PTFL-KULT Series
Pulsed Thulium Fiber Laser
2.0 µm Ultra-Compact Laser Transmitter

**Description**
PTFL-KULT 2 µm series Thulium doped fiber lasers are eye-safe pulsed laser sources delivering high peak power and high energy per pulse in a very compact package.

The 2 µm KULT laser is one of the most compact laser of its category. Due to its low attenuation during atmospheric propagation, this laser allows ultra long range finding through mist and damp air.

The output beam is near gaussian beam $M_2<1.1$ diffraction-limited.

This source is ideal for telemetry or range-finding applications and can be operated in harsh environment.

**Key Features**
- 2 µm eye-safe operation
- Energy per pulse up to 15 µJ
- Peak power up to 1.5 kW
- Pulse duration from 10 to 40 ns
- Pulse repetition frequency from 5 kHz to 20 kHz
- Linear or random polarization
- Diffraction limited output beam
- Low power consumption
- Wide operating temperature range (-35 °C to +65 °C)
- Compact and rugged package

**Applications**
- Telemetry, Range-finding
- 3D scanning
- Mapping
- Cloud height measurement
- Wind sensing
- Pollution monitoring

**Mode of operation**
The devices offer one mode of operation:

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

Current Set Point

Laser

Output Power

Pump Current

1 Platform

PK 2A

Non contractual photos
PTFL-KULT SERIES
2 µm ULTRA-COMPACT LASER TRANSMITTER

Optical Specifications
@ 25 °C

<table>
<thead>
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<th>PTFL-KULT</th>
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<tbody>
<tr>
<td>Mode of operation</td>
<td>Pulsed</td>
</tr>
<tr>
<td>Operating wavelength</td>
<td>1995 nm*</td>
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<tr>
<td>Wavelength excursion over T range</td>
<td>10 nm</td>
</tr>
<tr>
<td>Energy per pulse</td>
<td>From 10 to 15 µJ</td>
</tr>
<tr>
<td>Peak power</td>
<td>1.5 kW</td>
</tr>
<tr>
<td>Average power</td>
<td>From 75 to 200 mW</td>
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<tr>
<td>Pulse repetition frequency</td>
<td>From 5 to 20 kHz</td>
</tr>
<tr>
<td>Pulse duration</td>
<td>10 to 40 ns</td>
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<tr>
<td>Pigtail length</td>
<td>32+/−2 cm</td>
</tr>
<tr>
<td>Fiber type</td>
<td>SMF/PANDA</td>
</tr>
<tr>
<td>Polarization</td>
<td>Random or Linear</td>
</tr>
<tr>
<td>Beam quality, M²</td>
<td>&lt;1.1</td>
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<tr>
<td>Output termination</td>
<td>FC/APC</td>
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</table>

*Other wavelength on request

The PTFL series lasers are available as OEM module for an easily integration.

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.