



<10 PS / SINGLE SHOT TO 1MHZ / > 5W AT 1064 NM

COMPACT HIGH-ENERGY PICOSECOND FIBER LASER FOR MICROMACHINING

SIRIUS is a very compact, high energy hybrid ultrafast laser for advanced micro-machining applications and supercontinuum pumping, which offers over 120 μ J and > 5 W, with pulses below 10 ps at all repetition rates and a real perfect beam quality with $M^2 < 1.2$.

This laser series especially well-designed, ergonomic and very user-friendly with its very compact design is installed in less than 5 minutes (1 and only operator).

SIRIUS is ideally suited for selective ablation, electronics and photonic applications.

CORE SPECIFICATIONS

- / High Power : > 5 W at 1064 nm
- / High Energy : > 120 μ J
- / < 10 ps

USABILITY

- / Compact, Robust & Watercooled Nd:Yvo4 laser
- / Plug and play : < 15 min. setup
- / Smart electronics sync. out / sync. in

APPLICATIONS

- / Additive manufacturing
- / Consumer Electronics
- / Photovoltaic & Selective ablation

USABILITY

- / 24-month warranty
- / Worldwide technical support
- / Laser customization

TECHNICAL SPECIFICATIONS*

	SIRIUS-1064	SIRIUS-532
WAVELENGTH	1064 nm	532 nm
SPECTRAL WIDTH	< 0.3 nm	< 0.3 nm
PULSE DURATION	< 10 ps	< 10 ps
PULSE ENERGY	up to 120 µJ at 20 kHz	up to 40 µJ at 50 kHz
REPETITION RATE	Single pulse to 1 MHz (with burst mode)	
M ²	< 1.2	
BEAM WAIST DIAMETER	1 mm	
BEAM POINTING STABILITY	< 25 µrad/°C	
ELLIPTICITY	> 0.85	
WARM-UP TIME	< 10 min	
POWER STABILITY	< 1% RMS	
RMS NOISE	< 1%	
POLARIZATION	linear, > 100:1	

ELECTRICAL

EXTERNAL INTERFACES	High speed external synchronisation (sync. out / sync. in), Communication through USB, RS 232, TCP/IP
SOFTWARE INTERFACES	Intuitive GUI, Serial communication protocol
PULSE CONTROL	Ext AOM with gating and burst mode
POWER CONSUMPTION	100 to 240 VAC, < 400 W

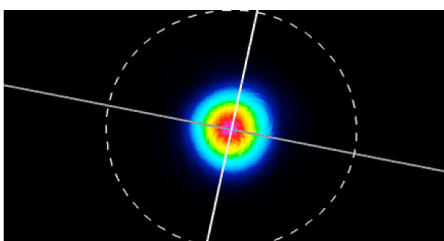
MECHANICAL

LASER HEAD DIMENSIONS & WEIGHT	464 x 290 x 118 mm ³ - 16 kg
LASER CONTROLLER DIMENSIONS & WEIGHT	19"/3U rack - 12 kg
STANDARD UMBILICAL LENGTH	3 m
TECHNICAL DRAWINGS FOR DOWNLOAD	SIRIUS / SIRIUS + MODULE
COOLING	Water cooled

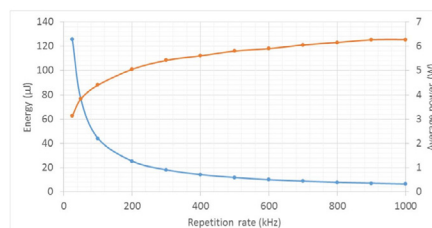
OPTIONS

EXTERNAL MODULE	External module with 3 wavelengths connected to main housing.
HARMONIC GENERATION	3 rd harmonic generation available

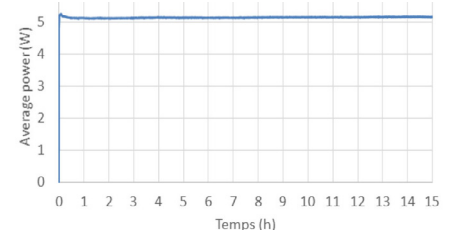
PERFORMANCE



BEAM PROFILE



POWER & PULSE ENERGY VS REPETITION RATE



AVERAGE POWER STABILITY

* This information is subject to modifications without prior notice.



CAUTION
CLASS 4 VISIBLE & INVISIBLE LASER
RADIATION WHEN OPEN
AVOID EYE OR SKIN EXPOSURE TO
DIRECT OR SCATTERED RADIATION