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Registras – Lietuvos Respublikos Juridinių asmenų registras

MICROLASER		STA-01SH-OEMAR	
SPECIFICATIONS ¹			
Parameter ²		Value	Notes
Operating mode		pulsed	Repetitively passively Q-switched
Wavelength [nm]		532	Second Harmonic of Nd:YAG 1064 nm (⁴ F _{3/2} - > ⁴ I _{11/2} transition)
Average Power [mW]		≥23	Measured at 100 kHz.
Pulse Repetition Rate PRR [kHz]		100	Laser operating PRR
Pulse Duration FWHM [ps]		450 ± 50	Measured at 532 nm
Pulse Timing Jitter [ns]		<300	Expected to be less than 50 ns
Average Power	RMS	≤ 1	Over 8 hours, after 30 min warm up. Room conditions, T _{amb} = 23 ± 2 C
Stability [%]	PTP	≤ 10	
Spatial Mode		TEM ₀₀	
Half-angle beam divergence 1/e ² [μm]			Available upon request
Beam Diameter 1/e ² [mm]		0.80-1.20	
M ²		≤1.3	
Polarization		Linear, better 100:1	
Ellipticity ³ [%]		≤20	
Pulse Spectral Structure		SLM	
Interfaces		USB, External Triggering (TTL rising edge)	
Laser Head Dimensions ⁴ Height x Length x Width [mm]		99 x Ø 24	51 x 99 x 51 (including Heat sink)
Laser Controller Dimensions Height x Length x Width [mm]		51 x 179 x 150	
Laser Controller Weight [kg]		≈ 0.8 - 0.9	
Laser Head Cooling		Provided	Heat Sink (refer to environment and mounting requirements)
Laser Controller Cooling		Not provided	(refer to environment and mounting requirements)
Electrical specifications:			
Input Power Voltage		5VDC ± 0.25V	
Current		<8A	Typical < 6 A (at room temperature), cold start < 8 A
Operating environment requirements:			
Operating Conditions		T _{amb} = 23 ± 2 C, humidity 45%-60%	Non-condensing environment.
Temperature of baseplate for Laser Head mounting		<30	recommended
Temperature of baseplate for Controller mounting		<30	recommended
Warranty		5000 hours or 12 months.	Whatever occurs first.

All parameters are obtained at T_{amb} = 23.0 C ± 2.0 C. If ambient temperature range during laser operation is wider, then average power could be less stable than specified.

¹ Specifications are subject to change without notice

² Parameters are measured at 100 kHz

³ [1-(minor axis/major axis)] x 100%, zero for perfect round beam.

⁴ Overall system dimensions are shown in the drawings below.



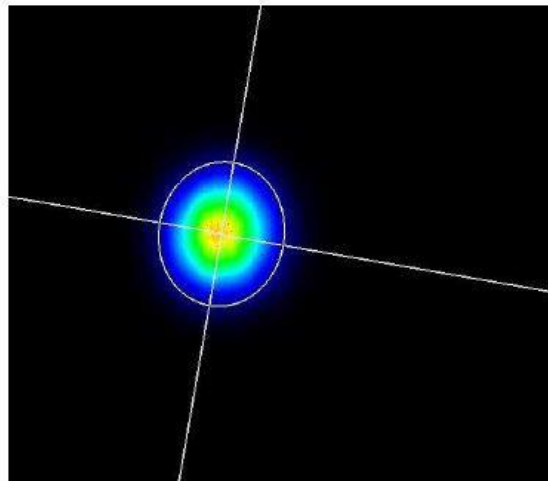
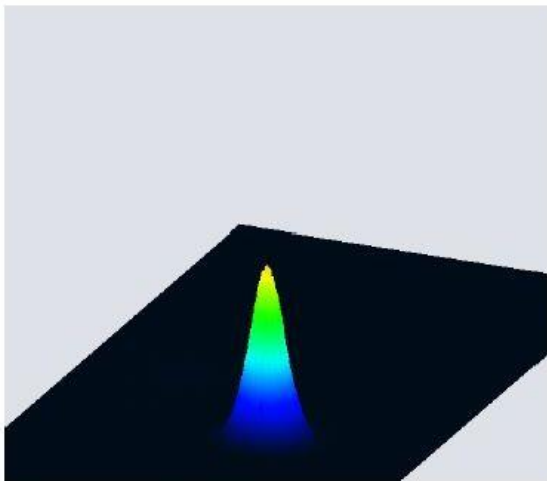
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PARAMETERS

