

Description

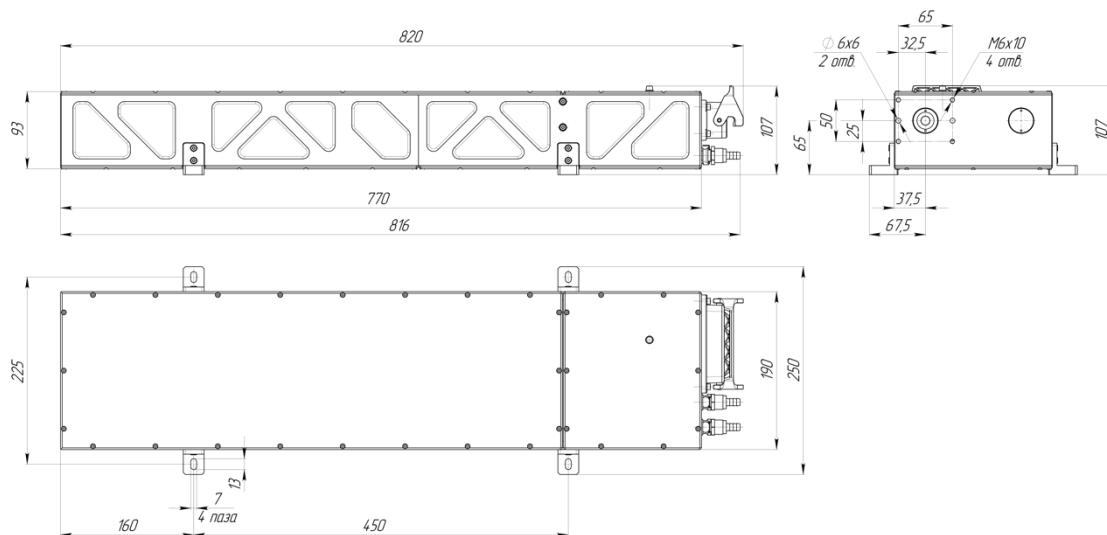
PICO-05 is a picosecond laser built up on an innovative optical scheme where the seed oscillator is replaced with a sole microchip crystal. The idea results in simplified layout, higher reliability and greatly reduced price. Pulse width is around 100ps, pulse repetition rate is up to 200kHz, output power achieves 5W at 1064nm and 200kHz.

Applications

- Micro-marking, marking of resistant materials
- Micro-hole drilling
- 3D micro-machining

Features

- Rugged alignment-free design
- Unbeatable cost effectiveness
- Easy integration with customer's systems; a variety of options



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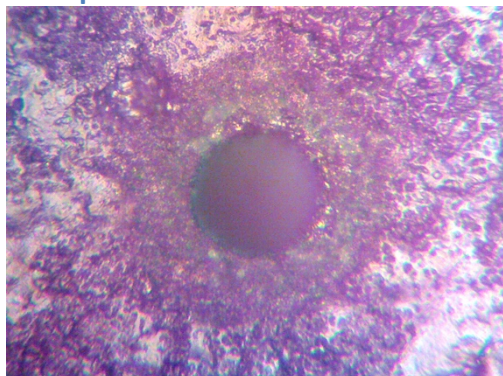
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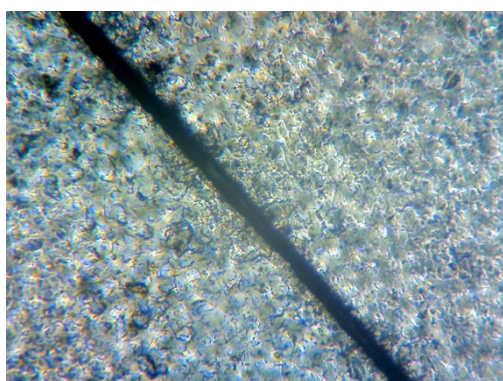
Specifications

Parameter	Value
Description	Sub-nanosecond DPSS Nd:YAG laser
Wavelength	1064nm
Pulse width	100ps
Pulse energy	Up to 25uJ @ 200kHz
Pulse repetition rate	Up to 200kHz
Output power	5W @ 200kHz
Output beam diameter (from laser head)	Approx. 1mm
M²	<1.2
Polarization	Linear, vertical
Laser head	Dimensions 770x190x100mm Weight 12kg
Power supply unit	19" rack mounted, 3U height, depth 350mm Weight 8kg
Cooling	External chiller (18C, 200W capacity)
Interfaces	Remote control user interface RS-485 machine interface

Examples of substrate treatments

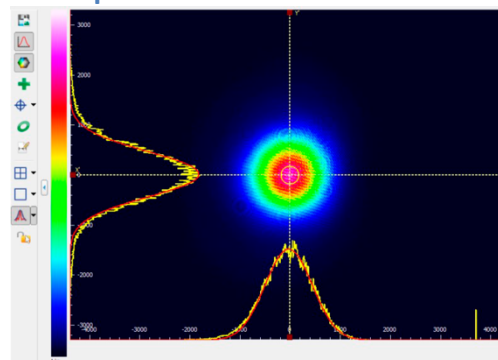


50um hole drilled in 200um thick ruby substrate



10um line on sapphire substrate

Beam profiles



Remote control, power supply, cooling units

Power supply unit is 19" rack mounted (3U height) and can be driven either via RS-485 machine interface or with 7" graphical display and touch panel.

Cooling unit is a chiller, to be purchased separately.

Options

- SHG, THG units, optionally with switchable wavelengths
- Beam shapers, scan heads, Z-axis
- Machine vision sub-system (e.g. with confocal lens)
- Process development service as well as custom made process heads are available on request