



FL-509-LN-L/1mW-1W

LOW-NOISE FIBER LASER AT 509nm

The 509nm low-noise laser has the characteristics of ultra-stable output power, Narrow line width, excellent beam quality and extremely low relative intensity noise(RIN). Which is widely used in Optical lattices, Atomic cooling and scientific research , etc.



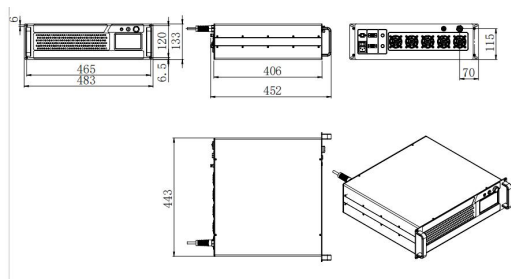
SPECIFICATIONS

Wavelength (nm)	509±1		
Operating mode	CW		
Free space output power (mW)	1-100mW	100-500mW	500mW-1W
Fiber coupled output power (mW)	1-50	50-250	250-500
Power stability (rms, 4 hours ±3°C)	<2%, <1%		
Longitudinal mode	Single		
Current adjustment range	1-100%		
Spectral linewidth (nm)	<0.002		
Relative intensity noise (DC-3MHz)	<0.1%, <0.05%		
Frequency shift (MHz)(over ±2°Cand 8hours)	<±200		
M ²	TEM ₀₀ , <1.1		
Fiber core diameter	0.14NA		
Fiber connector ¹	FC/APC		
Fiber length(m) ²	1		
Fiber Jacket	PVC, Metal optional		
Beam diameter (mm)	~1@free space output		
Pointing stability over temperature (urad/°C)	<50		
Polarization ratio(dB)	>15 Horizontal (Vertical optional)		
Warm-up time (minutes)	<30		
Cooled method	Air cooled/Water cooled (optional)		
Operating temperature (°C)	15-30		
Operating voltage (VAC)	110/220V		
Expected lifetime (hours)	>10000		



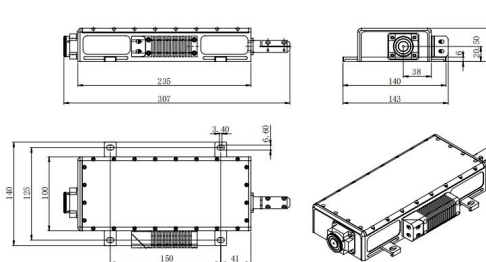
LASER HEAD (Driver integrated)³

Fundamental Frequency



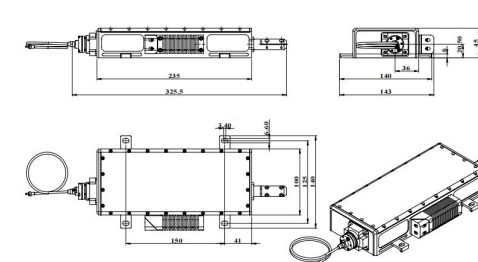
452(L)×483(W) ×133(H) mm³, 10kg

Second harmonic (Free space)

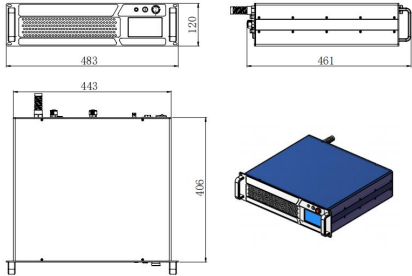
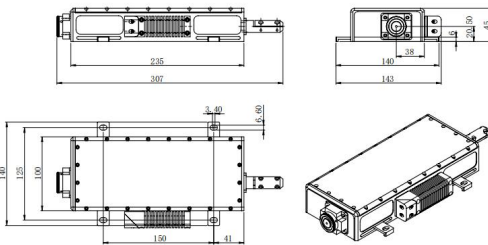
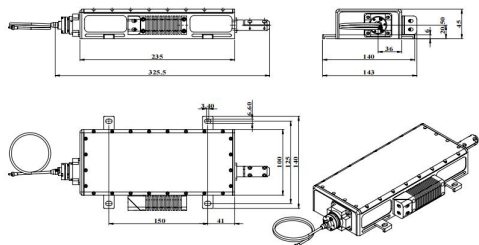


307(L)×143(W) ×45(H) mm³, 1.3kg

Second harmonic (Fiber coupled)



325.5(L)×143(W) ×45(H) mm³, 1.4kg

LASER HEAD (Driver integrated) ⁴		
Fundamental Frequency	Second harmonic (Free space)	Second harmonic (Fiber coupled)
 483(L)×461(W)×120(H) mm³, 11kg	 307(L)×143(W)×45(H) mm³, 1.3kg	 325.5(L)×143(W)×45(H) mm³, 1.4kg

1 Other output mode can be customized.

2 Other lengths are available on request.

3 Air cooled.

4 Water cooled.