UltraFlux is the first compact high energy tuneable wavelength femtosecond laser system which incorporates the advantages of ultrafast fiber laser, solid-state and parametric amplification technologies in less than 1 square meter footprint box. Patent pending (application No. EP2924500) OPCPA front end technology uses the same picosecond fiber laser for seeding both picosecond DPSS pump laser and femtosecond parametric amplifier by spectrally broadened output. This approach greatly simplifies the system – excludes femtosecond regenerative amplifier and eliminates the need of pump and seed pulse synchronization. In addition to that, contrast of the output pulses in picosecond to nanosecond time scale is potentially increased.

System generates down to 35 fs pulses, which can be automatically tuned in 700 – 1010 nm wavelength range. Less than 10 fs pulses are obtained in a few-cycle operating regime. Up to 0.3 mJ output pulse energy with better than 1.5% pulse-to-pulse stability at 1 kHz repetition rate is achieved by using a state of the art OPCPA technology.

By incorporating parametric amplifier technology together with a novel ultrafast fiber laser helped to create and bring to the market a new tool for femtosecond pump probe, nonlinear spectroscopy, emerging high harmonic generation experiments and other femtosecond and nonlinear spectroscopy applications. With this laser ultrafast science breakthrough is closer to any photonics lab than ever before.

**APPLICATIOnS**
- Broadband CARS and SFG
- Femtosecond pump-probe spectroscopy
- Nonlinear spectroscopy
- High harmonic spectroscopy
- Your application is welcome

**OPTIONS**
- Amplified and compressed supercontinuum output (1 μJ, 10 fs, 680 – 960 nm)
- Second harmonics: 350 – 480 nm
- Third harmonics: 245 – 320 nm
### SPECIFICATIONS 1)

<table>
<thead>
<tr>
<th>Model</th>
<th>UltraFlux FT2101</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. pulse energy 2)</td>
<td>0.3 mJ</td>
</tr>
<tr>
<td>Tunability</td>
<td>700 – 1010 nm</td>
</tr>
<tr>
<td>Pulse duration 3)</td>
<td>35 – 60 fs</td>
</tr>
<tr>
<td>Pulse repetition rate</td>
<td>1 kHz</td>
</tr>
<tr>
<td>Beam quality</td>
<td>$M^2 &lt; 1.5$</td>
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<tr>
<td>Pulse energy stability</td>
<td>&lt; 1 % rms (20000 shots)</td>
</tr>
<tr>
<td>Long-term power stability</td>
<td>±1 % peak-to-peak (&gt;12 hour period)</td>
</tr>
<tr>
<td>Footprint</td>
<td>$1.2 \times 0.75$ m</td>
</tr>
</tbody>
</table>

1) Due to continuous improvement, all specifications are subject to change without notice. Parameters marked typical may vary with each unit we manufacture.
2) Inquire for higher energy options.
3) 10 fs is available. Contact Ekspla for pulse energy and other specifications.

### PERFORMANCE

- **Typical output pulse energy**

- **Typical output pulse duration**

- **Long-term power stability measurement at 800 nm wavelength**

- **Typical beam profile. Output pulse energy 0.3 mJ**

- **Second harmonic output**

- **Third harmonic output**