

Picosecond Fiber Amplified Microchip PicoMega Series



KEY FEATURES

- 1064nm or 532nm
- Repetition rate up to 150 kHz
- Ultrashort pulses down to 120 ps
- Excellent beam quality – TEM00, $M^2 < 1.3$
- Efficient, air-cooled, very compact

Using the same platform as the PicoOne, the PicoMega Series brings passive Q-switching to a new realm. It generates ultra short pulses, down to 120ps of duration at repetition rates reaching 150kHz.

From Lidar to high throughput processing in applications where ultra short pulse width is a “must”, the PicoMega laser has a low cost of ownership compared to more complex picosecond lasers. It can be used as a seeder in applications where still higher power is needed.

APPLICATIONS

- Material processing
- Seeder for high power amplification
- Instrumentation and Lidar

TECHNICAL SPECIFICATIONS

	ANP-500P-000	ANG-150P-000
Wavelength	1064nm	532nm
Repetition Rate*	[100 kHz ;150 kHz]*	[100 kHz ;150 kHz]*
Constant Pulse width range (FWHM)	<200ps	<170ps
Output power	>300 mW	>120 mW
Output energy⁽¹⁾	>3μJ	>1μJ
Peak Power	>2kW	>6kW
Short term(10min) power stability⁽²⁾	TBD	<±2% rms
Long term (6 hrs) power stability⁽²⁾	TBD	<±3% rms
Beam profile	Gaussian TEM00	Gaussian TEM00
Full angle divergence @1/e²		
Horizontal	TBD	[6;10] mrad (typ. 8.2mrad)
Vertical	TBD	[3;7] mrad (typ. 5.2mrad)
M²⁽³⁾	<1.3	<1.3
Beam ellipticity⁽⁴⁾	<1.8 (typ 1.4)	<1.8 (typ 1.4)
Polarization	Linear PER>20dB	Linear PER>20dB
Option (described on page 3)	none	-xxY

*The repetition rate is fixed and factory-set at a value in this specified range. It is possible to target a fixed repetition rate in a narrower range closer to 150kHz, or to 100kHz, upon request.

NOTES

- (1) Adjustable by analog signal on utility connector of controller
- (2) For temperature variation < ± 3°C and < 3°C/hour, stability is measured with calorimeter - detector band [DC, 2Hz]
- (3) Mean average value $M = \sqrt{XY}$, X and Y being respectively the major and minor axis of the ellipse
- (4) Beam ellipticity is calculated as the ratio of the main axis far field divergence

