

# SIRIUS



## Compact, high-energy picosecond laser



SIRIUS produces high energy with short (<10ps) pulses, in a compact and robust format. Offering one of the World's lowest cost of ownership, high precision and ease of integration, Sirius is ideally suited for industrial applications such as thin film removal, glass engraving or micron-scaled features drilling/cutting used in a wide variety of market segments.

From single shot to 1 MHz, its efficient, industrial GUI is Industrials best ally to fine tune even the most challenging processes whatever the PRF.

SIRIUS embeds perfectly into any kind of systems working in a 24/7 operating environment, year wide. Its very reduced footprint, weight and capital investment make it the money-maker you need.



[www.spark-lasers.com](http://www.spark-lasers.com)  
Phone : +33 564 310 484  
[info@spark-lasers.com](mailto:info@spark-lasers.com)

### SIRIUS Key Features

- 5W at 1064 nm
- PRF range single shot to 1 MHz
- Seeder burst mode
- $M^2 < 1.2$
- Low CoO, Fast ROI
- Rugged design
- Plug-and-play
- Maintenance free
- Worldwide warranty coverage 24 months

### SIRIUS applications

- Consumer Electronics
- Automotive/Aerospace
- Food industry
- Medical & Bio-Medical
- PV cells

# Technical Specifications\*

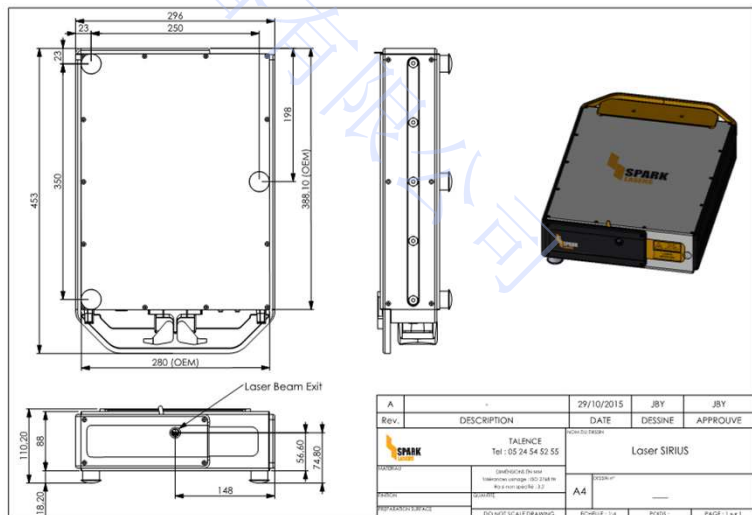
Model	SIRIUS-1064	SIRIUS-532**
Wavelength	1064 nm	532 nm
Spectral width	< 0.3 nm	< 0.3 nm
Pulse duration <sup>1</sup>	<10 ps	<10 ps
Pulse energy	100 µJ at 20 kHz (2 W)	50 µJ at 20 kHz (1 W)
	60 µJ at 50 kHz (3 W)	30 µJ at 50 kHz (1,5 W)
	35 µJ at 100 kHz (3.5 W)	17 µJ at 100 kHz (1,7 W)
	20 µJ at 200 kHz (4 W)	10 µJ at 200 kHz (2 W)
	9 µJ at 500 kHz (4.5 W)	4 µJ at 500 kHz (2,25 W)
	5 µJ at 1 MHz (5 W)	2 µJ at 1 MHz (2,5 W)
Repetition rate	Single pulse to 1 MHz (with burst mode)	Single pulse to 1 MHz (with burst mode)
M <sup>2</sup>	<1.2	<1.2
Beam waist diameter	1 mm	1 mm
Beam waist location	At output port +-50% RR	At output port +-50% RR
Beam pointing	<25 µrad/°C	<25 µrad/°C
Ellipticity	>0.85	>0.85
Warm-up time <sup>2</sup>	< 30 min	< 30 min
Power stability	<2% RMS	<4% RMS
Pulse stability	<2% RMS	<4% RMS
Polarization <sup>3</sup>	Vertical, >100:1	Vertical, >100:1
Pulse control	Ext AOM with gating and burst mode	Ext AOM with gating and burst mode
Laser head dimensions (mm <sup>3</sup> )	453 x 296 x 110,2	453 x 296 x 110,2
Laser controller dimensions	19"/3U rack	19"/3U rack
Standard umbilical length <sup>4</sup>	3 m	3 m
Power consumption	100 to 240 VAC < 600 W	100 to 240 VAC < 600 W
Cooling <sup>5</sup>	water cooled	water cooled

1. Assuming a sech fit.
2. From cold start. Time required to stabilize the output power at specified RMS Power stability.
3. Direction of linear polarization is factory set depending on the user needs.
4. Can be upgraded up to 10 m, contact us for more details.
5. Contact us regarding the exact chiller requirement.

\* Specifications subject to change without notice.

\*\* Other wavelengths available upon request

For custom specifications, please contact us



SPARK LASERS offers a 24-month warranty for all SIRIUS laser range.

For full details of this warranty coverage, please refer to our website [www.spark-lasers.com](http://www.spark-lasers.com) or contact us at +33 564 310 484



Batiment IOA  
Rue François Mitterrand  
33400 Talence  
FRANCE

## Contact

[www.spark-lasers.com](http://www.spark-lasers.com)

Phone : +33 564 310 484

info@spark-lasers.com