25G Athermal Wavelength Reference Filter

Product Description

Primanex Athermal Reference Filters are based on advanced etalon technology. With Primanex unique opto-mechanical design and advanced packaging techniques, the filters demonstrate extreme wavelength stability under varied environmental conditions including temperature and humidity.

Built by a proprietary precision tuning technique, the filters come with an option of ITU targeting accuracy within +/- 1.25GHz. This ITU-targeted filter can be used in WDM system channel monitoring and wavelength locking. A special option is also available for customer to select specific wavelengths for precision targeting.

The filters come in a transmission form, and come with a broad design options including etalon finesse, channel spacing (FSR) and operating wavelength range. The customer friendly product design enables the Athermal Reference Filters to be utilized in a spectrum of diverse applications including telecommunication, wavelength referencing and calibrating in fiber-optics sensing system, test & measurement instrumentation, and laser wavelength stabilization.

Features

- Extreme wavelength thermal stability
- Low IL and PDL
- Robust hermetic packaging
- Easy routing - all fibers on same side

Applications

- FBG sensing system
- System monitoring
- Test & measurement
- Instrumentation
## Specifications

<table>
<thead>
<tr>
<th>Item</th>
<th>Unit</th>
<th>Parameters</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wavelength Range</td>
<td>nm</td>
<td>1525 ~ 1565</td>
<td>Customizable</td>
</tr>
<tr>
<td>Insertion Loss</td>
<td>dB</td>
<td>≤3</td>
<td></td>
</tr>
<tr>
<td>Polarization Dependent Loss</td>
<td>dB</td>
<td>0.1</td>
<td></td>
</tr>
<tr>
<td>Polarization Dependent Accuracy</td>
<td>GHz</td>
<td>+/- 0.1</td>
<td></td>
</tr>
<tr>
<td>Channel Spacing (FSR)</td>
<td>GHz</td>
<td>25</td>
<td>50G, 100G and 200G available upon request</td>
</tr>
<tr>
<td>Thermal Stability</td>
<td>GHz</td>
<td>≤ +/- 0.8</td>
<td></td>
</tr>
<tr>
<td>Finesse</td>
<td></td>
<td>7</td>
<td>14</td>
</tr>
<tr>
<td>Bandwidth@3dB</td>
<td>GHz</td>
<td>≤ 5</td>
<td>≤ 3</td>
</tr>
<tr>
<td>Contrast</td>
<td>dB</td>
<td>≥ 13</td>
<td>≥ 16</td>
</tr>
<tr>
<td>Back Reflection</td>
<td>dB</td>
<td>≥ 20</td>
<td></td>
</tr>
<tr>
<td>Maximum Optical Power</td>
<td>mW</td>
<td>500</td>
<td></td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>°C</td>
<td>-5 ~ 70</td>
<td>Wider temperature range available upon request</td>
</tr>
<tr>
<td>Storage Temperature</td>
<td>°C</td>
<td>-40 ~ 85</td>
<td></td>
</tr>
<tr>
<td>Fiber Type</td>
<td>N/A</td>
<td>Corning SMF-28e+</td>
<td>Other fiber available</td>
</tr>
<tr>
<td>Dimension (L×W×H)</td>
<td>mm</td>
<td>30 × 25.5 × 8.6</td>
<td></td>
</tr>
</tbody>
</table>

* All the specifications are based on the devices without connectors, and guaranteed over the operating temperature ranges, wavelength range and all polarization states.

** Specifications are subject to change without notice.

## Dimensions Drawing (mm)

![Dimensions Drawing (mm) Image]
25G Athermal Wavelength Reference Filter

Photonics Beyond Boundary

Spectral Plot

Ordering Information (Example: PETL1-111T41100)

PETL1 | 1 | T | 

Finesse
1. 7
2. 14
3. Others

Operating Mode
T. Transmission
R. Reflection*

Fiber Type
1. 250μm fiber
2. 900μm fiber
3. Others

Channel Spacing
1. 100 GHz
2. 50 GHz
3. 200 GHz
4. 25GHz
5. 21GHz
6. Others

Fiber Length
1. 0.5 +/- 0.1 m
2. 1.0 +/- 0.1 m
3. 1.5 +/- 0.1 m
4. Others

Operating Wavelength
1. C band
2. L Band
3. Others

Connector Type (ln/Out)
0. No Connector
1. FC/UPC
2. FC/APC
3. SC/UPC
4. SC/APC
5. LC/PC
6. MU/PC
7. Others

* Device at Reflection mode is available upon request, and shares same dimension and appearance as those of transmission-type device.

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