## Opto Engine LLC

**Data sheet** 

Rev. 2102

MSL-FN-556/1~100mW



## SINGLE LONGITUDINAL MODE GREEN LASER AT 556nm

All solid state single longitudinal mode green laser at 556nm is made features of ultra compact, long lifetime, low cost and easy operating, which is used in DNA sequencing, flow cytometry, cell sorting, optical instrument, spectrum analysis, interference, measurement, holography, physics experiment, etc.









## SPECIFICATIONS

Wavelength (nm)         556±1           Operating mode         CW           Output power (mW)         >1, 5, 10, 20,, 100           Power stability (rms, over 4 hours)         <1%, <2%, <3%, <5%           Transverse mode         TEM₀₀           Longitudinal mode         Single           Spectral linewidth (nm)         <0.00001           Coherent length (m)         >50           Noise of amplitude (rms, 1Hz~20MHz)         <1%, typical<0.5%           M² factor         <1.2           Beam diameter at the aperture (1/e², mm)         <2.0           Beam divergence, full angle (mrad)         <1.2           Polarization ratio         >100:1, Vertical±5 degree (Horizontal Optional)           Warm-up time (minutes)         <10           Pointing stability after warm-up (mrad)         <0.05           Beam height from base plate (mm)         27.4           Operating temperature (°C)         15~35           Power supply (90-264VAC)         PSU-H-FDA           Expected lifetime (hours)         10000		
Output power (mW)	Wavelength (nm)	556±1
Power stability (rms, over 4 hours) $<1\%, <2\%, <3\%, <5\%$ Transverse mode $<$ TEM <sub>00</sub> Longitudinal mode $<$ Single $<$ Spectral linewidth (nm) $<$ 0.00001  Coherent length (m) $<$ 50  Noise of amplitude (rms, 1Hz~20MHz) $<$ 1%, typical<0.5% $<$ 1.2  Beam diameter at the aperture (1/e², mm) $<$ 2.0  Beam divergence, full angle (mrad) $<$ 1.2  Polarization ratio $<$ 100:1, Vertical±5 degree (Horizontal Optional) $<$ Warm-up time (minutes) $<$ 10  Pointing stability after warm-up (mrad) $<$ 0.05  Beam height from base plate (mm) $<$ 27.4  Operating temperature ( $<$ C) PSU-H-FDA	Operating mode	CW
Transverse mode  Longitudinal mode  Single  Spectral linewidth (nm)  Coherent length (m)  Noise of amplitude (rms, 1Hz~20MHz)  M² factor  Beam diameter at the aperture (1/e², mm)  Beam divergence, full angle (mrad)  Varm-up time (minutes)  Pointing stability after warm-up (mrad)  Beam height from base plate (mm)  Operating temperature (°C)  Power supply (90-264VAC)  Toologout  TEM <sub>00</sub> All (1.2)  All (1.2)  Polarization ratio  Pointing stability after warm-up (mrad)  All (2.05)  Stability after warm-up (mrad)  All (3.05)  Power supply (90-264VAC)  PSU-H-FDA	Output power (mW)	>1, 5, 10, 20,, 100
Longitudinal mode Single Spectral linewidth (nm) Coherent length (m) >50 Noise of amplitude (rms, 1Hz~20MHz)  M² factor Seam diameter at the aperture (1/e², mm) Seam divergence, full angle (mrad) Varm-up time (minutes) Polarization ratio Varm-up time (minutes) Single <a href="mailto:volume=" mail<="" mailto:volume="mailto:volume=" td=""><td>Power stability (rms, over 4 hours)</td><td>&lt;1%, &lt;2%, &lt;3%, &lt;5%</td></a>	Power stability (rms, over 4 hours)	<1%, <2%, <3%, <5%
Spectral linewidth (nm)	Transverse mode	$TEM_{00}$
