

# Solid-State VOA Demm

(patents pending)

## Product Description

The SS Variable Optical Attenuator provides real-time monitoring and control of optical power. The solid-state optical crystal design eliminates all mechanical movement and organic materials. The closed-loop monitoring and control eliminates most of the power variations, such as PDL, WDL, TDL, etc. The closed-loop SS Variable Optical Attenuators are designed to meet the most demanding operation requirements of ultra-high reliability and fast response time. The closed-loop SS Series VOA is particularly suitable for continuous power regulating operations and optical transient suppression, as well as analog signal modulation applications.

The closed-loop SS Series VOA is available in either transparent or opaque configurations.



## Performance Specifications

| Close-loop SS VOA                |                         | Unit |
|----------------------------------|-------------------------|------|
| Wavelength                       | C- band or L-band       | nm   |
| Insertion Loss <sup>1</sup>      | < 0.8 (Typ), <1.0 (Max) | dB   |
| Wavelength Dependent Loss (WDL)  | < 0.3 @ 15dB            | dB   |
| Temperature Dependent Loss (TDL) | < ± 0.2                 | dB   |
| Polarization                     | 0 to10dB                | dB   |
| Dependent Loss (PDL)             | >10dB                   |      |
| Return Loss                      | > 45                    | dB   |
| Attenuation Range                | > 25                    | dB   |
| Response Time                    | < 200                   | µs   |
| Electrically Power consumption   | < 0.2                   | W    |
| Resolution                       | Continuous              | dB   |
| Operating Optical Power          | < 500                   | mW   |
| Operating Currant                | 100                     | mA   |
| Operating Temperature            | -5 ~ 70                 | °C   |
| Storage Temperature              | -40 ~ 85                | °C   |
| Fiber Type                       | Corning SMF-28          |      |
| Package Dimension                | (L)115x(W)76X(H)25      | mm   |

Notes:

1. Excluding Connectors

## Features

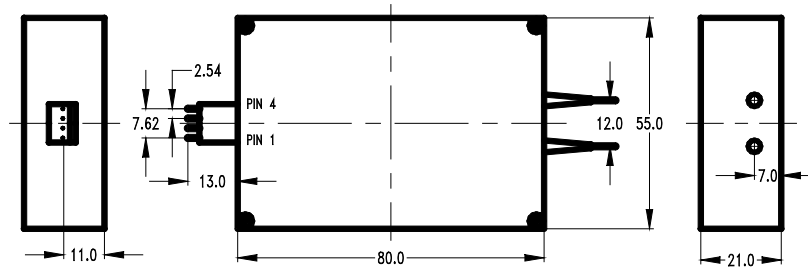
- No Moving Parts
- High Reliability
- Solid-State High Speed
- Closed-Loop Control
- Low IL and PDL
- Cost Effective
- Epoxy-Free Optical Path

## Applications

- Optical Power Control
- Optical Power Regulation
- Optical Power Balance
- Instrumentation

# Solid-State Variable Optical Attenuator

## Mechanical Footprint Dimensions (Unit:mm)



## Electrical Connector Configurations

| Pin Name      | Vin                         | Vout                         | Gnd                          | +5V          |
|---------------|-----------------------------|------------------------------|------------------------------|--------------|
| Specification | Control Voltage input, 0-5V | Power monitor, output, 0- 5V | Ground for Vin, Vout and +5V | 4.5V to 5.5V |

## Ordering Information

| SS-   | Type                      | Wavelength                    | Off State                 | Package Type   | Fiber Type                                    | Fiber Length                             | Connector  |
|---|---------------------------|-------------------------------|---------------------------|----------------|---|--|--|
| <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | Standard=11<br>Special=00 | 1330=3<br>1550=5<br>Special=0 | Transparent=1<br>Opaque=2 | Evaluation Kit | SMF-28 250um=1<br>SMF-28 900um=2<br>Special=0 | 0.25m=1<br>0.5m=2<br>1.0m=3<br>Special=0 | None=1<br>FC/PC=2<br>FC/APC=3<br>SC/PC=4<br>SC/APC=5<br>ST/PC=6<br>LC=7<br>Special=0 |