Product Overview

Phoenix Photonics state of polarization (SOP) scanner utilizes three variable all-fiber waveplates to provide full coverage of the Poincare sphere enabling conversion of any input SOP to any required output SOP. Designed to allow continuous variation of the output SOP the device can also be used for polarization control either within a feedback circuit or in open loop configuration.

Features & Applications

FEATURES
- All-fiber
- Simple current control
- Full cycle of Poincare sphere
- Low insertion loss
- High return loss

EXAMPLE APPLICATIONS
- Polarization control
- State of polarization scanning
- Component testing
- Sensor systems
- Optical fiber polarimetry

For more information please contact Phoenix sales: sales@phoenixphotonics.com or visit us at www.phoenixphotonics.com
<table>
<thead>
<tr>
<th>Specification</th>
<th>Units</th>
<th>Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wavelength range</td>
<td>nm</td>
<td>1300-1610</td>
</tr>
<tr>
<td>Insertion Loss</td>
<td>dB</td>
<td>&lt;0.8</td>
</tr>
<tr>
<td>PMD</td>
<td>ps</td>
<td>&lt;0.15</td>
</tr>
<tr>
<td>Return Loss</td>
<td>dB</td>
<td>&gt;70</td>
</tr>
<tr>
<td>Maximum current</td>
<td>mA</td>
<td>70</td>
</tr>
<tr>
<td>Maximum Voltage</td>
<td>V</td>
<td>10</td>
</tr>
<tr>
<td>Scan rate</td>
<td>deg./s</td>
<td>360</td>
</tr>
<tr>
<td>Operating Temperature Range</td>
<td>°C</td>
<td>-5 to 70</td>
</tr>
<tr>
<td>Storage Temperature</td>
<td>°C</td>
<td>-40 to +85</td>
</tr>
<tr>
<td>Fiber type</td>
<td></td>
<td>SMF28</td>
</tr>
<tr>
<td>Input &amp; Output Fiber Lengths</td>
<td>mm</td>
<td>1000</td>
</tr>
</tbody>
</table>

### Specification Notes
1. Devices will operate over full wavelength range, higher current is required at longer wavelengths to achieve switching.
2. Losses do not include connectors.
3. Maximum current and voltage for each section of the controller
4. Scan rate is the rate of polarization change for a cycle of the Poincare sphere for each section

### Packaging Style
All dimensions are approximate and may vary slightly

### Ordering Information

```
    P | S | C

Wavelength:
20 – 2000 nm
15 – 1530 - 1610 nm
14 – 1480 - 1530 nm
13 – 1280 - 1330 nm
10 – 980 - 1060 nm

Connectors:
0 – none
1 – FC/PC
2 – FC/APC
* Others available

Cable type:
0 – none
1 – 900µm loose tube
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