

# ELECTRONICALLY VARIABLE OPTICAL ATTENUATORS

## EVOA Series

### Product Description

Oplink's electronically variable optical attenuator (EVOA) is a high performance opto-mechanical device. EVOA operates by moving an obstructing element into the optical beam and the position of the obstructing element can be adjusted by an integrated, electronically controlled step motor, resulting in fine tuning of attenuation.

Oplink's EVOA features a large dynamic attenuation range of >30dB and an excellent optical performance over C- or L-band. Its latching operation retains recent attenuation setting upon removal of drive voltage. Applications include pre-emphasis attenuation, detector saturation control, in-line power equalization and amplifier power control applications. Also, it can be used to extend the dynamic range of optical measurement instruments.

Oplink's EVOA is designed to withstand the diverse environmental conditions and compliance to the Telcordia standard GR-1221.

Oplink can provide customized designs to meet specialized feature applications. Also, Oplink offers modular assemblies that integrate other components to form a full function module or subsystem.

### Performance Specification

Parameter	Min	Typical	Max	Unit
Operating wavelength range	1525 ~ 1570 or 1570 ~ 1610			nm
Insertion Loss <sup>[1]</sup>			1.0	dB
Attenuation range	0		30	dB
Temperature dependence of attenuation <sup>[2]</sup>			0.15	dB
Wavelength dependence of attenuation	0~15dB Attenuation 15~30dB attenuation		0.2 0.3	dB
Polarization dependence of attenuation	0 to 15 dB > 15 dB		0.15 0.2	dB
PMD			0.1	ps
Return Loss <sup>[1]</sup>	40			dB
Resolution			0.15	dB
Repeatability			0.2	dB
Back lash			0.3	dB
Response speed <sup>[3]</sup>			0.2	sec
Optical power			100	mW
Operating Temperature		-5 to +70		°C
Storage Temperature		-40 to +85		°C
Fiber type		SMF-28		
POT resistance	9	10	11	KΩ
Package Dimensions	P2: 50.0 (L) × 25.0 (W) × 12.0 (H) P3: 45.0 (L) × 18.0 (W) × 12.0 (H)			mm

Notes:

1) Excluding connectors. 2) Relative to 23°C. 3) At 3 dB attenuation change.



### Features

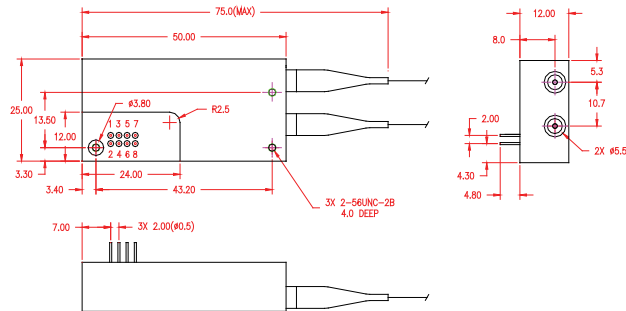
- ◆ Operates over C or L Band
- ◆ Low Insertion Loss and PDL
- ◆ Latching Capability
- ◆ PCB Mountable

### Applications

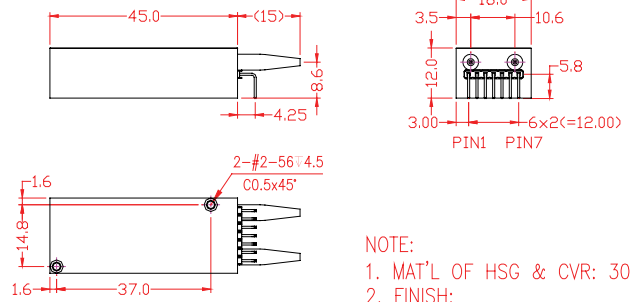
- ◆ Pre-emphasis Attenuation
- ◆ Detector Input Power Control
- ◆ In-line Power Equalization
- ◆ Gain Control in Optical Amplifiers
- ◆ On/Off Switch
- ◆ Instrumentation, Testing and Measurement

**Mechanical Drawing / Package Dimensions (dimension in mm)**

**1) Standard Package Type P2**



**2) Mini Package Type P3**



- NOTE:
1. MAT'L OF HSG & CVR: 303S.
  2. FINISH:
  3. UNITS: mm.
  4. TOL'S: .X=±0.2  
.XX=±0.1
  5. PROJECTION:

**Electrical Connector Configuration P2**

Pin#	Pin1	Pin2	Pin3	Pin4	Pin5	Pin6	Pin7	Pin8
Function	Motor Phase A-	Motor Phase B+	Motor Phase B-	Motor Phase A+	Pot Wiper	Pot +V	Pot GND	NC

**Electrical Connector Configuration P3**

Pin#	Pin1	Pin2	Pin3	Pin4	Pin5	Pin6	Pin7
Function	Pot GND	Pot wiper	Motor Phase A-	Motor Phase B+	Motor Phase B-	Motor Phase A+	Pot +V

**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.

