

ATTENUATORS

PM MEMS ATTENUATOR

DiCon's PM MEMS Attenuator is based on a micro-electro-mechanical system (MEMS) chip. The MEMS chip consists of an electrically movable mirror on a silicon support. A voltage applied to the MEMS chip causes the mirror to rotate, which changes the coupling of light between the input and output fibers of the MEMS Attenuator.



Cylindrical Package

FEATURES

- Small attenuator package
- High extinction ratio
- Qualified to GR-1221
- Available in opaque or transparent versions
- Available in both cylindrical and 14-pin DIP packages

APPLICATIONS

MEMS Attenuators are used for distributed power equalization within OADMs, MUX/DMUXes, Band Equalizers, Channel Equalizers, Optical Cross-Connects, Line Cards and Transponders. Polarization Maintaining Attenuators can also be used for power adjustment in polarization sensitive devices such as modulators.



ATTENUATORS

OPTICAL SPECIFICATIONS^{1,2}

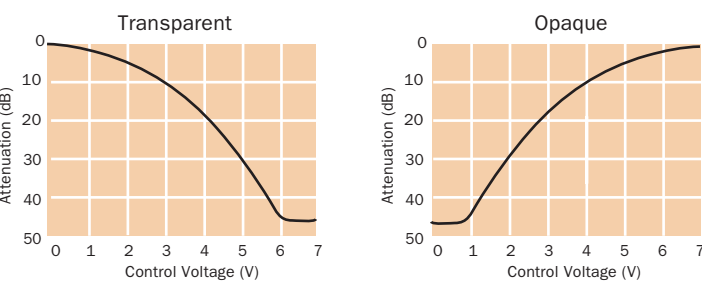
| | | | |
|-----------------------|--------------------------------------|---------------------------------|-------------|
| Excess loss | | 0.8 dB max. | |
| Flatness | Broad band Application | 0 to 15 dB | 0.4 dB max. |
| | | 15 to 20 dB | 0.7 dB max. |
| | Narrow band Application ³ | 0 to 20 dB | 0.2 dB max. |
| Attenuation slope | | 20 dB/V max. | |
| Extinction ratio | | 18 dB min. | |
| Back-reflection | | -50 dB max. | |
| Optical power | | 500 mW max. | |
| Response time | | 2 ms max. | |
| Repeatability | | 0.1 dB max. | |
| Wear-out | | 1 x 10 ⁹ cycles min. | |
| Fiber type | | Panda 400 or equivalent | |
| Operating temperature | | -5°C to +70°C | |
| Storage temperature | | -40°C to +85°C | |

1. All specifications referenced without connectors.
 2. At room temperature.
 3. Maximum change of each 2 nm segment within the operating range.

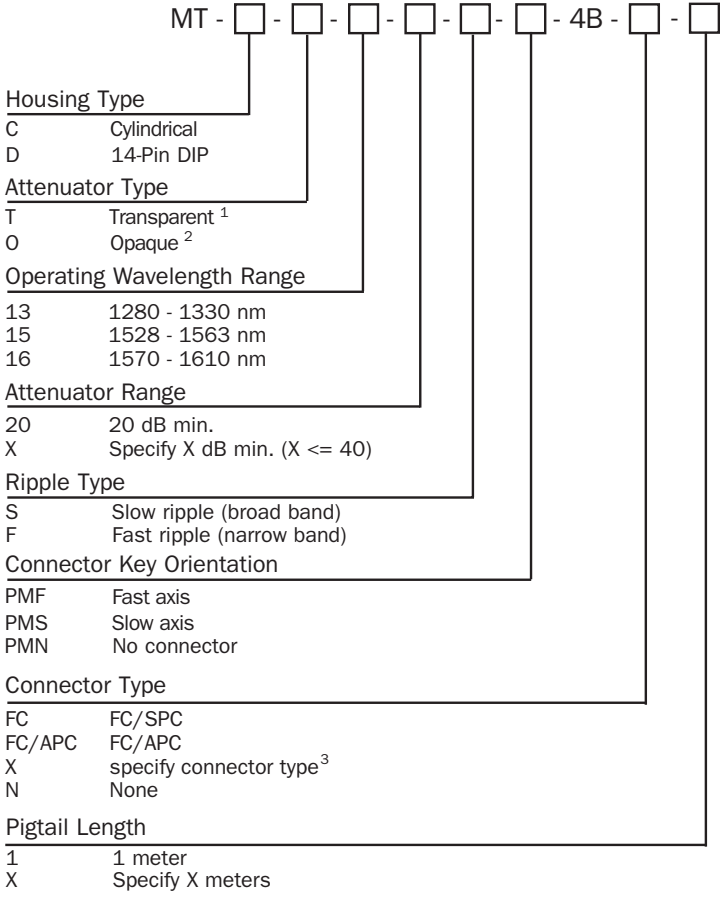
ELECTRICAL SPECIFICATIONS

| | |
|--------------------------|------------------------------|
| Actuation type | Non-latching |
| DC drive voltage | 0 - 5 VDC (6.5 V for opaque) |
| Voltage damage threshold | 10 VDC max. |
| Resistance | 2 MΩ min. |
| Power consumption | 20 uWatt max. |

OPTICAL PERFORMANCE



ORDERING INFORMATION



1. Minimum insertion loss at 0 V.
 2. Minimum insertion loss at 6.5 V (high isolation at 0 V).
 3. Connector Types: FC/UPC, SC, SC/APC, SC/UPC, LC, LC/UPC, MU/UPC

HOUSING DIMENSIONS

