CRFL SERIES
CW ERBIUM FIBER LASER, TERAHERTZ LINEWIDTH

KEY FEATURES
- High output power up to 20 W
- Standard 1455 or 1480 nm operating wavelengths
- High efficiency frequency conversion
- Excellent power stability
- Non polarized output light
- Benchtop or module available
- Maintenance free

APPLICATIONS
- Distributed Raman amplification
- Remote EDFA pumping
- Pump splitting architecture
- Fiber optic component testing

**Description**

CRFL series Raman fiber lasers provide high output power up to 20 W at 1455 and 1480 nm. The diffraction limited beam is unpolarized.

Principle of operation involves utilization of a high power Ytterbium fiber laser source to pump a cascaded Raman resonator. High conversion efficiency is achieved from fundamental pump laser to final Raman Stokes.

These Raman lasers are well suited for distributed Raman amplification, remote pumping of EDFAs or for Telcordia fiber optic component testing.

The CRFL are available in benchtop format for laboratory environment or in module format for easy integration into a system.

**Modes of operation**
The devices offer several modes of operation:

- **ACC (Automatic Current Control)** mode is standard for all devices. The laser is controlled from diodes current set point.

- **APC (Automatic Power Control)** mode allows to control the laser at a fixed output power set point. The device maintains a constant optical output power monitored with a photodiode. The current is adjusted automatically.

Credit photo plateforme B130 : Wyecs Prod
# CRFL Series

## S-Band Raman Fiber Lasers

The CRFL series lasers are available as turn key system or as OEM module.

### RELIABILITY

The Keopsys range of fiber lasers are manufactured with tested components and are submitted to several inspections during the manufacturing process under a rigorous quality management certified in accordance with the ISO 9001:2008 standard. Our all-in-fiber systems offer maintenance free operation. Countless units are continuously running in demanding environments with no failure.

### GUARANTEE

Our fiber systems are under 1 full year parts and labor guarantee. We offer a warranty extension of 1 or 2 years. Please contact us.

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## Optical Specifications

<table>
<thead>
<tr>
<th>CRFL</th>
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<tbody>
<tr>
<td><strong>Mode of operation</strong></td>
<td>CW</td>
</tr>
<tr>
<td><strong>Output power</strong></td>
<td>From 2 to 20 W</td>
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<tr>
<td><strong>Standard operating wavelength</strong></td>
<td>1455 - 1480 nm</td>
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<tr>
<td><strong>Linewidth</strong></td>
<td>&lt; 2 nm or &lt; 3 nm</td>
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<tr>
<td><strong>In band power</strong></td>
<td>&gt; 90 % (over +/- 5 nm from peak operating wavelength)</td>
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<tr>
<td><strong>Side mode suppression (1000-1400 nm)</strong></td>
<td>&gt; 15 dB or &gt;14 dB depending of the output power</td>
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<tr>
<td><strong>Polarization</strong></td>
<td>Random</td>
</tr>
<tr>
<td><strong>Beam quality, M²</strong></td>
<td>&lt; 1.1</td>
</tr>
<tr>
<td><strong>Output monitor and APC (option)</strong></td>
<td>Internal photodiode and automatic power control mode</td>
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<tr>
<td><strong>Output power tunability</strong></td>
<td>25 to 100 % or 10 to 100 % depending of the output power</td>
</tr>
<tr>
<td><strong>Output fiber type</strong></td>
<td>SMF28</td>
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<tr>
<td><strong>Output termination</strong></td>
<td>FC/APC, E2PS or Collimator</td>
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For ordering information and custom solutions, please contact us: websales@keopsys.com

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Keopsys undertakes a continuous and intensive product development program to ensure that its products perform to the highest technical standards. As a result, the specifications in this document are subject to change without notice.