High Speed Tunable Filter

Features / Benefits
- No moving parts, shock resistant,
- High scanning speed up to 100KHz
- Small footprint
- Wide tuning range from 1500nm to 1610nm
- High wavelength resolution 0.01nm
- Low insertion loss
- No alignment required
- Low cost
- Polarization insensitive

Applications
- Ultra-high resolution optical spectrum analysis (OSA)
- Optical performance monitoring (OPM) and optical channel monitoring (OCM)
- Tunable add /drop in ROADM
- Tunable optical noise filtering and channel locking.
- Optical NIR spectroscopy
- Tunable filter for sensor application

The Lightwaves2020 Electro-Optic Fabry-Perot Tunable Filter (EOFPTF) is a specialized filter based on the Electro-Optic crystal Fabry-Perot Etalon technology. The wavelength tuning is achieved by varying the applied electrical field. The scanning frequency up to 100kHz enables the use in fast transient test and analysis.

Many spectrum measurement can be made using the EOFPTF and an oscilloscope. The integrated EOFPTF does not need alignment in applications. A TEC package is included to have excellent thermal stability.

The polarization-independent feature makes it very stable and repeatable without the need for a polarization controller in many applications.

This novel tunable filter is your best choice in many demanding WDM, OPM, and RODAM applications.
High Speed Tunable Filter

Absolute Maximum Ratings

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Unit</th>
<th>Specification</th>
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<tbody>
<tr>
<td>Operating Wavelength Range</td>
<td>nm</td>
<td>1500 to 1600</td>
</tr>
<tr>
<td>Free Spectrum Range (FSR)</td>
<td>nm</td>
<td>10 to 90</td>
</tr>
<tr>
<td>Bandwidth (FWHM)</td>
<td>nm</td>
<td>0.1 to 0.01</td>
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<tr>
<td>Standard Finesse</td>
<td>-</td>
<td>100, 1000, 10000</td>
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<tr>
<td>Maximum Insertion Loss</td>
<td>dB</td>
<td>&lt; 3.0</td>
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<tr>
<td>PDL</td>
<td>dB</td>
<td>&lt; 0.1</td>
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<tr>
<td>PMD</td>
<td>ps</td>
<td>&lt; 0.1</td>
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<tr>
<td>Maximum Back-Reflection</td>
<td>dB</td>
<td>&lt; -50</td>
</tr>
<tr>
<td>Wavelength Update Speed</td>
<td>µs</td>
<td>&lt; 10</td>
</tr>
<tr>
<td>Input Voltage (with driver)</td>
<td>VFSR</td>
<td>0 - 5VDC</td>
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</tbody>
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Note: 1. All specification referred without connectors
2. Measured at wavelength 1550nm

Dimensions

Ordering Information

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<tr>
<th>E</th>
<th>O</th>
<th>F</th>
<th>P</th>
<th>T</th>
<th>F</th>
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Connector
0 = None
1 = FC/UPC
2 = FC/APC
3 = SC/UPC
4 = SC/APC
5 = LC/UPC
6 = MU/UPC

Band Width
1 = 0.1nm
2 = 0.01nm

FSR
1 = 10nm
2 = 20nm
3 = 30nm
4 = 40nm

w/o driver
1 = w/o driver
2 = with driver