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NEOLIT MM

Ultrashort Pulse Fiber Seeder for Laser Amplifier 1020 – 1070 nm, 1 – 10 ps, 1 – 50 mW, 15 – 40 MHz



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SMOOTH ULTRASHORT PULSE GENERATION

FEATURES

- No consumable components
- All in fiber design
- Robust to external disturbances
- High quality pulses and spectrum
- Highly customizable output parameters
- Ultra wide spectrum compressible down to 30 fs

APPLICATIONS

 Seeding femtosecond and picosecond fiber and DPSS lasers

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Neolit seeders are novel sources of ultrashort laser pulses, free of consumable components (no SESAM, no bulk optics) which makes them exceptionally long-lasting.

The all-fiber design ensures high environmental stability against vibrations and thermal fluctuations. The integration is very simple due to compact single box, passively-cooled construction.

High quality temporal and spectral shape of the pulses guarantees excellent results at the output of the laser system.

| Model | Neolit | Neolit AMP | Neolit BB |
|---|----------------------------|------------|------------|
| Central wavelength | 1020 – 1070 nm | | 1040 nm |
| Pulse duration (directly from the fiber) ¹⁾ | 1 – 5 ps | 5 – 10 ps | 7 ps |
| Spectral bandwidth (FWHM) | 4 – 12 nm | 8 – 12 nm | 20 – 70 nm |
| Average power | 1 – 5 mW | 20 – 50 mW | 20 – 50 mW |
| Pulse repetition rate (factory fixed) | 15 – 40 MHz | | |
| Polarization | linear, > 100:1 extinction | | |
| Optical output | FC/APC connector | | |
| RF signal interface | SMA | | |
| Available control interfaces | USB, CAN | | |
| Powering requirements | 12 ± 2 V, max. 3 A | | |
| Operating temperature | 15 – 45 °C | | |
| Mechanical dimensions (L × W × H) | 194 × 135 × 40 mm | | |

SPECIFICATIONS

 $^{\rm IJ}$ Pulses from the seeder are externally compressible to within 10% of the transform limit.

²⁾ Customized versions including additional amplifier, fiber pulse picker, pulse stretcher are possible.

³ Neolit seeders are class <u>3B</u> laser products. Avoid eye or skin exposure to direct or scattered laser light.

⁴⁾ World patented technology: US10038297, JP6276471, EP3178137, CN106575849.

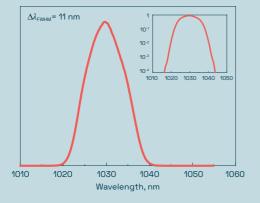


DANGER: VISIBLE AND/OR INVISIBLE LASER RADIATION AVOID EYE OR SKIN EXPOSURE TO DIRECT, REFLECTED OR SCATTERED RADIATION CLASS 3B LASER PRODUCT

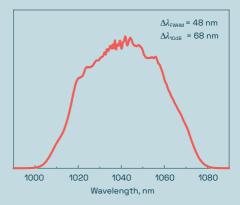


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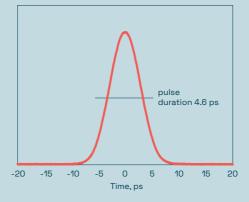
PERFORMANCE



Spectrum of **Neolit** laser (20 MHz, 2 mW), spectrum in long scale





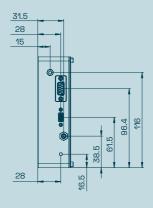


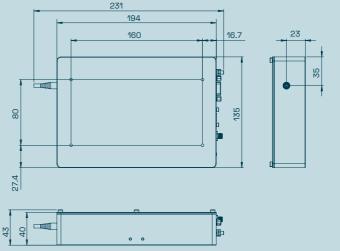
Autocorrelation function of the pulses of **Neolit** laser



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DRAWINGS





Drawing of **NEOLIT** laser head (in mm)



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