Beam Diameter : 1/e2 along crosshair (13.5%)

Crosshair Center: Centroid

Orientation Crosshair: Auto Orient

Exposure Time: 10.00 ms (MANUAL)

Image Orientation: 0 degrees

Image Averaging: None

Active Area: 2048 x 1088

Pixel Addressing: None

Camera Gain: 1.00

ADC Level: 12 bit

Relative Position (X,Y): (0.0,0.0) μm

MEASURES

Axis (dSigma X, dSigma Y): (926.5,1060.5) μm

Effective Diameter: NA

Ellipticity: 87.4 %

Orientation: -9.8 degrees

Centroid (X,Y): (-1794.5,-611.7) μm

Peak (X,Y): (-1826.0,-599.5) μm

Peak Saturation Level: 61.4 %

Peak to Average Ratio (X,Y): (1.7,1.8)

Divergence (X,Y): (4.6,5.3) mrad

Relative Centroid (X,Y): (-1794.5,-611.7) μm

Relative Peak (X,Y): (-1826.0,-599.5) μm



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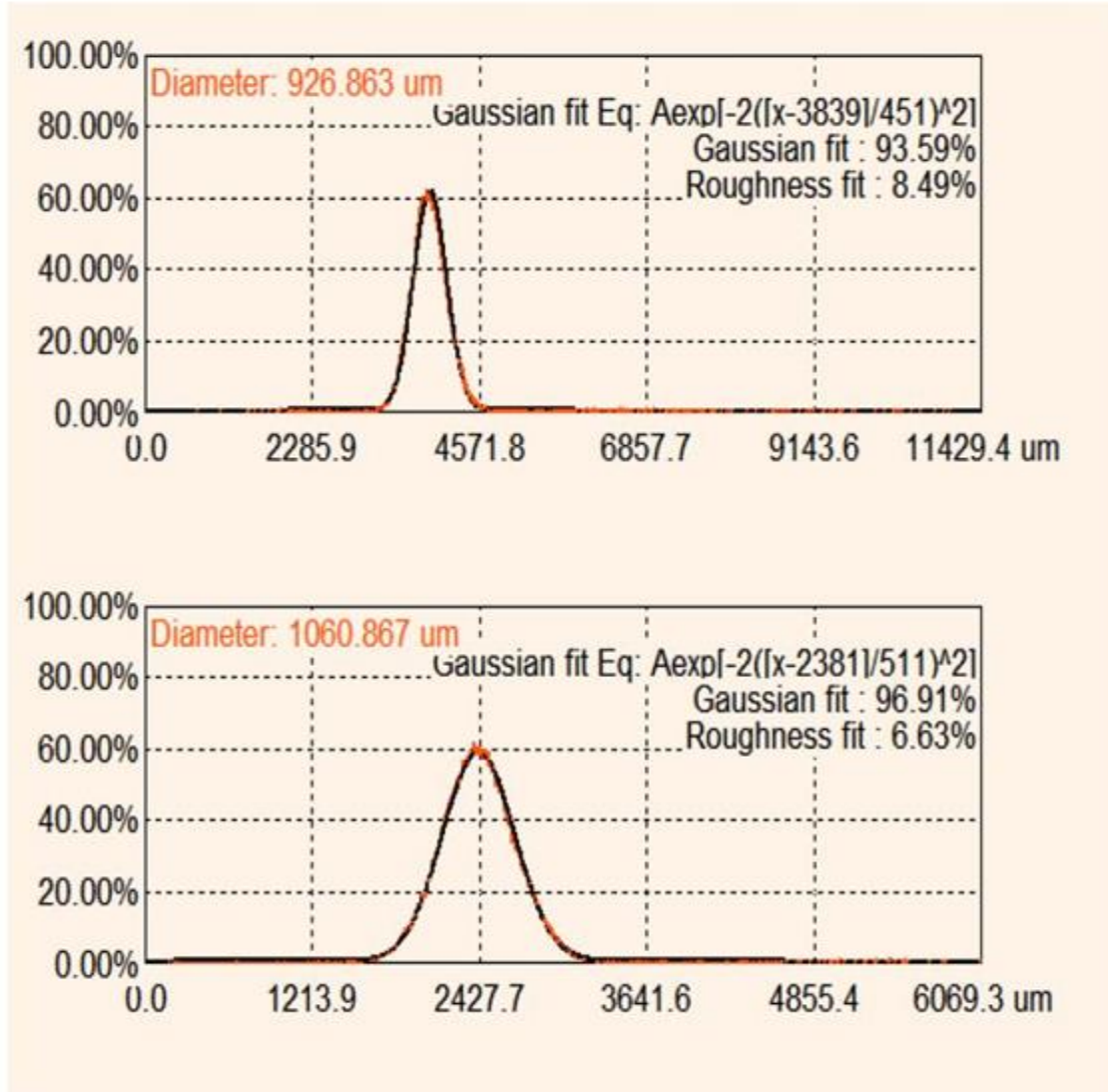


