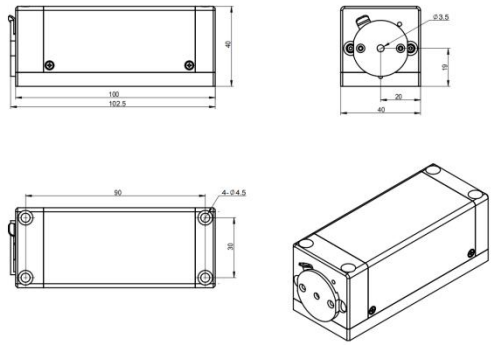
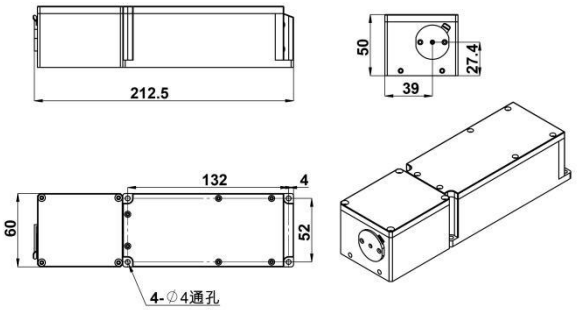
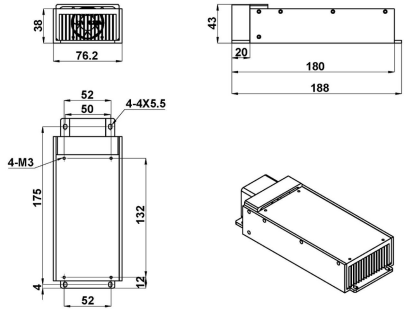
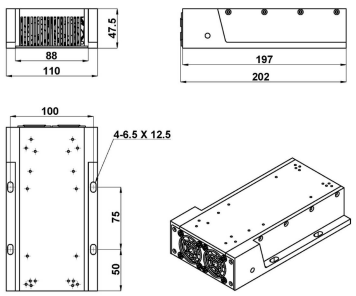
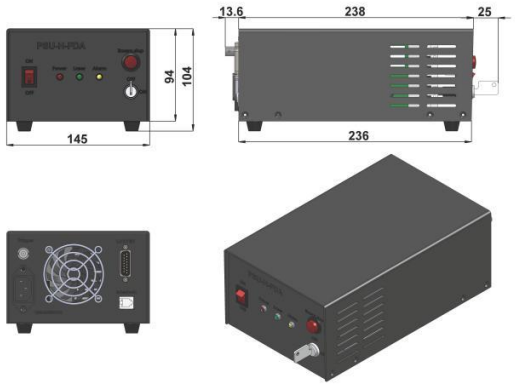
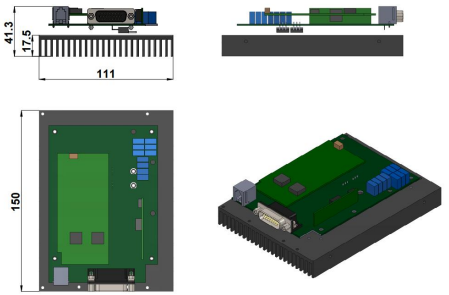
Lasers for Low Frequency Raman

SLM Laser with High Spectral purity

The all-solid-state single longitudinal mode laser features an ultra-compact, long lifetime, easy operating, It has high spectral purity within ±5cm^{-1} of the main peak and perfectly suited for low-frequency Raman spectroscopy.

SPECIFICATIONS

Model	MSL-S-532-Raman	MSL-U-532-Raman
Wavelength (nm)	532±0.05 (air condition)	
Output power (mW)[1]	1-150	1-500
Power stability (rms, 4 hours ±3°C)	<0.5%	
Transverse mode	TEM_{00}	
Longitudinal mode	Single	
Operating mode	CW	
Spectral line width (MHz)	1MHz (<3×10^{-5}cm^{-1})	
Frequency shift (MHz) (over ±2°C and 8 hours)	<±200 (<0.07cm^{-1})	
Wave number cut-off for raman spectrum (cm^{-1})	<5	
Spectral purity @±0.14nm (5cm^{-1}) from the main peak	>60dB	
Spectral purity @±1.4nm (50cm^{-1}) from the main peak	>80dB	
M^2	<1.1	
Beam diameter at the aperture (1/e^2 ,mm)	<1.0	
Beam divergence, full angle (mrad)	<1.2	
Noise of amplitude (rms, 20Hz-20MHz)	<0.2%	
Polarization ratio	>100:1, Horizontal (Vertical optional)	>100:1, Vertical (Horizontal optional)
Pointing stability (μrad) (over 2 hours after warm-up and ±3°C)	<50	
Pointing stability over temperature (μrad/°C)	<8	
Warm-up time (minutes)	<5	
Beam height from base plate (mm)	19	27.4
Power supply (100-240VAC)	/	PSU-H-FDA
Operating voltage (VDC)	12V/3A	PSU-SR-OEM (12V/25A)
Operating temperature (°C)	15-35	
Storage temperature (°C)	-10-50	
Expected lifetime (hours)	>10000	

LASER HEAD (DRIVER Integrated) (MSL-S-532-Raman)	LASER HEAD (MSL-U-532-Raman)[2]	HEATSINK (optional TC-04-FS)
		
102.5 (L) ×40 (W) ×40(H) mm³, 0.36kg	212.5 (L)×60(W) ×50(H) mm³, 1.0 kg	188(L)×76.2(W)×43(H) mm³, 0.65 kg
HEATSINK (optional TC-02-FS)	POWER SUPPLY (PSU-H-FDA)[3]	DRIVER (PSU-SR-OEM)[3]
		
202(L)×110(W)×47.5(H) mm³, 1.25 kg	276.6(L) ×145(W) ×103.6(H) mm³, 2.3 kg	150(L) ×111(W) ×41.3(H) mm³, 0.8kg

1 Any power level can be selected in this range.

2 The laser head needs to be used on a heat sink with good heat dissipation.

3 Fixed output power.