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
**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>PARAMETER</th>
<th>RATING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attenuation Range</td>
<td>0-60 dB max.</td>
</tr>
<tr>
<td>Tuning Resolution</td>
<td>0.04 dB max. (0-40 dB)</td>
</tr>
<tr>
<td>Tuning Speed</td>
<td>100 ms min., 1700 ms max.</td>
</tr>
<tr>
<td>Excess Loss</td>
<td>0.8 dB typ., 1.3 dB max.</td>
</tr>
<tr>
<td>Flatness</td>
<td>±0.1 dB max.</td>
</tr>
<tr>
<td>PDL</td>
<td>0-30 dB</td>
</tr>
<tr>
<td>Back</td>
<td>±25 dB max.</td>
</tr>
<tr>
<td>Reflection</td>
<td>-20 dB max.</td>
</tr>
<tr>
<td>Repeatability</td>
<td>9 um ±0.01 dB max.</td>
</tr>
<tr>
<td></td>
<td>50um/62.5um ±0.1 dB max.</td>
</tr>
<tr>
<td>Attenuation Accuracy</td>
<td>±0.2 dB max. (0-30 dB)</td>
</tr>
<tr>
<td></td>
<td>±0.3 dB max. (30-40 dB)</td>
</tr>
<tr>
<td>Optical Power</td>
<td>300 mW max.</td>
</tr>
<tr>
<td>Fiber Jacket</td>
<td>0.9 mm tight buffer</td>
</tr>
<tr>
<td>Power Requirement</td>
<td>+12 VDC, 250 mA max.</td>
</tr>
<tr>
<td>Control Interface</td>
<td>±2°C</td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>0°C to +50°C</td>
</tr>
<tr>
<td>Storage Temperature</td>
<td>-20°C to +70°C</td>
</tr>
<tr>
<td>Humidity</td>
<td>40°C / 90% RH / 5 days</td>
</tr>
</tbody>
</table>

1. All specifications at room temperature, without connectors.
2. With ±25 nm centered around calibration wavelength at 23°C.
3. Single mode fiber only.
4. ±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)

- **Height:** 20.6
- **Length:** 106.95
- **Width:** 94.35
- **Input:** 17.5
- **Output:** 17.5

Note: Screw depth inside the housing should not exceed 3.30mm.

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