RIO Colorado Tunable Laser Source

A compact and turn-key benchtop laser source based on industry-proven External Cavity Lasers

The new RIO Colorado Tunable Laser Source is an impressive feature-rich extension of RIO’s game-changing ORION™ and PLANEX™ product series. The RIO Colorado laser source is designed with the customer’s need in mind: user-friendly, highly integrated and turn-key operation.

In addition to unrivaled reliability and performance, the RIO Colorado laser source laser-based provides exceptional value and ease-of-use with 20mW output power, wide wavelength tunability, C- or L-band wavelength options, very low RIN, low phase noise and narrow linewidth, very fast frequency and amplitude modulation.

This solution is positioned for reducing the development cycle time and allow for simple integration into R&D lab environments, coherent communication architectures and advanced fiber optic sensing systems. External monitoring and control can be achieved via a Graphical User Interface (GUI) and a USB connection.

KEY FEATURES

• Wide wavelength tuning across C-band (L-band optional)
• Single longitudinal mode
• Low phase and frequency noise
• Ultra low RIN
• Excellent SMSR
• PM output
• Fast frequency modulation
• Amplitude modulation
• Turn-key and small footprint
• USB interface with Graphical User Interface
• Telcordia qualified
Performance Highlights

<table>
<thead>
<tr>
<th>PARAMETER</th>
<th>VALUE</th>
<th>UNIT</th>
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<tbody>
<tr>
<td>Output Power</td>
<td>20 mW</td>
<td></td>
</tr>
<tr>
<td>Spectral linewidth (Lorentzian)</td>
<td>≤35kHz 25kHz typical</td>
<td>kHz</td>
</tr>
<tr>
<td>Relative Intensity Noise (at frequency &gt;25 MHz)</td>
<td>≤ -165 dB/Hz</td>
<td></td>
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<tr>
<td>C-band wavelength tuning range</td>
<td>1527.60 to 1565.60 nm</td>
<td></td>
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<tr>
<td>Wavelength tuning resolution</td>
<td>1 MHz</td>
<td></td>
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<tr>
<td>Continuous wavelength tuning range</td>
<td>12 GHz</td>
<td></td>
</tr>
<tr>
<td>Frequency modulation range (pk-pk)</td>
<td>&gt; 500 MHz</td>
<td></td>
</tr>
<tr>
<td>Frequency modulation speed</td>
<td>Up to 100 kHz</td>
<td></td>
</tr>
<tr>
<td>Operating case temperature range</td>
<td>15 to 50 °C</td>
<td></td>
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Mechanical Diagram

<table>
<thead>
<tr>
<th>DIMENSIONS</th>
<th>UNITS</th>
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<tbody>
<tr>
<td>L</td>
<td>180 mm</td>
</tr>
<tr>
<td>W</td>
<td>260 mm</td>
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<tr>
<td>H</td>
<td>55 mm</td>
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Ordering Information

Controller Interface

- Controller Interface 3 USB

Fiber/Connector *

- Fiber/Connector 5 PM/FC-APC

Wavelength

- Wavelength 03 C-band tunable
- Wavelength 04 L-band tunable

Output Power

- Output Power 5 20 mW

* Contact RIO for other fiber/connector option availability.

Applications

- Acoustic and seismic sensing
- Defense and security
- Oil & Gas - exploration and production
- LIDAR and remote sensing
- Interferometric fiber optic sensing
- Metrology
- RF and microwave photonics

For ordering or technical information contact

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