SUPPLEMENTAL INFORMATION & OPTIONS

Preliminary information

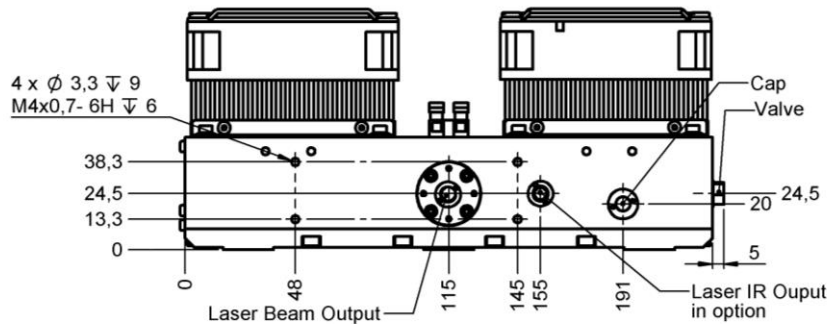
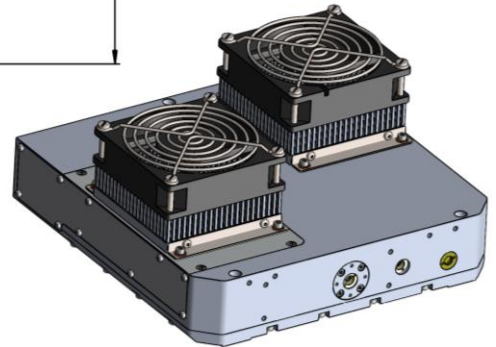
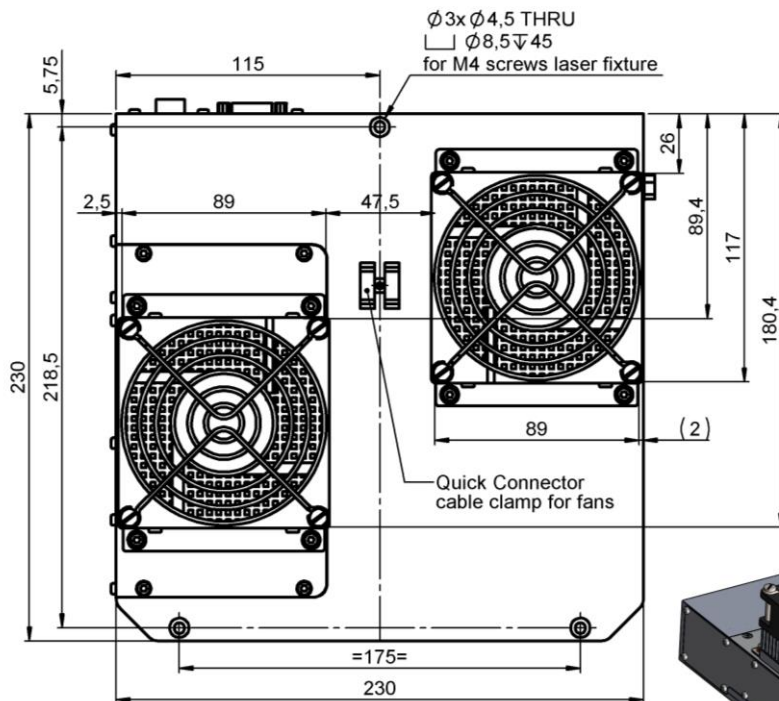
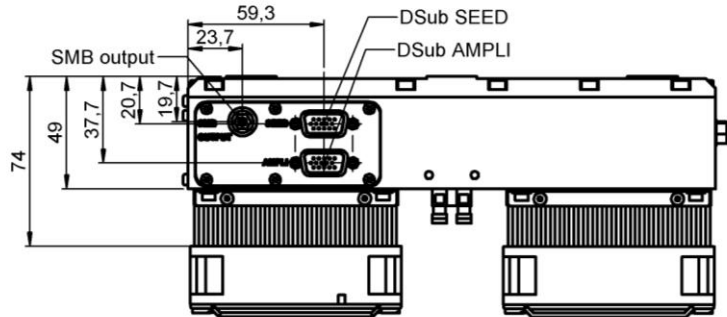
Environment Parameters	
Operating Base Plate Temperature Tolerance	+20°C, +30°C
Maximum Power Consumption	<25W
Storage Temperature	0-50°C
Shock of 11ms according to IEC 68-2-27, non operating	25g
Vibration 5Hz to 500Hz sinusoidal according to IEC 68-2-6	2g

Certification	
Laser classification according to IEC 60825-1:2007	4
CDRH compliance	No
RoHS	Yes

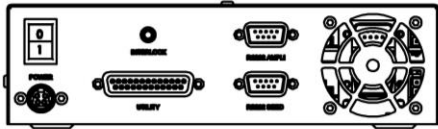
Package	
Laser Head dimensions, LxWxH	See mechanical drawings on page 4
Laser Head weight	4.5 kg
ALC-05A-DP1 controller dimensions, LxWxH	See mechanical drawings on page 5
ALC-05A-DP1 controller weight	1.1 kg

Options	
Additional Infrared Output for Synchronization (-xxY)	Additional output emitting Infrared 1064nm light that can be used for Synchronization/Monitoring. <i>The performances of this 1064nm light are not factory tested, and consequently not specified.</i>

LASER HEAD MECHANICAL DRAWINGS



ALC-05A-DP1 CONTROLLER PRELIMINARY MECHANICAL DRAWINGS



NOTES: All dimensions are in millimeters
Third Angle Projection

