

## 840±50nm Broadband PM MEMS VOA

840±50nm Broadband PM MEMS VOA (Variable Optical Attenuator) is an optoelectronic products designed for attenuating the optical power, it integrates with a MEMS chip inside to adjust the angle of the reflection prism to acheive the optical power attenuation function, it's widely used in Quantum Communication system, OCT and Optical Testing System. High power version is also available.

### Application:

Quantum Communication  
OCT  
Testing System  
Lab & Research

### Features:

Compact Package  
High attenuation  
High responsivity  
High Reliability

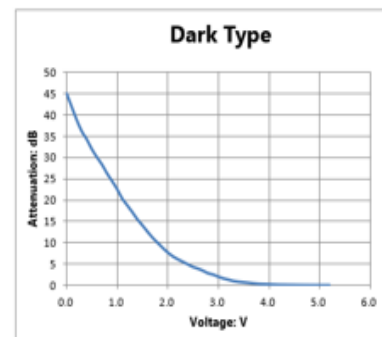
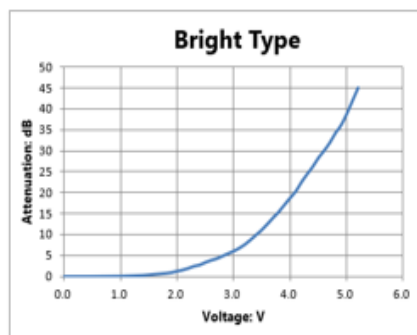


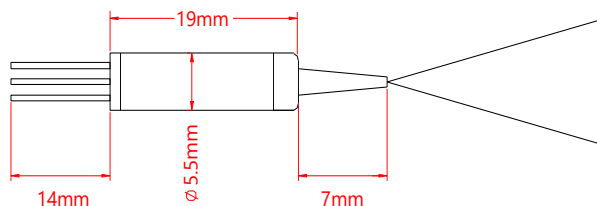
### Specifications:

| Parameter                       | Symbol    | Value                   | Unit |
|---------------------------------|-----------|-------------------------|------|
| Center Wavelength               | $\lambda$ | 840                     | nm   |
| Bandwidth                       | BW        | ±50                     | nm   |
| Max. Attenuation Range          | Att.      | 45                      | dB   |
| Typ. Original Loss              | IL        | 0.9                     | dB   |
| Max. Original Loss              | IL        | 1.2                     | dB   |
| Max. Wavelength Dependent Loss  | WDL       | 0.3 (@0dB), 1.5 (@20dB) | dB   |
| Max. Wavelength Ripple          |           | 0.05                    | dB   |
| Min. Extinction Ratio           | ER        | 20                      | dB   |
| Max. Temperature Dependent Loss | TDL       | 0.2 (@0dB), 1.0 (@20dB) | dB   |
| Max. Response Time              |           | 3                       | ms   |
| Driving Voltage                 | V         | 6                       | V    |
| Min. Return Loss                | RL        | 45                      | dB   |
| Max. Optical Power (CW)         | P         | 500                     | mW   |
| Max. Tensil Load                |           | 5                       | N    |
| Fiber Type                      |           | PM780-HP Panda fiber    | -    |
| Operating Temperatuer           | T         | -5~70                   | °C   |
| Storage Temperature             | T         | -40~85                  | °C   |

Notice: Above specifications are tested at center wavelength without connector in room temperature @23 °C.

For devices with connectors, IL will be 0.3dB higher, RL will be 5dB lower, ER will be 2dB lower, slow axis is default aligned to the connector key.



**Drawing and Pin Information:**

|  |       |       |       |
|--|-------|-------|-------|
|  | Pin 1 | Pin 2 | Pin 3 |
|  | +     | GND   | GND   |

**Ordering Information (Part Number):****PMBEV-*WWW*-*T*-*A*-*DD*-*J*-*LL*-*CC***

| <b>WWW</b>    | <b>T</b>         | <b>A</b>              | <b>DD</b>       | <b>J</b>             | <b>LL</b>    | <b>CC</b>    |
|---------------|------------------|-----------------------|-----------------|----------------------|--------------|--------------|
| Wavelength    | Attenuation Type | Working Axis          | Driving Voltage | Fiber Jacket         | Fiber Length | Connector    |
| 830 - 830nm   | B - Bright       | B - Both Axes Working | 06 - 6V         | B - 250um Bare Fiber | 05 - 0.5m    | NE - None    |
| 840 - 840nm   | D - Dark         | F - Fast Axis Blocked |                 | 9 - 900um Loose Tube | 10 - 1.0m    | FA - FC/APC  |
| 850 - 850nm   |                  |                       |                 |                      | 15 - 1.5m    | FU - FC/UPC  |
| SSS - Specify |                  |                       |                 |                      | 20 - 2.0m    | LA - LC/APC  |
|               |                  |                       |                 |                      | SS - Specify | LU - LC/UPC  |
|               |                  |                       |                 |                      |              | SA - SC/APC  |
|               |                  |                       |                 |                      |              | SU - SC/UPC  |
|               |                  |                       |                 |                      |              | SS - Specify |

**Notification:**

1. The MEMS products are particularly sensitive of ESD (electro-static discharge), it's recommended to use grounded anti-static wrist straps and grounded anti-static mats before handling the products.
2. Make sure the driving voltage is 0V before and after operating.
3. when switching on the circuit, connect ' GND ' first, then ' + ' (pin 1) and upgrade voltage slowly. when switch off the circuit, power off '+' (pin 1) first, then ' GND '.
4. Always take anti-static measures to storage the products when not in use.