Fig.1. STA-01SH-OEMAR laser beam profile example. It may slightly change for each laser.



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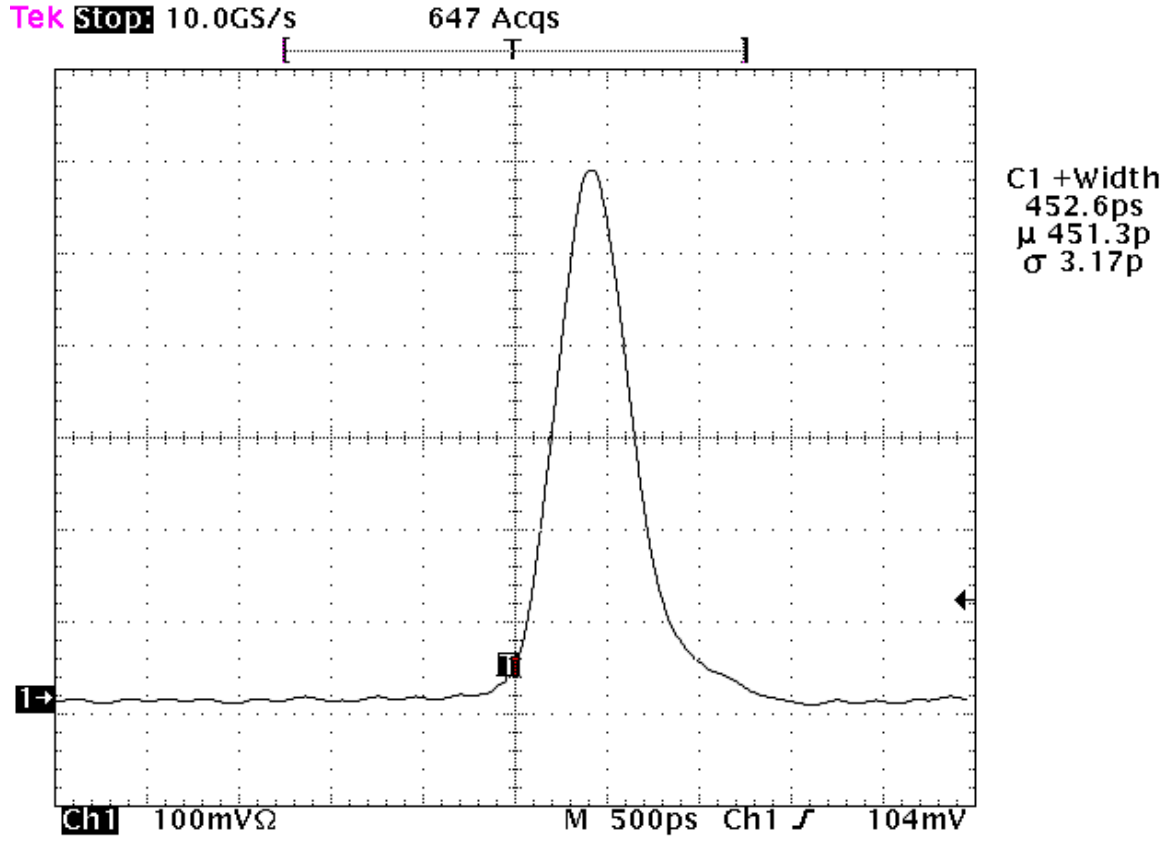


Fig.2. Pulse width at 100 kHz pulse repetition rate.