Coherent length (m) >50  Noise of amplitude (rms, 1Hz~20MHz) <1%, typical<0.5%  M² factor <1.2  Beam diameter at the aperture (1/e², mm) <2.0  Beam divergence, full angle (mrad) <1.2  Polarization ratio >100:1, Vertical±5 degree (Horizontal Optional)  Warm-up time (minutes) <10  Pointing stability after warm-up (mrad) <0.05  Beam height from base plate (mm) 27.4  Operating temperature (°C) 15~35  Power supply (90-264VAC) PSU-H-FDA	Longitudinal mode	Single
Noise of amplitude (rms, 1Hz~20MHz) <1%, typical<0.5%  M² factor <1.2  Beam diameter at the aperture (1/e², mm) <2.0  Beam divergence, full angle (mrad) <1.2  Polarization ratio >100:1, Vertical±5 degree (Horizontal Optional)  Warm-up time (minutes) <10  Pointing stability after warm-up (mrad) <0.05  Beam height from base plate (mm) 27.4  Operating temperature (°C) 15~35  Power supply (90-264VAC) PSU-H-FDA	Spectral linewidth (nm)	<0.00001
M² factor <a href="mailto:scheme">&lt;1.2</a> Beam diameter at the aperture (1/e², mm) <a href="mailto:scheme">&lt;2.0</a> Beam divergence, full angle (mrad) <a href="mailto:scheme">&lt;1.2</a> Polarization ratio >100:1, Vertical±5 degree (Horizontal Optional) Warm-up time (minutes) <a href="mailto:scheme">&lt;10</a> Pointing stability after warm-up (mrad) <a href="mailto:scheme">&lt;0.05</a> Beam height from base plate (mm) 27.4 Operating temperature (°C) 15~35 Power supply (90-264VAC) PSU-H-FDA	Coherent length (m)	>50
Beam diameter at the aperture (1/e², mm) <2.0  Beam divergence, full angle (mrad) <1.2  Polarization ratio >100:1, Vertical±5 degree (Horizontal Optional)  Warm-up time (minutes) <10  Pointing stability after warm-up (mrad) <0.05  Beam height from base plate (mm) 27.4  Operating temperature (°C) 15~35  Power supply (90-264VAC) PSU-H-FDA	Noise of amplitude (rms, 1Hz~20MHz)	<1%, typical<0.5%
Beam divergence, full angle (mrad)  Polarization ratio  >100:1, Vertical±5 degree (Horizontal Optional)  Warm-up time (minutes)  Pointing stability after warm-up (mrad)  Beam height from base plate (mm)  Operating temperature (°C)  Power supply (90-264VAC)  PSU-H-FDA	M <sup>2</sup> factor	<1.2
Polarization ratio >100:1, Vertical±5 degree (Horizontal Optional)  Warm-up time (minutes) <10  Pointing stability after warm-up (mrad) <0.05  Beam height from base plate (mm) 27.4  Operating temperature (°C) 15~35  Power supply (90-264VAC) PSU-H-FDA	Beam diameter at the aperture (1/e², mm)	<2.0
Warm-up time (minutes) <10 Pointing stability after warm-up (mrad) <0.05  Beam height from base plate (mm) 27.4  Operating temperature (°C) 15~35  Power supply (90-264VAC) PSU-H-FDA	Beam divergence, full angle (mrad)	<1.2
Pointing stability after warm-up (mrad) <0.05  Beam height from base plate (mm) 27.4  Operating temperature (°C) 15~35  Power supply (90-264VAC) PSU-H-FDA	Polarization ratio	>100:1, Vertical±5 degree (Horizontal Optional)
Beam height from base plate (mm) 27.4  Operating temperature (°C) 15~35  Power supply (90-264VAC) PSU-H-FDA	Warm-up time (minutes)	<10
Operating temperature (°C) 15~35 Power supply (90-264VAC) PSU-H-FDA	Pointing stability after warm-up (mrad)	<0.05
Power supply (90-264VAC) PSU-H-FDA	Beam height from base plate (mm)	27.4
	Operating temperature ( $^{\circ}$ C)	15~35
Expected lifetime (hours) 10000	Power supply (90-264VAC)	PSU-H-FDA
	Expected lifetime (hours)	10000
Warranty 1 year	Warranty	1 year





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

