

Spark, Flame, FireStorm

Ultra High Energy kHz Diode-Pumped Lasers

**NEW
PRODUCT**



FLAME-50

Key Advantages

- > Low cost of ownership
- > Easy to use
- > Extended range of energy and tpulse parameters
- > Designed by experts in laser technology

Spark, Flame an Firestorm belong to a family of high-energy and high rep rate solid-state lasers based on master oscillator power-amplifier architecture. One preamplifier and two stage power amplifier provide up to 50 mJ in a single pulse creating a laser system with unique parameters.



Main Features

- > MOPA architecture
- > Unique combination of up to 100 mJ pulse energy, TEM00 mode and 1-kHz rep rate
- > High repetition rate
- > Excellent beam quality
- > High pulse energy of up to 100 mJ

Target Applications

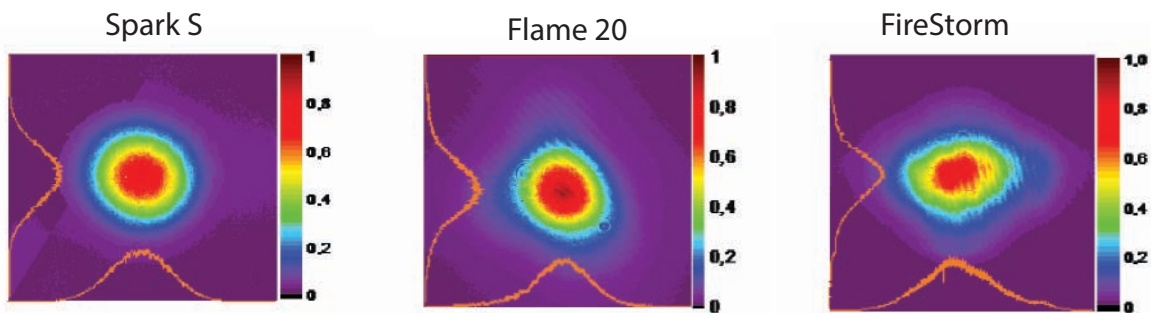
- > Biomedical Research
- > Materials Processing
- > Mid-IR OPO/OPA pumping
- > Nonlinear Molecular Spectroscopy
- > High-energy Laser pumping

Specifications

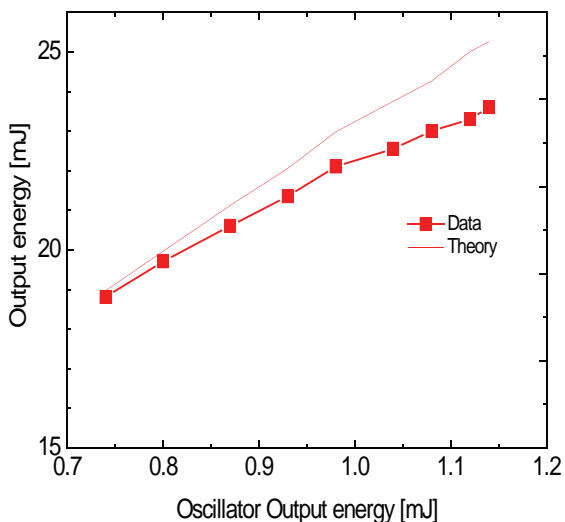
	Spark M	Spark S	Flame 20	Flame 50	FireStorm
Wavelength	1064 nm	1064 nm	1064 nm	1064 nm	1064 nm
Pulse energy	1 mJ	0.5 mJ	>20 mJ	>50 mJ	>100 mJ
Repetition rate	1 - 0.5 kHz	1 - 0.5 kHz	1 - 0.5 kHz	1 - 0.5 kHz	1 - 0.5 kHz
Pulse duration (FWHM)	< 1.3 ns	< 800 ps	< 1.5 ns	< 1.5 ns	< 2 ns
Optical pulse jitter ⁽¹⁾	< 500 ps	--	< 500 ps	< 500 ps	< 500 ps
Polarization at 1064 nm	Linear, > 90%	Linear, > 90%	Linear, > 90%	Linear, > 90%	Linear, > 80%
Beam profile (near field)	Gaussian	Gaussian	Gaussian	Gaussian	Gaussian
Beam quality	$M^2 < 1.3$	$M^2 < 1.2$	$M^2 < 1.5$	$M^2 < 1.7$	$M^2 < 2,5$
Single Frequency	optional	YES	optional	optional	optional

(1) in respect to trigger pulse

Performance



Flame-20 Output Characteristics



Flame-50 Output Characteristics

