

HQF Series Lamp-pumped Q-switched Nanosecond Laser



The HQF series lamp-pumped Q-switched nanosecond laser is a compact nanosecond laser featuring a single lamp with dual-rod design. The flash lamp has a long service life and is easy to replace. The output beam has a flat-top distribution. The single wavelength and dual-wavelength options are available to output 800mJ or 1.2J respectively at a wavelength of 1064nm. It can also provide supporting components such as articulated arm, control screen, power supply, water cooler, etc. This series of products features compact design, high stability, excellent beam quality, and high energy output. They are widely used in biomedical and analytical instrument industries, such as tattoo removal, pigmentation removal, skin rejuvenation, LIBS, and other fields.

Key Features

- ◆ Single and dual wavelength outputs are optional
- ◆ Multiple energy options available
- ◆ Compact design, easy to integrate
- ◆ Excellent beam quality, top hat beam profile
- ◆ High cost-effectiveness

Applications

- | | |
|--|----------------------------------|
| Biomedical applications | Laser-induced fluorescence (LIF) |
| Tattoo removal | Particle image velocimetry(PIV) |
| Pigmentation removal | Laser-based ultrasound detection |
| Skin rejuvenation | Laser shock processing(LSP) |
| Tissue ablation | Differential absorption lidar |
| Laser ranging | Raman spectroscopy |
| Micromachining | Non-linear optics |
| Laser-induced breakdown spectroscopy(LIBS) | |

Technical Specifications

Wavelength (nm)	1064 / 532	
Repetition rate (Hz)	1~10	
Pulse energy (mJ)	800mJ@1064nm, 400mJ@532nm	1200mJ@1064nm, 600mJ@532nm
Energy stability RMS	<2%@1064nm, <3%@532nm	
Other parameters		
Pulse width FWHM ¹ (ns)	<8	
Beam full divergence (typ., mrad)	Horizontal @1/e ²	<5
	Vertical @1/e ²	<5
Pointing stability ² (μrad)	<50	
Time jitter ³ (RMS,ns)	<0.5	
Beam diameter ⁴ (mm)	~9.5	~10.5
Spatial profile	Top hat	
Polarization state	linear polarization	
Cooling method	water cooling	
Electrical Supply	220V/110V±10%AC, 50/60Hz	
Power consumption	<700W	
Environment requirements	temperature 18~35°C, humidity <75%	

1. Full Width at Half Maximum (FWHM).
2. Deviation from beam mean centroid.
3. With respect to external trigger.
4. Measurement at a distance of 10cm from the laser outlet.

Others:

Unless otherwise specified, all the data in the above table are the typical values obtained from testing at a wavelength of 1064nm, and the final data is subject to the final test report.

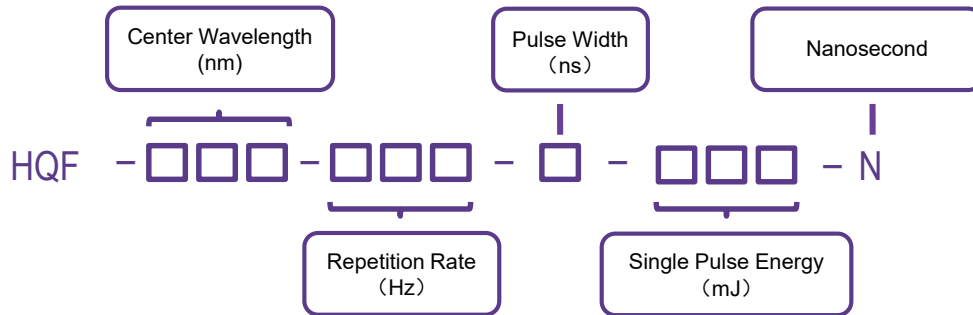
Lasers with wavelength at 355nm or 266nm can be customized upon request.

Customizable long pulse function.

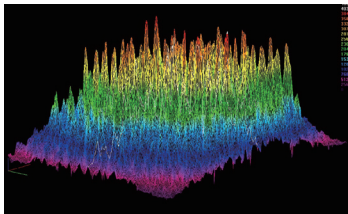
Order Information

Wavelength (nm)	Part Number	Repetition Rate (Hz)	Single Pulse Energy (mJ)	Pulse Width (ns)
1064/532	HQF-1064/532-10-6-800/400-N	1~10	800@1064nm 400@532nm	<8
	HQF-1064/532-10-6-1200/600-N	1~10	1200@1064nm 600@532nm	<8

Part Numbering Schema



Product Characteristics Diagrams

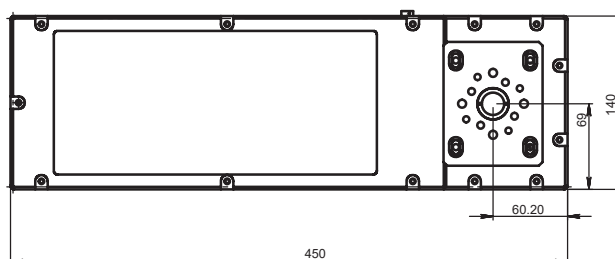
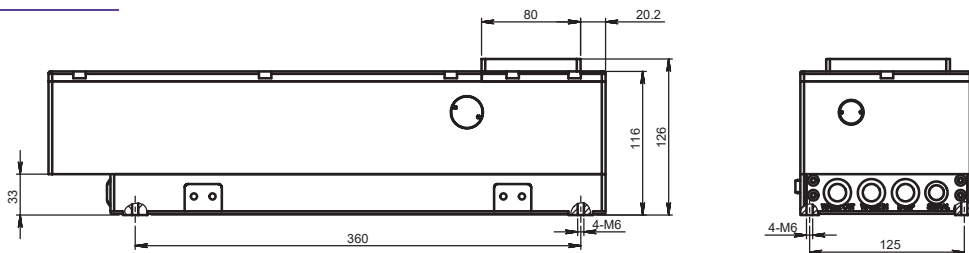


Beam intensity distribution



Beam Profile

Mechanical Drawings (in mm)



HQF-1064/532-10-6-800/400-N & HQF-1064/532-10-6-1200/600-N

