



L1-MP-Y1070

Pulsed ytterbium lasers



Applications

- ▶ Marking / engraving
- ▶ Cleaning
- ▶ Coating removal
- ▶ Scribing
- ▶ Heat treatment
- ▶ Texturing
- ▶ Ablation
- ▶ Precision cutting
- ▶ Milling



Distinctive features

- ▶ Industrial design
- ▶ Compact size
- ▶ High reliability
- ▶ Air cooling
- ▶ Average output power up to 100 W
- ▶ Beam quality $M^2 < 2$

Pulsed ytterbium fiber lasers of the L1-MP-Y1070 series generate pulsed radiation with a wavelength of $1.064 \mu\text{m}$ and an average output power of up to 100 W. The modular lasers are built in compact air-cooled housings. The laser radiation is delivered through a flexible 3 m fiber cable with a collimator at the output.

The optical isolator built into the collimator provides protection against back reflection, which makes it possible to process highly reflective materials. The laser is equipped with a built-in red pilot laser to visualise where the main radiation hits.



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Pulsed ytterbium lasers

Fiber lasers are more efficient and compact than classic solid-state lasers. Excellent processing quality is achieved thanks to the high beam quality and the wide set of parameters that can be varied when selecting the operating mode.

The L1-MP-Y1070 series lasers allow the user to change the number of pulses in a burst down to single-pulse mode. This is especially valuable when the lasers are used for micromachining, scribing, surface structuring, ablation, solar cell manufacturing, perforation, resistor trimming, marking and processing of sensitive materials.

Main specifications	10-10	20-20	30-30	50-50	100-100
Wavelength, μm 1.07	1,07				
Nominal average power, W	10	20	30	50	100
Pulse energy, mJ	1				
Pulse duration, ns	100				
Pulse repetition rate, kHz	2...500				
Pilot laser	Red				
Termination	Collimator				
Beam diameter, mm	6...9				
Beam quality, M^2	1,8				
Power consumption, W	100	120	170	270	340
Feeding fiber length, m	3*				
Supply voltage, V (DC)	24				
Dimensions, mm	215x95x286				215x140x286

* - Optionally up to 5 m.



GLOBAL LEADER IN THE LASER INDUSTRY

VPG LaserONE is a Russian company founded by the outstanding Soviet scientist Valentin Pavlovich Gapontsev, founder of the international science and technology corporation.

VPG LaserONE develops and serially produces high-efficiency fibre lasers and amplifiers, optical components, assemblies, modules, instruments, subsystems and systems for:

- Industrial laser cutting, welding, cladding, alloying, heat treatment, marking and cleaning systems.
- Scientific research.
- Fibre-optic, atmospheric and satellite optical communications, cable television.
- Surgery and biomedicine.
- Optical ranging and remote monitoring of industrial facilities and the atmosphere.
- Measurement and control systems, sensors.

In order to introduce innovative laser technologies into production, VPG LaserONE has for many years worked closely with leading domestic machine-building, metallurgical, railway and motor transport enterprises and supplies its customers with more than 600 types of ultra-high-technology laser equipment. Many devices and systems have no equivalents on the world high-tech market. All key components of fibre laser technology are manufactured in-house, which delivers:

- Fast product development.
- Efficient production methods.
- The industry's best product delivery times.
- More advanced and higher-quality solutions.
- The highest wall-plug efficiency, which reduces overall energy consumption and costs.



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1992

Foundation date



1,500+

employees



500+

R&D
specialists



>60 000 m²

facilities



100+

patents



90%

component
localization