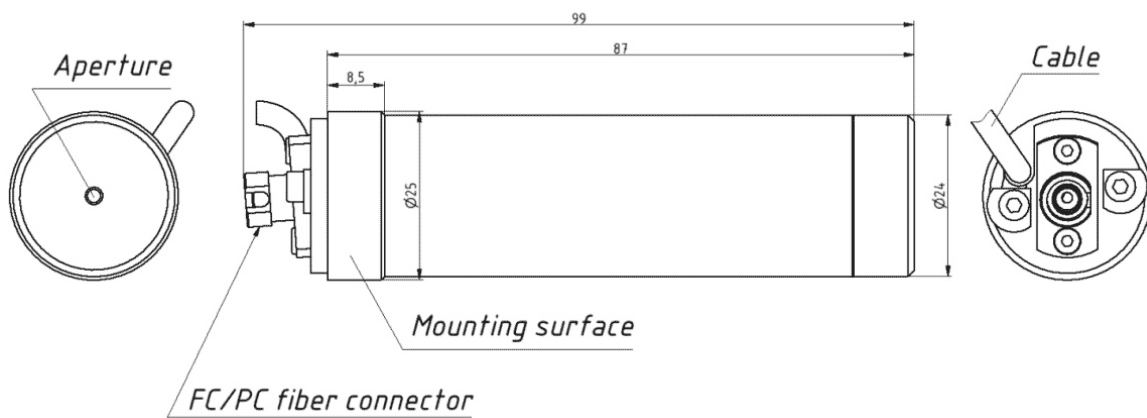


Fig.3. Dimensions of STA-01SH-OEMAR laser head.



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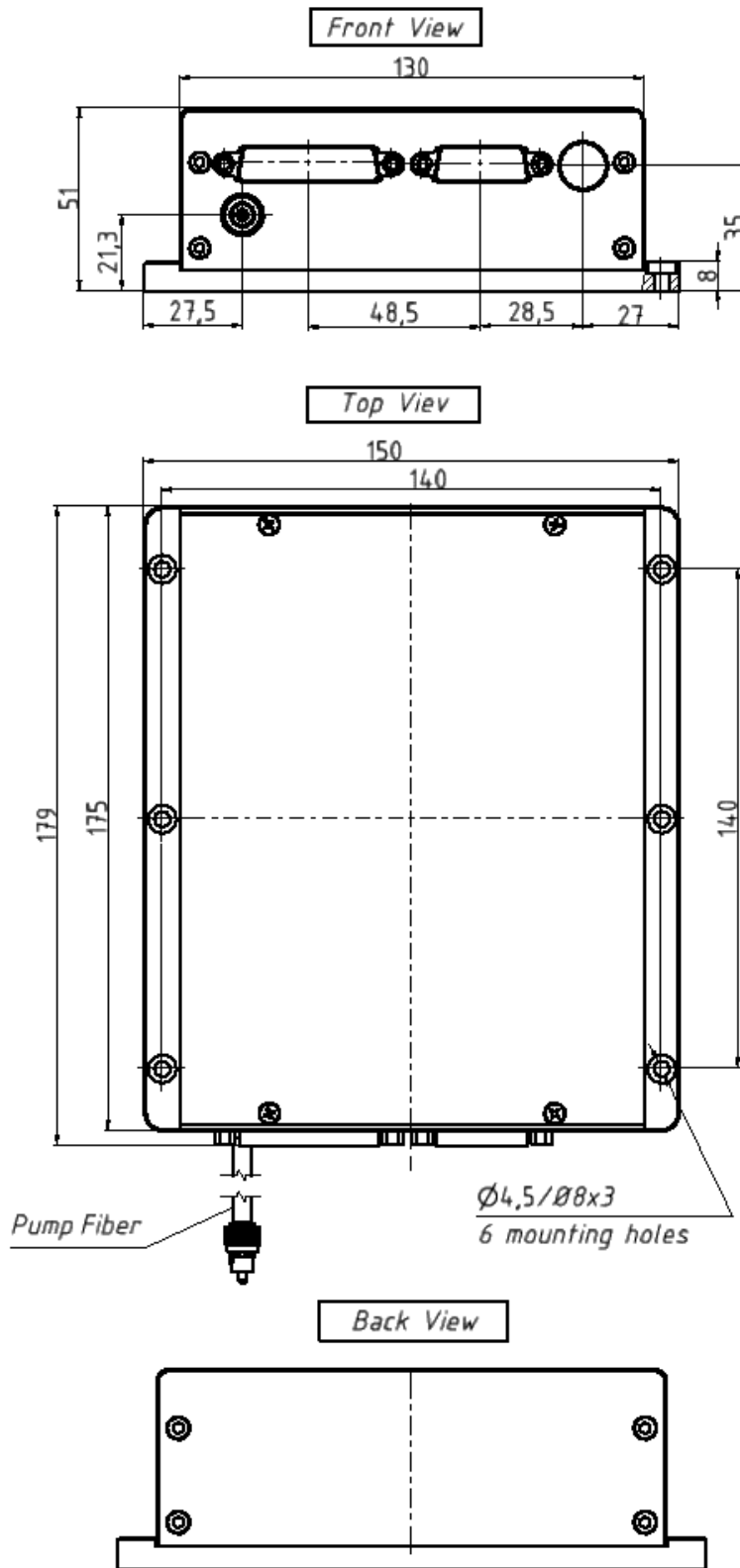


