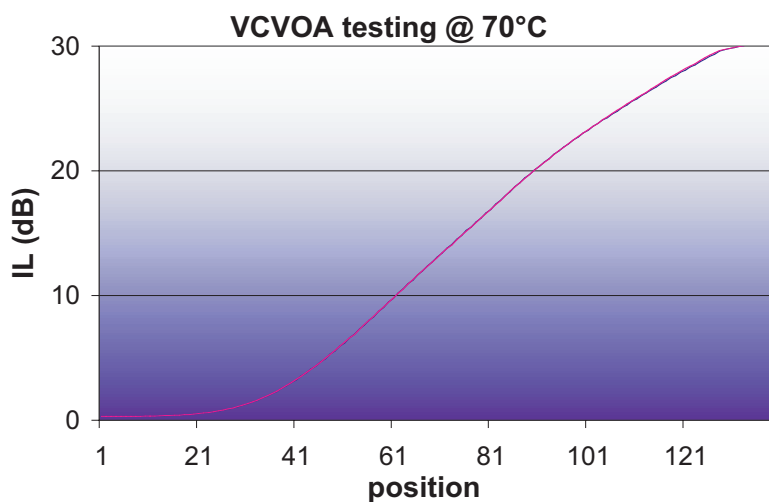
- Gain-tilt control in optical amplifiers
- Used between stages of Raman Amplifier as "gain" block
- Balance laser signal into DWDM networks
- Power equalization in multi-channel optical networks

Specifications

	Min	Typical	Max
Wavelength range (nm)*	1480		1620
Input optical power (mW)			250
Attenuation range (dB)	0.35 ~ 30		
Attenuation resolution (dB)			0.1
Residual attenuation (dB)			0.1
Minimum insertion loss (dB)			0.35**
Temperature dependence of attenuation (dB)	0.2 (reference to attenuation @23°C)		
Wavelength dependence of attenuation (dB)		0.2	
Polarization dependent loss (dB)			0.05
Polarization mode dispersion (ps)			0.02
Return loss (dB)	55	60	
Response speed (ms)			100
Repeatability of attenuation setting (dB)			0.08
Backlash in attenuation setting (dB)			0.15
Dimensions (mm)	(W)25X(H)12X(L)50		
Operating temperature (°C)	-5		70
Storage temperature (°C)	-20		80
Fiber type	Corning SMF-28		
Potentiometer resistance (Ohm)	8.5K	10K	11.5K

*other wavelength available.

**without monitoring tap and not including IL of connectors.



— from low to high (forward) — backward



Ordering Information

V C V O A P R O

0 = Without taps

Package
S = Standard
C = Customer design module

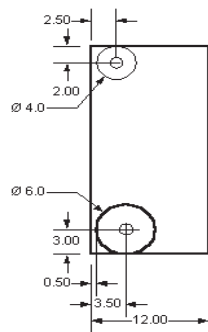
Pigtail type
B = 250µm bare fiber
L = 900µm loose tube

Fiber Length
1 = 1m
2 = 2m
3 = Customer order

Connector
0 = None
1 = FC/APC
2 = SC/APC
3 = FC/UPC
4 = SC/UPC
5 = ST/PC
6 = LC/UPC
7 = MU/PC
8 = Customer order

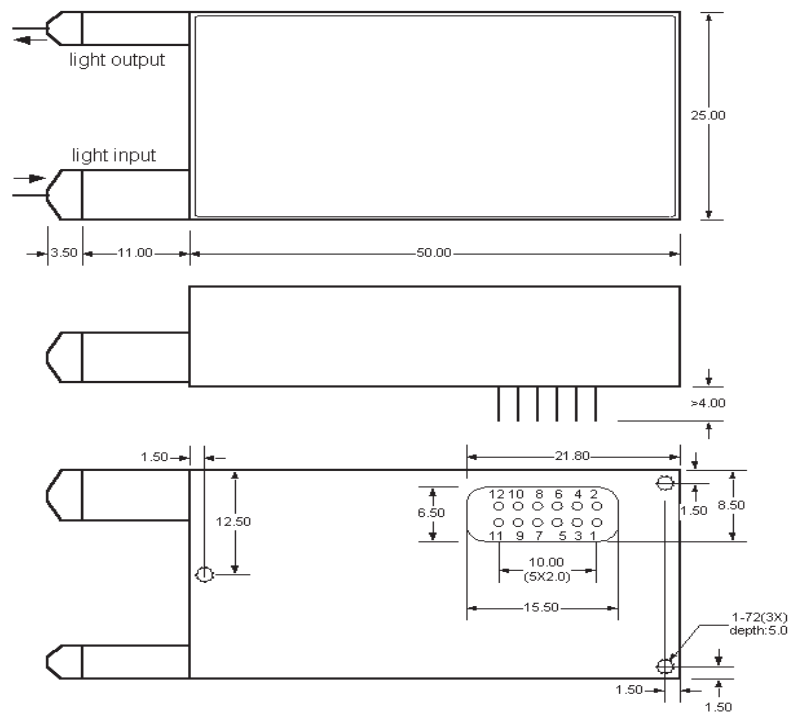


Configurations and Interface



Pins:
 1 Motor A-
 2 Motor B+
 3 Motor B-
 4 Motor A+
 5 Potentiometer wiper
 6 Potentiometer +
 7 Potentiometer -
 8 Ground / case
 9 Not defined (ND)
 10 ND
 11 ND
 12 ND

