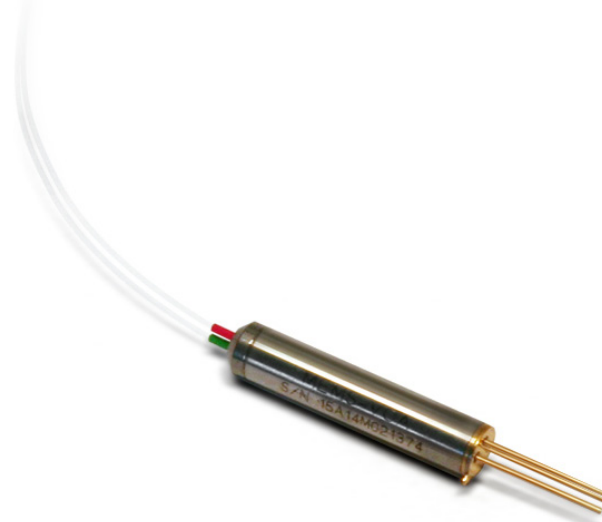


PM MEMS OPTICAL ATTENUATOR

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



FEATURES

- Small attenuator package
- Based on DiCon's proven MEMS platform
- Available in opaque or transparent versions
- Qualified to GR-1221
- High Extinction Ratio

APPLICATIONS

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



PM MEMS OPTICAL ATTENUATOR

OPTICAL SPECIFICATIONS¹

PARAMETER		RATING	
Excess Loss		0.8 dB max	
WDL	Broad Band Application	0 to 15 dB	0.7 dB max.
		15 to 20 dB	1.0 dB max.
	Narrow Band Application ²	0 to 15 dB	0.3 dB max.
		15 to 20 dB	0.4 dB max.
Extinction Ratio		18 dB min.	
Attenuation Slope		20 dB/V max.	
Back Reflection		-50 dB max.	
Optical Power		500 mW max.	
Response Time		2 ms max.	
Repeatability ³		0.1 dB max.	
Durability		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	

- All Specifications at room temperature, without connectors
- Maximum change of each 2 nm segment within the operating range
- Repeatability is defined after 100 cycles

ORDERING INFORMATION

MT - C - - 15 - - - - 4B - - -

Housing Type

C Cylindrical

Attenuator Type

T Transparent¹

O Opaque²

Operating Wavelength Range

15 1528 - 1563 nm

Attenuator Range

20 20 dB min.

X Specify X dB min. (X <= 40)

Ripple Type

S Slow ripple (broad band)

F Fast ripple (narrow band)

Connector Key Orientation

PMF Fast axis

PMS Slow axis

PMN No Connector

Fiber / Jacket Type

4B 9/125 μm Panda Fiber with 400 μm buffer

Connector Type

FC FC/SPC

FC/APC FC/APC

X specify connector type³

N None

Pigtail Length

1 1 meter

X Specify X meters

Pin Bending

S Straight Pins

B Bent Pins

1. Minimum insertion loss at 0 V.

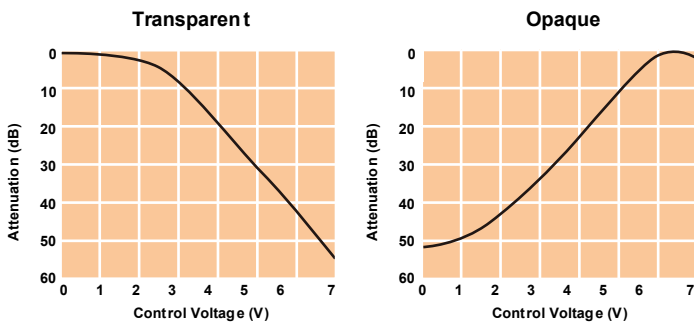
2. Minimum insertion loss at 6 - 7 V (high isolation at 0 V).

3. Connector Types: FC/UPC, SC, SC/APC, SC/UPC, LC, LC/UPC, MU/UPC.

ELECTRICAL SPECIFICATIONS

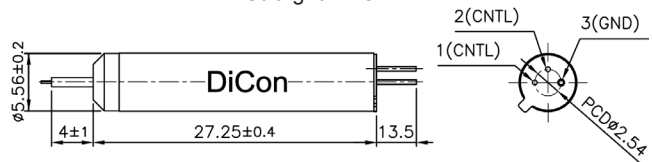
PARAMETER	RATING
Actuation type	Non-latching
DC Drive Voltage	0-5 VDC (7 V for opaque)
Voltage Damage Threshold	10 VDC max.
Resistance	2 MΩ min.
Power Consumption	20 uWatt max.

OPTICAL PERFORMANCE



MECHANICAL DIMENSIONS

Straight Pins



Bent Pins

