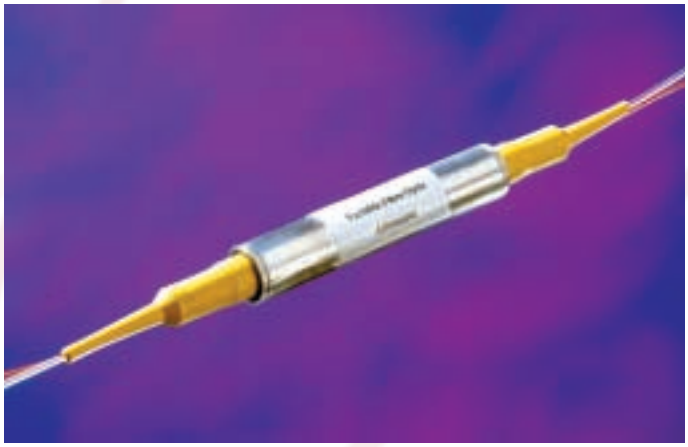
ProtoDel

Optical Fiber Components

Variable Optical Fiber Attenuators

Type: PVA-MI

Electronically driven all-fiber, high performance, wide bandwidth range of variable attenuators.



FEATURES:

- Low Insertion Loss
- Low PDL and PMD
- High reliability, no moving parts
- Any single channel between 1280–1625nm
- C and L Band
- Extremely low back reflection
- All-fiber configuration
- PCB mountable package
- Simple driver circuit – no TEC
- Built for Telcordia GR-1221

APPLICATIONS:

- Metro and Long Haul
- Receiver power level control
- Source power level control
- Gain control for optical amplifiers, including RAMAN pump
- DWDM Systems
- Channel level balancing
- Optical fiber system R&D
- Test & Measurement

ProtoDel's variable attenuators allow more flexible System Engineering design, providing a range of attenuation levels and packaging options combined with the benefits derivable from an all-fiber design, including: virtually zero reflection, long term reliability, design flexibility and reduced cost.

ProtoDel attenuators can be supplied for continuous attenuation variation up to -70dB and operate in any single channel within the fiber operating range of 1280 – 1625nm.

The devices are supplied in a compact PCB mountable package for OEM applications. Various other configurations are also available, including:

- OEM device module.
- Most fiber types, including polarization maintaining, are available.

Customisation – design flexibility to meet your specific application – multi-pack, high power, high attenuation and more. The basic and underlying technology is very flexible and can be adapted to other performance specifications. Furthermore, **ProtoDel** Integrated Fiber and evanescent field components can be integrated to create high performance, cost effective components, modules and sub-modules for specific applications. Please contact **ProtoDel** direct or visit our web site at **www.protodel.com** for further information.

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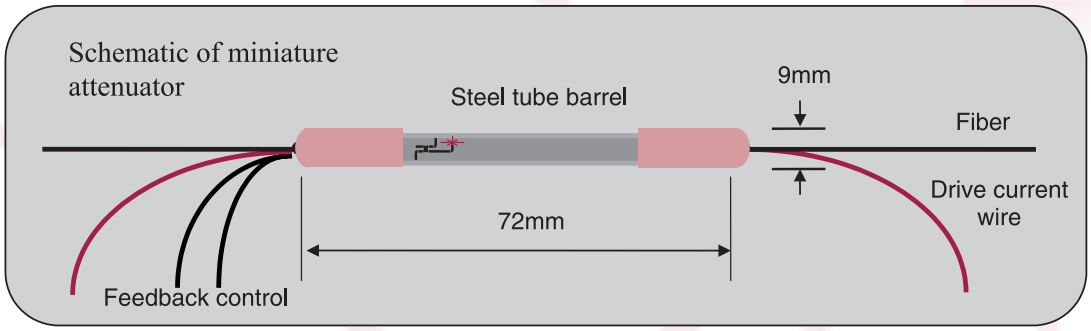
SPECIFICATIONS:

Wavelength	nm	1280 - 1625
Attenuation range	dB	0->30, 0->50, continuous
Insertion loss (inc. PDL)	dB	<0.4 (at minimum attenuation)
Polarization dependent loss	dB	<0.1 (at minimum attenuation)
Attenuation (non-powered)	dB	>20 (typical)
Maximum input power	dBm	20 (higher powers - please discuss)
Response rate (@ 25°C)*	dB/sec	>30
Operating temperature	°C	-5 to70
Power supply		+5V / 250mA (maximum)
Back reflection	dB	<-70dB

*Note: Please see design and application notes for definitions.
** TDL, WDL Response Rate and Resolution are defined by the driver circuit - please see design and application notes.

PACKAGING STYLES:

Miniature	This option can be supplied with or without thermal stability feedback control element. With integrated element: 72mm long, 8mm diameter steel tube. Without integrated element: 72mm long, 6.5mm diameter steel tube.



All dimensions are approximate and may vary slightly.

The devices can be tailored to meet most application requirements, please contact our technical design team to discuss specific requirements.

Ordering information:

P V A - M I - [ ] - [ ] - [ ][ ] - [ ][ ] - [ ]

Thermal control:
T - integrated thermistor
N - No thermistor

Attenuation range:
3 - 0 to 30dB
5 - 0 to 50dB

Wavelength:
15 - 1550nm
14 - 1480nm
13 - 1300nm

Connectors:
0 - none
1 - FC/PC
2 - FC/SPC
3 - APC
4 - ST

Cable type:
1 - 900µm
2 - 3mm

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