



**MSL-FN-xxx-S series**

**FREQUENCY STABILIZED SLM LASER**

Single longitudinal mode, frequency stabilized laser is made features of stable frequency and low frequency noise, which is used in optical frequency standards, gravitational wave detection, tests of fundamental physics, atomic clocks, high resolution spectrum, Laser Radar, precision measurement, etc.



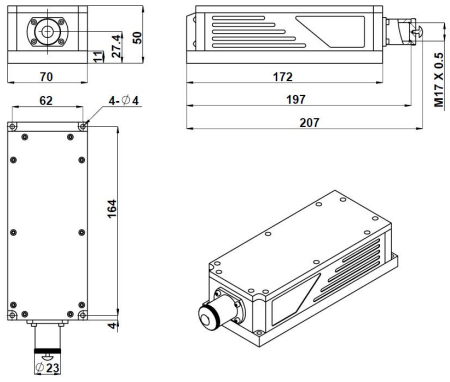
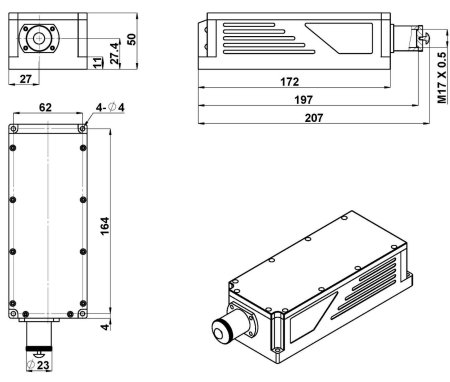
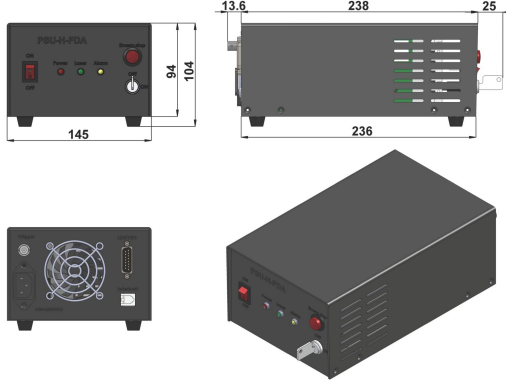
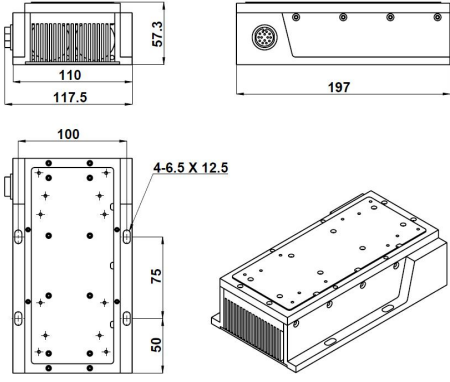
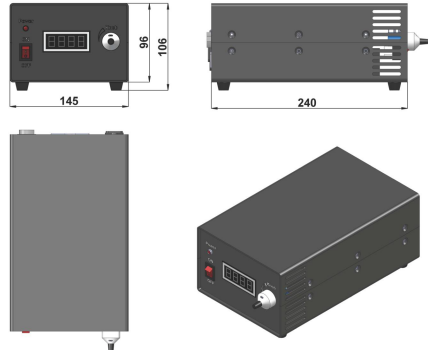
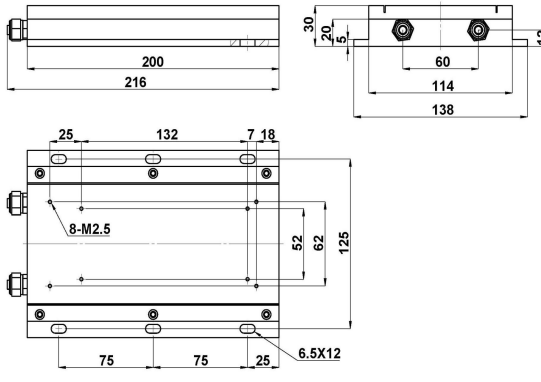
**SPECIFICATIONS**