Unit: mm



HIGH POWER VCVOA

Features

- High reliability
- Latching capability
- Potentiometer feedback to monitor
- Wide attenuation range
- High attenuation resolution
- Mountable on printed circuit board

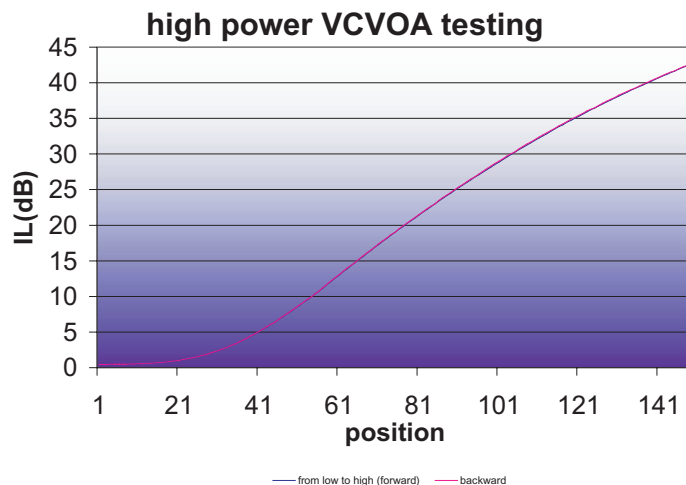
Applications

- Gain-tilt control in optical amplifiers
- Used between stages of Ranab Amplifier as "gain" block
- Used between stages of EDFA as a constant "gain" block
- Balance laser signal into DWDM networks
- Power equalization in multi-channel optical networks

Specifications

	Min	Typical	Max
Wavelength range (nm)		1480+/-30;1550+/-40	
Input optical power (mW)			5000
Attenuation range (dB)	0.4 ~ 40		
Attenuation resolution (dB)			0.12
Residual attenuation (dB)			0.1
Minimum insertion loss (dB)			0.4*
Temperature dependence of attenuation (dB)		0.2 (reference to attenuation @23°C)	
Polarization dependent loss (dB)			0.05
Polarization mode dispersion (ps)		0.02	
Return loss (dB)		50	
Response speed (ms)			100
Repeatability of attenuation setting (dB)		0.08	0.1
Backlash in attenuation setting (dB)			0.15
Dimensions (mm)		(W)26X(H)12X(L)50	
Operating temperature (°C)	-5		70
Storage temperature (°C)	-20		80
Fiber type		Corning SMF-28	
Potentiometer resistance (Ohm)		10K	

*without monitoring tap and not including IL of connectors





Ordering Information

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Pigtail type
B = 250µm bare fiber
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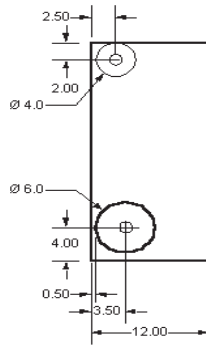
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Connector

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3 = FC/UPC
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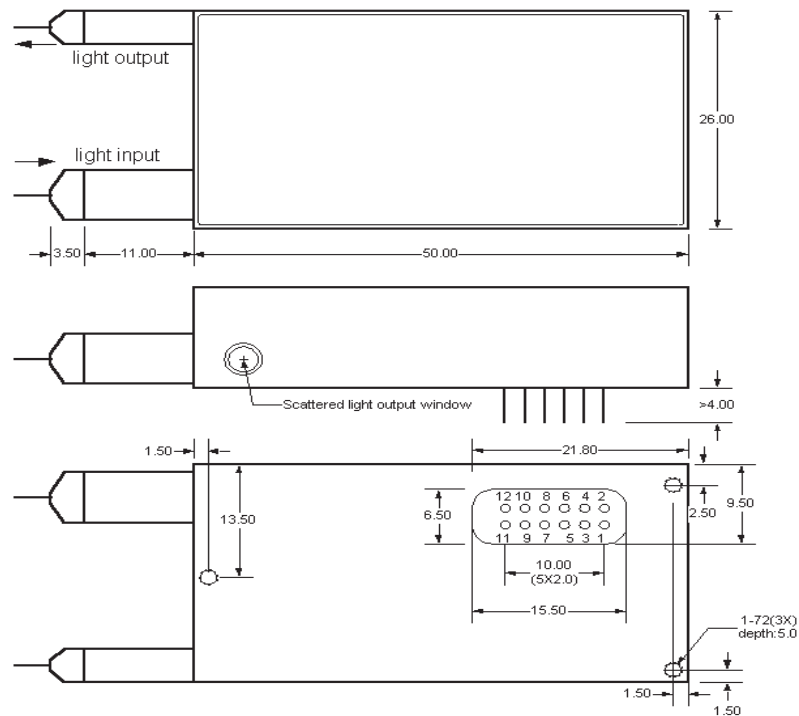


Configurations and Interface



- Pins:
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 - 8 Ground / case
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 - 10 ND
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 - 12 ND

Unit: mm



NOTES