

# MEMS Attenuator MOVA-1 / 8

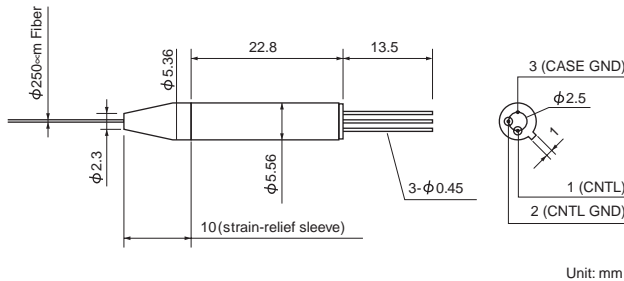
Santec's MEMS (Micro Electro Mechanical Systems) based attenuator uses tilting mirror technology. Our MEMS technology is simple and unique MEMS mirror structure\* for high yield chip production and stable operation as variable optical attenuator. Coupled with laser-welded packaging, this provides both environmental reliability and operational stability design with excellent optical properties. 8 channels array type is compact package and any drive voltage range can be customized as option.

\* Patent pending

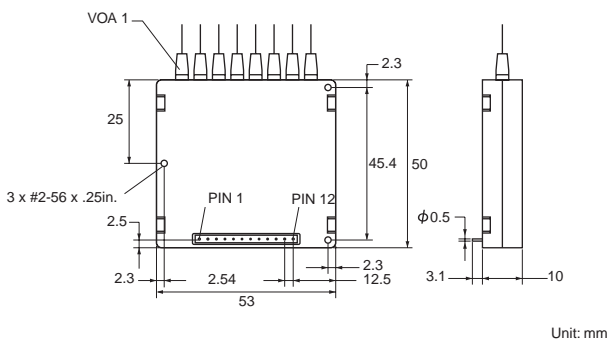


## Mechanical Dimensions

### Single



### 8ch array



### MOVA-8 Pin Assignment

Pin#	Function	Pin#	Function
1	Vcc	7	Ch5
2	Ch1	8	GND
3	Ch2	9	Ch6
4	GND	10	Ch7
5	Ch3	11	GDN
6	Ch4	12	Ch8

## Features

- ▶ Low Loss, Low PDL
- ▶ Fast Response
- ▶ Low Power Consumption
- ▶ Compact package
- ▶ Proprietary Stiction-free Structure
- ▶ Excellent Anti-shock/vibration performance
- ▶ Broadband type available
- ▶ 1x1 switch available
- ▶ Bright and Dark type available
- ▶ Telcordia GR-1221, GR-63 qualified
- ▶ Custom operating voltage range (8ch array type)

## Applications

- ▶ Optical Power Management
- ▶ WDM Channel Equalization
- ▶ Gain Control for Amplifiers
- ▶ Overload Protection

■ Specifications \*1,2

Parameter	Unit		Spec	Note
Wavelength range	-	nm	1530 - 1570 1570 - 1610	C band L band
Insertion loss	Max.	dB	0.8	@0V *3
Max. attenuation	Min.	dB	30	
Shutter isolation *4	Min.	dB	40	
WDL *5	Max.	dB	0.5 1.2	@<10dB attn. @<20dB attn.
PDL	Max.	dB	0.3	@20dB attn.
PMD	Max.	psec	0.1	
Response time	Max.	msec	10	
Optical power handling	Min.	mW	300	
Driver voltage	-	V	<20	Voltage conversion circuit available
Operating temperature	-	°C	-5 to 70	
Power consumption	Max.	mW	<10	

\*1 All specifications referenced without connectors in C or L band.

\*2 Relative to 25°C.

\*3 Dark type: >30dB@0V bias is available as option.

\*4 With shutter option.

\*5 Broad-band option.

■ Ordering Code

MOVA-1  
MOVA-8

A - B - C - D - E - F - G - H

- H : Connector Polish :  
0 : None / S : SPC / A : APC (Angled PC)
- G : Connector Type :  
00 : None / FC : FC / SC : SC / LC : LC / MU : MU
- F : Fiber Length : 10 : 1.0 m
- E : Fiber Jacket : 02 : 0.25mm / 09 : 0.9mm loose tube
- D : Shutter : 0 : None / 1 : With shutter
- C : Control Voltage : V20 : 20V type
- B : Type : BB : Broad band / NB : Narrow band / SW : 1x1 switch
- A : Activation Type : B : Bright type / D : Dark type

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April 25, 2005



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