

**Custom
Multiple
Wavelength
PIV Laser
System**

Tunable Nd:YAG-Laser System comprises of two pump lasers, harmonics generators and optical parametric oscillator connected in a single device. Pump lasers generate optical pulses of the fundamental Nd:YAG radiation (1064 nm wavelength). Beams of two lasers are combined by mirrors, polarizer and half wave plates. The fundamental Nd:YAG radiation is converted into the third harmonic (355 nm) in harmonics generator. The optical parametric oscillator (OPO) is a solid state continuously

tunable source of visible and near IR radiation. Based on type II BBO nonlinear crystals, the OPO covers 420–2300 nm wavelengths with up to 25% conversion efficiency when pumped by third harmonic of a pulsed Nd:YAG laser. The pumping beam is directed by dichroic mirror to the OPO cavity. Wavelength tuning is achieved by rotation of nonlinear crystals. Complete system consists of three separate units with OPO and one unit with only second harmonic generation for 532 nm output (Figure 1).

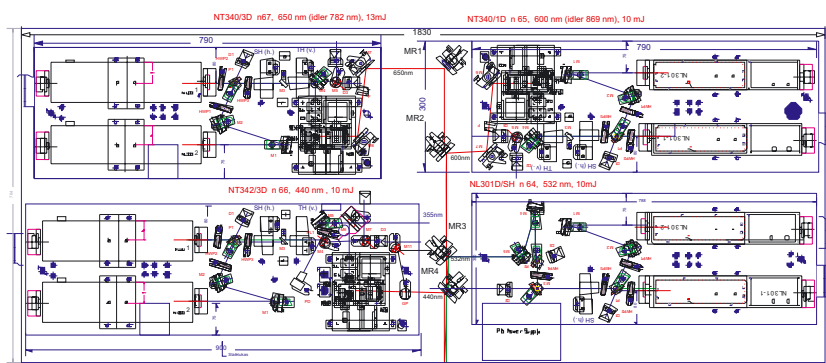


Figure 1. Optical layout of the system

SPECIFICATIONS

Pulse duration (FWHM), ns ¹⁾	4–6
Adjustable delay between pulses	From 30 ns to 7.5 ms
Repetition rate, Hz	10
Optical pulse jitter, ns ²⁾	±0.5
System output, mJ	
@440 nm	~15, ~15
@532.1 nm	~15, ~15 ³⁾
@600 nm	~10, ~10
@650 nm	~15, ~15

¹⁾ At 532, FWHM

²⁾ With respect to syncpulse, StDev.

³⁾ Intentionally lowered by misaligning half wave plate before SH crystal)

EKSPLA distributor in United Kingdom:



Ingcrys Laser Systems Ltd
14 Parris Road, Stokenchurch,
High Wycombe, Bucks. UK
Tel.: + 44 (0) 1494 482541
Fax: + 44 (0) 1494 482873
Email: sales@ingcrys.com
www.ingcrys.com