Part number	MSL-FN-360-S	MSL-FN-457-S		MSL-FN-473-S		MSL-FN-532-S	MSL-FN-556-S
Wavelength (nm)	360±1	457±1		473±1		532±1	556±1
Output power (mW)	1-50	1-150	150-350	1-50	50-100	1-400	1-100
Power stability (rms, over 4 hours)	<3%, <2%, <1%	<3%, <2%, <1%	<3%, <2%	<3%, <2%, <1%	<3%, <2%	<3%, <2%, <1%	
Transverse mode	TEM <sub>00</sub>		Near TEM <sub>00</sub>	TEM <sub>00</sub>			
Longitudinal mode	Single						
Operating mode	CW						
Spectral line width (nm)	<0.00001						
Coherent length (m)	>50						
Noise of amplitude (rms, 1Hz~20MHz)	<1%, <0.5%					<0.5%	<1%, <0.5%
M <sup>2</sup> factor	<1.2					<1.2, <1.1	<1.2
Beam diameter at the aperture (1/e <sup>2</sup> , mm)	<1.2	<2.0	<2.5, typical <2.0			<1.5	<2.0
Beam divergence, full angle (mrad)	<1.0	<1.2					
Polarization ratio	>50:1, >100:1, Optional Horizontal (Vertical Optional)		>100:1, Vertical (Horizontal Optional)				
Frequency shift over 8 hours (MHz)	<±200						
Frequency shift with Temp (MHz/°C)	<200						
Pointing stability after warm-up (mrad)	<0.05						
Warm-up time (minutes)	<10	<5					
Beam height from base plate at TC-01 (mm)	84.7						
Extra heat sink	TC-01						
Operating temperature (°C)	10~35						
Laser head consumption(W)	20 (typical), <30 (40°C) (TC-01/Water cooling Optional)						
Power supply (90-264VAC)	PSU-H-FDA						
Expected lifetime (hours)	/	10000					
Warranty	1 year						



**SPECIFICATIONS**

Part number	MSL-FN-561-S	MSL-FN-639-S	MSL-FN-656.5-S	MSL-FN-660-S	MSL-FN-671-S		MSL-FN-721-S	
Wavelength (nm)	561±1	639±1	656.5±1	660±1	671±1		721±1	
Output power (mW)	1-150	1-300	1-50	1-20	1-300	300-500	1-50	50-100
Power stability (rms, over 4 hours)	<3%, <2%, <1%			<3%, <2%	<3%, <2%, <1%	<3%, <2%	<3%, <2%	
Transverse mode	TEM <sub>00</sub>							
Longitudinal mode	Single							
Operating mode	CW							
Spectral line width (nm)	<0.00001							
Coherent length (m)	>50	>40	>50					
Noise of amplitude (rms, 1Hz~20MHz)	<1%, <0.5%							
M <sup>2</sup> factor	<1.2	<1.2, <1.1	<1.2	<1.2	<1.2, <1.1	<1.2	<1.5	
Beam diameter at the aperture (1/e <sup>2</sup> , mm)	<2.0	<1.5	<2.0	<2.0, typical<1.5			<1.5	
Beam divergence, full angle (mrad)	<1.2	<1.5	<1.2					
Polarization ratio	>100:1, Vertical (Horizontal Optional)	>100:1, Horizontal (Vertical Optional)	>100:1, Vertical (Horizontal Optional)				>100:1, Horizontal (Vertical Optional)	
Frequency shift over 8 hours (MHz)	<±200	<±100 MHz (±0.15pm)	<±200					
Frequency shift with Temp (MHz/°C)	<200	<40 MHz/°C (0.05pm/°C)	/			<200		
Pointing stability after warm-up (mrad)	<0.05							
Warm-up time (minutes)	<5	<10	<5					
Beam height from base plate at TC-01 (mm)	84.7							
Extra heat sink	TC-01							
Operating temperature (°C)	10~35							
Laser head consumption(W)	20 (typical) , <30 (40°C) (TC-01/Water cooling Optional)							
Power supply (90-264VAC)	PSU-H-FDA							
Expected lifetime (hours)	10000							
Warranty	1 year							

LASER HEAD	LASER HEAD (MSL-FN-360)	POWER SUPPLY
 <p style="text-align: center;">197(L)×70(W)×50(H) mm<sup>3</sup>, 1.5 kg</p>	 <p style="text-align: center;">197(L)×70(W)×50(H) mm<sup>3</sup>, 1.5 kg</p>	 <p style="text-align: center;">276.6(L) ×145(W) ×103.6(H) mm<sup>3</sup>, 2.3 kg</p>
TC-01 HEAT SINK	TC-01 HEAT SINK POWER SUPPLY	Water cooling Optional
 <p style="text-align: center;">197(L)×117.5(W) ×57.3(H) mm<sup>3</sup>, 1.6 kg</p>	 <p style="text-align: center;">277(L) ×145(W) ×106(H) mm<sup>3</sup>, 2.6 kg</p>	 <p style="text-align: center;">216(L)×138(W) ×30(H) mm<sup>3</sup>, 1.2kg</p>