

Optical Variable Attenuator OVA-650

The OVA-650 is a compact variable optical attenuator that uses a stepper motor for accurate electrical control.* The unit has high resolution, low insertion loss, low PDL, and exhibits extremely low wavelength dependence. Two package designs are available with effective height of 12mm and 8mm (Dual-line pins on the bottom, Single-line pins on the side with screw tabs) respectively. This device can be easily mounted onto a printed circuit board for system integration.

* santec - US patent number 6442324.



Features

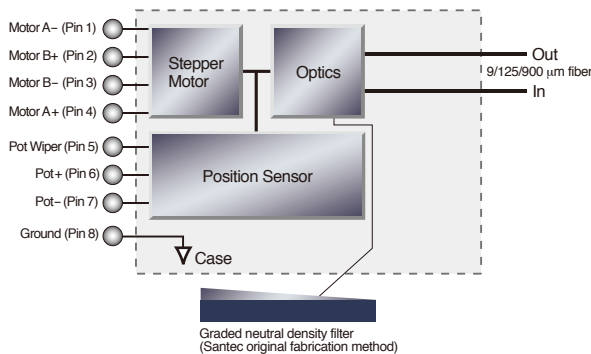
- ▶ Low loss, low PDL, low wavelength dependence
- ▶ High reliability (Hermetically sealed)
- ▶ Latching operation
- ▶ Compact size suitable for system integration
- ▶ Telcordia GR-1221 qualified

Applications

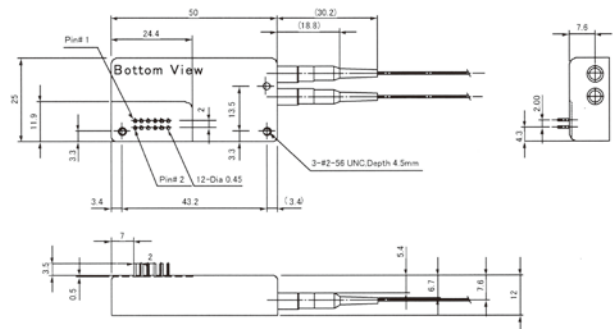
- ▶ Power equalization or gain-tilt control in optical amplifiers
- ▶ Transmitter power control
- ▶ Receiver power control
- ▶ Power control in OADM's.

Configuration

Interface pin-out



Dimensions



Pin Assignments

Pin No.	Function	Pin No.	Function
1	Motor Coil A-	7	Pot -
2	Motor Coil B+	8	Case Ground
3	Motor Coil B-	9	Not in use
4	Motor Coil A+	10	Not in use
5	Pot Wiper	11	Not in use
6	Pot +	12	Not in use

Optical Specifications

Parameter	Units				Notes
Max Attenuation Range	-	dB	15	30	-
Resolution	Max.	dB	0.1		-
Insertion Loss	Max.	dB	0.6		Excluding connectors
Return Loss	Min.	dB	50		-
Polarization Dependent Loss (PDL)	Max.	dB	0.2		-
Wavelength Dependence of Attenuation	Max.	dB	0.2(0 -15dB Atten.)		1525 - 1575 nm or 1565 -1610nm
Temperature Dependence of Attenuation	Max.	dB	0.2		Relative to 25 deg.C
Polarization Mode Dispersion (PMD)	Max.	psec	0.1		-
Response Speed	-	ms	100		To change 3 dB Atten.
Repeatability of Attenuation Setting	Max.	dB	0.1		
Backlash	Max.	dB	0.2		-
Operating Temperature	-	deg.C	0 to + 70		<95% humidity
Maximum Optical Input Power	Max.	dBm	23		

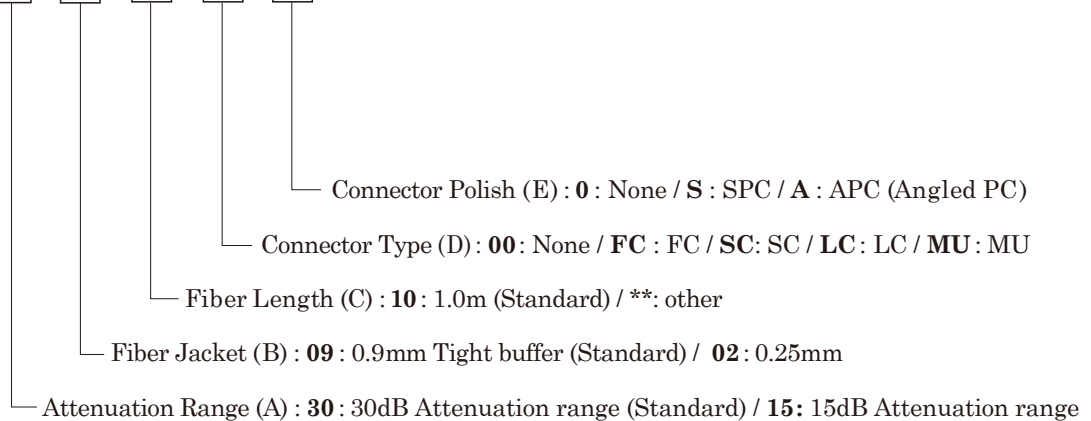
Electrical and Mechanical Specification

Parameter	Units		
Maximum Electrical Power Consumption	Max.	W	2.5
Maximum Electrical Power to Hold	Max.	mW	30
Position Sensor	Max.	kΩ	12
Fiber	-	-	SMF-28 equivalent
Size	-	mm	50 x 25 x 12
Weight	Max.	g	50

Ordering Code

OVA-650

- **A** - **B** - **C** - **D** - **E**



www.santec.com E-Mail : sales@santec.com

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SANTEC CORPORATION

5823 Ohkusa-Nenjyozaka, Komaki, Aichi 485-0802, Japan Tel. +81-568-79-1959 Fax +81-568-79-1718

SANTEC U.S.A. CORPORATION

433 Hackensack Ave., Hackensack, NJ, 07601, U.S.A. Toll Free +1-800-726-8321 (santec-1) Tel. +1-201-488-5505 Fax +1-201-488-7702

SANTEC EUROPE LIMITED

Magdalen Centre, Robert Robinson Ave., The Oxford Science Park, Oxford OX4 4GA, U.K. Tel. +44-1865-784960 Fax +44-1865-784961

SANTEC (SHANGHAI) Co., Ltd.