



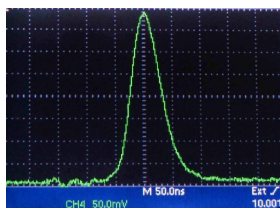
The RGB-ALFA series is family of compact master oscillator flash lamp pumped Nd:YAG lasers producing emissions in the nanosecond regime. Design features include a highly stable passively Q-switched oscillator and frequency conversion to the second and/or third harmonics by most efficient NLO crystals. The lasers produce Single Longitudinal Mode and TEM00 near diffraction limited radiation at a variety of energies, wavelengths and repetition rates.

In addition to constituting highly versatile laboratory tools all ALFA series lasers are rigorously designed to meet the high stability standards required for scientific and technological applications.

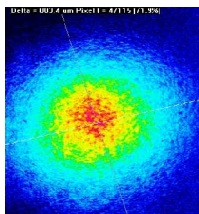
Red, nm	Green, nm	Blue, nm
671	540	447
669	527	446
657	524	438

Wavelengths available on request

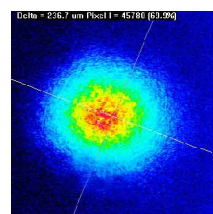
Beam Characteristics



Typical temporal pulse shape
RGB-ALFA



Typical transversal shape at 660nm
RGB-ALFA



Typical transversal shape at 440nm
RGB-ALFA

System Features

- Beams are optimized for holography: smooth beam, coherence exceeding >2 m;
- Pure Solid State laser design;
- Active laser stabilization installed in standard models;
- Low maintenance cost;
- No Tap-water consumption;
- Low electrical consumption;
- PC control via USB using advanced Geola software or LabView drivers;
- Lasers are CE marked according to IEC 60825-1:2001/EN 60825-1:2001;



GEOLA

The RGB-ALFA Series of Pulsed Nd:YAG Lasers

Technical Specifications

Base Model	RGB-ALFA
Output Wavelength:	660nm 532nm 440nm
Max Output Energy ⁽¹⁾ :	4mJ 6mJ 2.5mJ
Pulse Duration:	50ns 35ns 50ns
Energy Stability (StDev) ⁽²⁾ :	< 2 / 2 / 3 %
Beam Divergence:	Near Diffraction Limit for beam size
Line width:	< 0.003 cm ⁻¹
Beam Diameter (1/e ²):	~ 5...9 mm
Beam Profile ⁽³⁾ :	Gaussian
Pulse Repetition Rate ⁽⁴⁾ :	30/60 Hz
Beam Pointing:	< 150 µrad
Polarization:	Horizontal and/or Vertical, > 98%
Q-Switching Type:	Passive
Triggering:	External / Internal
	DIMENSIONS
Laser Head: (L x W x H)	1080 x 455 x 180 mm
Power & Cooling Cabinet: (L x W x H)	600 x 550 x 550 mm
Umbilical length:	2.5 m
	ENVIRONMENTAL REQUIREMENTS
Room Temperature:	22 - 24 °C (recommended)
Relative Humidity:	< 70% (non-condensing)
Mains Voltage ⁽⁵⁾ :	210...240 VAC, single phase 50/60 Hz
Power Consumption:	~ 1.5 ... 4 kW

Geola Digital reserves the right to change specification without notice

⁽¹⁾ For higher energies an amplification cascades could be installed on request.

⁽²⁾ Std.Dev. for 20.000 shots at 30Hz repetition rate.

⁽³⁾ Flat-Top harmonic outputs could be provided on request.

⁽⁴⁾ Other repetition rates could be available on request.

⁽⁵⁾ Laser models with 60 Hz repetition rate requires 380 VAC mains.

Distributor

Manufacturer

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