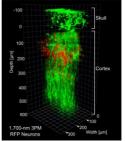
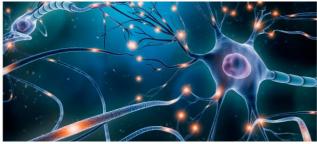
DIADEM 1300





3-photon microscopy (courtesy of Chris Xu, Cornell University)



Optogenetics



COMPACT 1300 nm FEMTOSECOND LASER

< 150 fs / Up to 1 μ J / Up to 2 W / 1300 nm

DIADEM 1300 is the first compact laser producing high-energy femtosecond pulses at 1300 nm. DIADEM 1300 was specifically designed to meet the requirements of 3-photon microscopy and optogenetics by offering the ideal combination of high average power, high energy and short pulse duration in the infrared.

DIADEM 1300 is a highly versatile platform offering potential access to other wavelengths such as 1030 nm or 1700 nm. DIADEM 1300 is the ideal laser for deep brain imaging.

TECHNICAL SPECIFICATIONS^{*}

| General | DIADEM 1300 |
|------------------------------|--|
| Wavelength | 1300 nm |
| Average power | 2 W at 2 MHz |
| Pulse duration | < 150 fs |
| Repetition rate | Single shot to 2 MHz |
| Energy per pulse | 1μ |
| Beam parameters | |
| M ² | < 1.3 |
| Beam diameter | 1.6 +/- 0.3 mm |
| Divergence | < 0.5 mrad |
| Ellipticity | > 0.85 |
| Output beam | Collimated |
| Polarization | > 100:1, vertical |
| Stability | |
| Power stability RMS | < 1% |
| Pulse to pulse stability RMS | < 2% |
| Electrical | |
| External interfaces | RS-232, USB, TCP/IP |
| Synchronized input | Sync in for pulse-on-demand |
| Synchronization output | TTL |
| Pulse power control | Analog modulation + fast gating (> 1MHz Bandwidth) + Fine energy control |
| Software interfaces | GUI, RS-232 serial communication protocol |
| Power consumption | < 250 W |
| Cooling | Air |
| Mechanical | |
| Laser head dimensions | 534 x 342 x 195 mm |
| Laser head weight | 22 kg |
| Control unit | 19"/ 3U rack |
| Control unit weight | 13 kg |
| Umbilic length | 3 m |
| Environmental | |
| Operational temp range | 19-30°C |
| Storage temp range | 0-40°C |
| Operational max altitude | 2000 m |
| Operational humidity | non condensing |
| Storage humidity | 80% RH |
| Options | |
| Wavelength | 1700 nm or dual output with 1030 nm |
| High repetition rate | > 2 MHz operation |
| Cooling | Water |



* This information is subject to modifications without prior notice.