Fig.4. Dimensions of STA-01SH-OEMAR laser controller.



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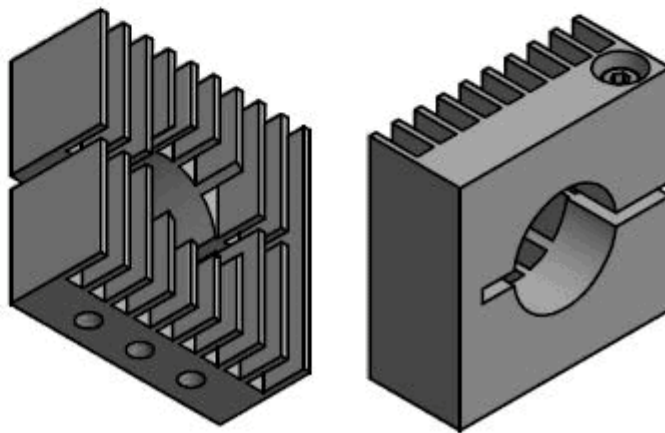
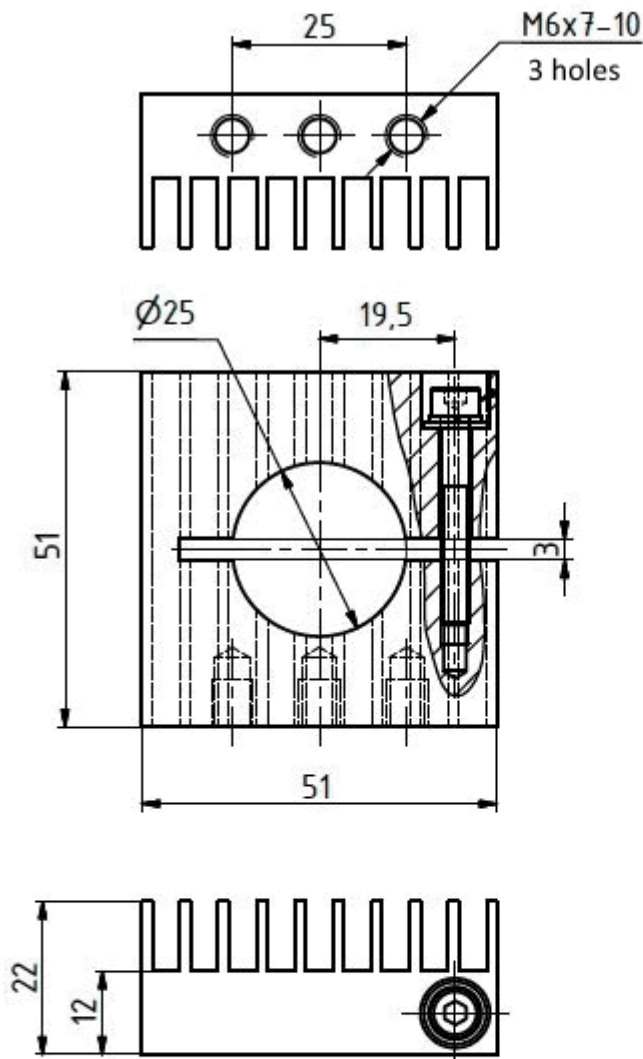


Fig.5. Dimensions of STA-01SH-OEMAR laser head heat sink.