

# PRECISION VARIABLE ATTENUATOR



DiCon's Precision Variable Attenuator operates by using a neutral density filter placed in the light path. This neutral density filter varies in attenuation along its length and a high precision stepper motor is used to move the filter to the requested attenuation level. This type of fiber optic attenuator is ideal for multimode fiber applications because the neutral density filter attenuates all modes equally, and results in stable attenuation and linear response.

## FEATURES

- Attenuation over 0 - 60 dB
- Ideal for multimode fiber use
- Stable attenuation level, independent of mode fill condition
- Protocol and bit rate independent

## APPLICATIONS

- Bit error rate (BER) testing
- System characterization
- Component or system loss simulation
- Optical margin and loss budget analysis



# PRECISION VARIABLE ATTENUATOR

## SPECIFICATIONS<sup>1</sup>

PARAMETER		RATING
Attenuation Range		0-60 dB max.
Tuning Resolution		0.04 dB max. (0-40 dB)
Tuning Speed		100 ms min., 1700 ms max.
Excess Loss		0.8 dB typ., 1.3 dB max.
Flatness <sup>2</sup>		±0.1 dB max.
PDL <sup>3</sup>	0-30 dB	0.2 dB max.
Back Reflection	9 um	-50 dB max.
	50um/62.5um	-20 dB max.
Repeatability	9um	±0.01 dB max.
	50um/62.5um	±0.1 dB max.
Attenuation Accuracy <sup>4</sup>	9um	±0.1 dB max. (0-40 dB)
	50um/62.5um	±0.2 dB max. (0-30 dB) ±0.3 dB max. (30-40 dB)
Optical Power		300 mW max.
Fiber Jacket		0.9 mm tight buffer
Power Requirement <sup>5</sup>		+12 VDC, 250 mA max.
Control Interface		I <sup>2</sup> C
Operating Temperature		0°C to +50°C
Storage Temperature		-20°C to +70°C
Humidity		40°C / 90% RH / 5 days

- All specifications at room temperature, without connectors
- With ±25 nm centered around calibration wavelength at 23°C.
- Single mode fiber only.
- At calibration wavelength.
- +5 VDC, 500 mA version available upon request.

## ORDERING INFORMATION

NAT600 - □ - □ - □ - □

### Calibration Wavelength

8	850 nm
9	980 nm
8/13	850 and 1310 nm
13	1310 nm
13/15	1310 and 1550 nm
15	1550 nm
15/16	1550 and 1610 nm
16	1610 nm
13/15/16	1310 nm, 1550 nm and 1610 nm

Four calibration wavelengths are available upon request.

### Fiber Type

9	9/125 Corning SMF-28
50	50/125 multimode fiber
62	62.5/125 multimode fiber

Other fiber type options are available upon request.

### Connector Type

FC	FC/SPC
FC/APC	FC/APC
FC/UPC	FC/UPC
SC	SC/SPC
SC/APC	SC/APC
SC/UPC	SC/UPC
ST	ST/SPC
ST/UPC	ST/UPC
LC	LC/UPC
N	None

### Pigtail Length

1	1 meter
X	Specify X meters

## MECHANICAL DIMENSIONS (Units: mm)

