

# Solid State Refractive Laser OLIMP-2000/213



## Specifications

Source of radiation:	solid state pulse Nd: YAG with diode pumping and Q-SW modulation
Wavelength:	213 nm
Pulse duration:	10 nsec
Pulse generation frequency:	300 Hz
Transverse profile of energy distribution:	Gaussian, TEM <sub>00</sub>
Laser beam in focus diameter:	0.5 mm
The maximum output laser energy:	1 mJ
Forming system:	"flying" spot
Auto-tracking:	on the limb and iris
Ablation zone diameter:	to 20 mm
Reaching operating mode:	30 min
Time of continuous operation:	12 hours
Weight:	160 kg
External dimensions (l×w×h):	800 mm×1000 mm×1200 mm
Laser cooling system:	liquid-filled
Power supply voltage:	220 V, 50 Hz
Power consumption:	0.9 kWh
Service life:	at least 10 years

## Clinical possibilities

Myopia up to	-15 diopters
Hypermetropia up to	+6 diopters
Myopic astigmatism up to	-6 diopters
Hypermetropic astigmatism up to	+6 diopters
Glaucoma surgery	

## Types of surgery made:

LASIK, PRK, MAGEK, Epi-LASIK, LASEK, PTK  
Personalized ablation

Registration Certificate No. ФСП 2010/08230  
Certificate of conformity № РОСС RU.ИМ25.В03771



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Mobile solid state laser system  
for refractive surgery  
and glaucoma surgery

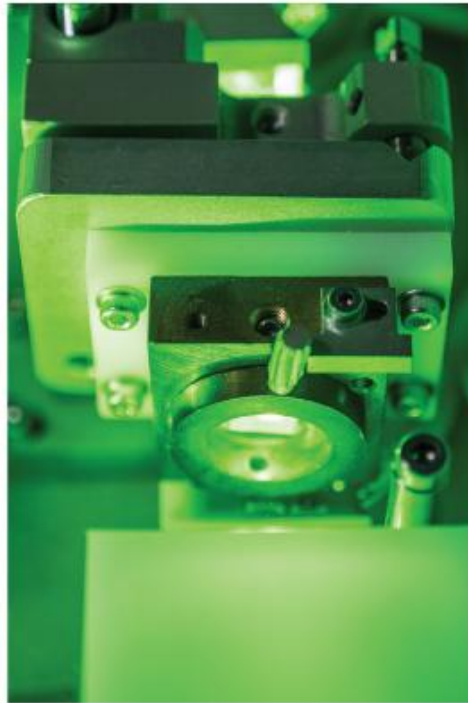
JSC «Rybinsk Instrument Making Plant»

Russia, Yaroslavl Region, Rybinsk, Serova Ave. 89, phone +7 (4852) 695387  
<http://laser-olimp.ru>

Made in Russia

# Solid state technology

A solid state nanosecond pulsed Nd:YAG laser is used for performing refractive operations with the use of solid state technology. Infrared radiation with the wavelength of  $\lambda=1064$  nm is generated by optical pumping of an yttrium aluminum garnet doped with neodymium. The working ultraviolet radiation with the wavelength of  $\lambda=213$  nm is formed by cascade transformation with the use of three nonlinear crystals



## Efficiency

Thousands of surgeries, including those with the use of personalized ablation technology showed good post-surgery results that were comparable with the published results of the surgeries performed at modern imported excimer laser installations.

## Stability

The unique system of the laser together with the peculiarities of the 213 nm wavelength ensure obtaining high quality and stable energy from pulse to pulse, from surgery to surgery.

## Safety

Absence of hazardous gases in the list of consumables guarantees safety of patients and medical personnel, and may classify the installation as environmentally safe.

## Mobility

This is a new opportunity in the world of refractive surgery. The installation may be moved around both within the same building and within mobile health programs. Easy transportation is possible due to small dimensions, low weight and modular design of the installation.

## Enhanced surgery possibilities

Customizable software provides to the surgeon a completely new personalized tool for treating glaucoma.

## Advantages of the wavelength $\lambda = 213$ nm

- The tolerance to hydration of the cornea
- Maximum absorption of corneal collagen
- Minimum energy and thermal load on the cornea
- Minimum sensitivity to fluctuations in the microclimate of the operating room
- Minimum damaging effect on optical elements

## Advantages of Solid State Technology

- No availability of consumable gas mixtures containing toxic fluorine
- No liquid nitrogen to purge the optical path
- High energy stability for the entire lifetime
- High coherence of radiation
- High quality of energy distribution in the spot
- Environmental, safety and ease of operation



## Installation Advantages

- Easy and easy maintenance
- User-friendly interface
- Multi-level error protection
- Mobility and compactness
- Possibility of transportation by any means of transport
- Long life (at least 10 years)

## Clinical Approbation

- Implemented in clinical practice since 2009
- Successfully works in three clinics of the Russian Federation
- More than 5,000 successful operations were performed

