

BlueCut

High Energy Industrial Femtosecond Laser 1030 nm



The BlueCut is an industrial-grade micro-Joule femtosecond fiber laser system. Based on all-fiber integrated technology, this is an inherently robust and stable system, which comes in a sealed package designed for OEM integration. The system is maintenance free and easily field serviceable, ensuring maximum up-time demanded by both industrial and scientific applications. The high repetition rates available from the BlueCut combined with its high average power and superior beam quality allow for high throughput and increased efficiency for a fast return-on-invest.

MenloSystems

KEY SPECIFICATIONS

- Wavelength 1030 nm / 515 nm
- Pulse Energy: >10 μ J
- Average Power >10 W
- Pulse Duration: < 400 fs
- Burst Mode

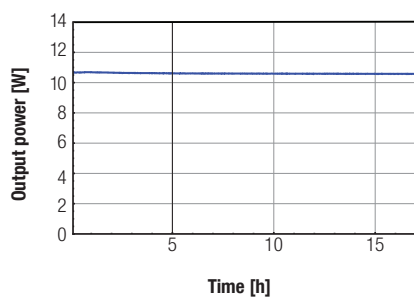
APPLICATIONS

- Micro Material Processing
 - Waveguide Writing
 - Micro-Cutting
 - Micro-Structuring
 - Marking of Transparent Materials
- Biomedical
 - Life Science, Lab-on-a-Chip
 - Ophthalmology
 - Multi-Photon Microscopy
 - 2 Photon Polymerization
- Industries
 - Semiconductors
 - Organic Materials
 - Solar Cells
- Scientific
 - Seeding of Solid State Amplifiers
 - Nonlinear Frequency Conversion

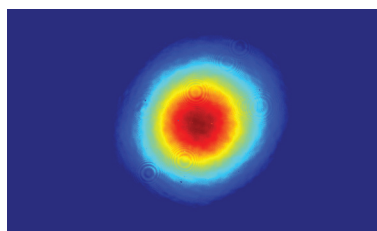
PERFORMANCE DATA

Amplitude noise

< 1 % rms (over 12 h)

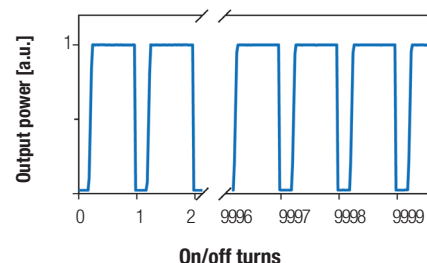


Spatial Mode

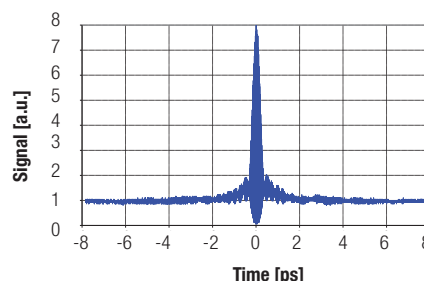


Reproducibility

Identical and consistent laser performance



Temporal Profile



FEATURES

- Single Shot to 10 MHz
- Air Cooled
- All-Fiber Technology
- Compact Design for OEM Integration
- Robust and Stable
- Maintenance Free
- Remote Control

OPTIONS

- SHG
Frequency doubling to 515 nm
- Inquire about options for OEM integration

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SPECIFICATIONS

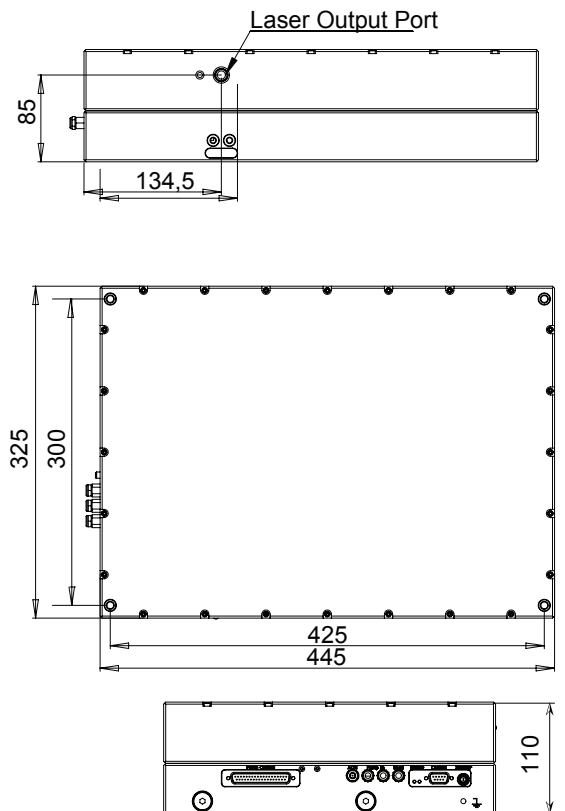
Center Wavelength	1030 nm
Maximum Pulse Energy	>10 μJ^*
Maximum Average Power	>10 W*
Repetition Rate	single pulse to 10 MHz
Pulse Duration	<400 fs
Spectral Bandwidth	>5 nm
Long-term Power Stability	<1 % rms (over 12 h)
Beam Quality	TEM00, $M^2 < 1.25$, (typ. <1.20)
Polarization	linear
Output Control	integrated pulse picker for selection of repetition rate integrated fast shutter with analog-in and digital-in modulation for external gating integrated optical isolator
SHG Wavelength 515 nm	optional

*Whatever applies first for a given repetition rate.

UTILITY AND ENVIRONMENTAL REQUIREMENTS

Operating Voltage	100-240 VAC/50-60 Hz (optional 24 VDC, 20A)
Power Consumption	<500 W
Cooling Requirements	air cooling (no water cooling is required)
Warm-up Time	<20 min
Communication interface	RS232 or USB, Laptop included with GUI
Range of Operating Temperature	15 to 35°C (60 to 95°F), non-condensing
Dimensions Head	325 x 445 x 110 mm ³
Dimensions Controller	19" x 4U x 495 mm (448 x 352 x 495 mm ³)

Example	Average Power	Pulse Energy
250 kHz	2.5 W	10 μJ
1 MHz	10 W	10 μJ
10 MHz	10 W	1 μJ



ORDERING INFORMATION

Product Code | BlueCut10

Please call for pricing. Specifications are subject to change without notice. Custom modifications are available, please inquire.



Invisible laser radiation
avoid exposure to beam
Class 4 laser



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