

MENHIR-1030 SERIES

Menhir Photonics femtosecond laser sources are based on robust and well-engineered designs, offering excellent reliability with the lowest phase noise and timing jitter on the market from soliton mode-locking. Continuous 24/7 operation, user-friendly and self-starting, the MENHIR-1030 series has been designed to facilitate OEM integration and enable the specific customers' needs.

Key features

- Ultra-low noise
- Transform-limited pulses
- Compact industrial design
- Harsh environment resistant
- User friendly
- Turnkey system
- 24/7 operation
- All-in-one system

Applications

- Amplifier seeding
- Non-linear optics
- THz generation
- Timing distribution
- Frequency combs
- Spectroscopy
- Ultra-low noise microwave generation

Key specifications

- Wavelength: 1025 – 1035 nm
- Rep. rate: 100 MHz – 2.5 GHz
- Soliton pulses: < 300 fs

Options

- f_{rep} and f_{CEO} actuators
- RF output
- OEM version
- Fiber output



Specifications

Parameters

MENHIR-1030 (Oscillator without amplifier)

Average power	> 50 mW
Peak power	> 0.1 kW
Pulse energy	> 0.05 nJ
Repetition rate	Standard: 216 MHz, 1 GHz, 1.3 GHz Custom design: from 100 MHz to 2.5 GHz*
Center wavelength	1030 +/- 5 nm
Spectral bandwidth	> 5 nm (at -3 dB)
Pulse width	< 300 fs, Transform limited
Optical output port	Free space , Fiber output (PM FC/APC)
Beam quality	TEM ₀₀ , M ² < 1.05
Polarization	Linear (PER > 23 dB, > 200:1)
Amplitude noise	< 1% [1 h], < 0.05% [1 Hz – 10 MHz]
Timing-jitter	< 30 fs [1 kHz – 10 MHz]**

* Please inquire for specific repetition rate.

** Please inquire for better timing-jitter requirements.

General

Power supply	5 VDC / 2 A***
Power consumption	< 10 W
Cooling	Passively air cooled
Warm-up time	< 10 s (cold start)
Dimensions / Weight	260 x 250 x 60 mm ³ / 8 kg
Operating temperature	+5°C to 45°C
Storage temperature	-10°C to +60°C
Relative humidity	< 80% (non-condensing)
Control unit	No control unit required / All-in-one system
Analog interface	Status, Trigger, Alarm, Interlock, Power modulation
Digital interface	USB, RS232

*** Power supply for 100 – 120 VAC or 220 – 240 VAC is provided.

Please inquire for custom modifications.

Specifications are subject to change without notice.

