PriTel's UOC-R Series of Ultrafast Optical Clocks are easy-to-use mode-locked fiber lasers that do not require an external RF synthesizer. In this series, regenerative mode-locking is used to provide the internal RF reference.

The UOC-R Series is available with other pre-selected fixed repetition rates.

The UOC-R has an RF output at the frequency of the laser that can be used for triggering and other synchronizations.

### Specifications

<table>
<thead>
<tr>
<th>UOC-R</th>
<th>Pulse repetition rate</th>
<th>9.95 GHz ±0.010 GHz, fixed (other rates on custom basis)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wavelength</td>
<td>1550 ± 1 nm</td>
<td></td>
</tr>
<tr>
<td>Average output power</td>
<td>&gt;10 mW</td>
<td></td>
</tr>
<tr>
<td>Sideband suppression</td>
<td>&gt;80 dB</td>
<td></td>
</tr>
<tr>
<td>Pulsewidth</td>
<td>2.5 ps</td>
<td></td>
</tr>
<tr>
<td>Spectral width</td>
<td>1.0 nm</td>
<td></td>
</tr>
<tr>
<td>Optical Gain medium</td>
<td>Er-doped silica fiber</td>
<td></td>
</tr>
<tr>
<td>Pump source</td>
<td>Diode laser</td>
<td></td>
</tr>
<tr>
<td>Connectors</td>
<td>FC/APC (other connectors available on request)</td>
<td></td>
</tr>
<tr>
<td>Environmental Operating temperature</td>
<td>+15 to 30°C</td>
<td></td>
</tr>
<tr>
<td>Storage temperature</td>
<td>-20 to 50°C</td>
<td></td>
</tr>
<tr>
<td>Electrical/ Mechanical Operating Voltage</td>
<td>85-264 VAC at 47-63 Hz</td>
<td></td>
</tr>
<tr>
<td>Power consumption</td>
<td>&lt;250 W</td>
<td></td>
</tr>
<tr>
<td>Dimensions (2U)</td>
<td>9 cm x 48 cm x 38 cm</td>
<td></td>
</tr>
<tr>
<td>Weight</td>
<td>20 kg</td>
<td></td>
</tr>
</tbody>
</table>

The UOC-R Series provides three secondary optical outputs for monitoring system performance by a photodiode, optical spectrum analyzer, or power meter.

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E-mail: PriTel@PriTel.BIZ, Internet: www.PriTel.BIZ
Typical Performance of PriTel's UOC-R Ultrafast Optical Clock

RF Spectrum

Center = 9.95328 GHz

Sampling scope trace

Note: Electrical Ringing Artifact

20 ps/div

Autocorrelation

Pulsewidth 1.7 ps
Tracewidth 2.8 ps

Optical spectrum

Spectral width 2.2 nm

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