



The MagicPRISM is a compact, motorized optical parametric oscillator (OPO) module based on OPOTEK patented ring-cavity oscillator technology. With conversion efficiencies as high as 40%, the MagicPRISM is a cost effective solution for turning a fixed wavelength Nd:YAG laser into a tunable laser with wavelength ranges that cover the visible or near-infrared. Check the pump laser requirements below to see if your Nd:YAG laser qualifies for this incredible upgrade.

The MagicPRISM Inline comes prealigned with a Lumibird Q-smart 450 pump laser for a complete tunable laser configuration. The OPO module is added after the second and/or third harmonic in this compact, slim form factor.

MODULE FEATURES

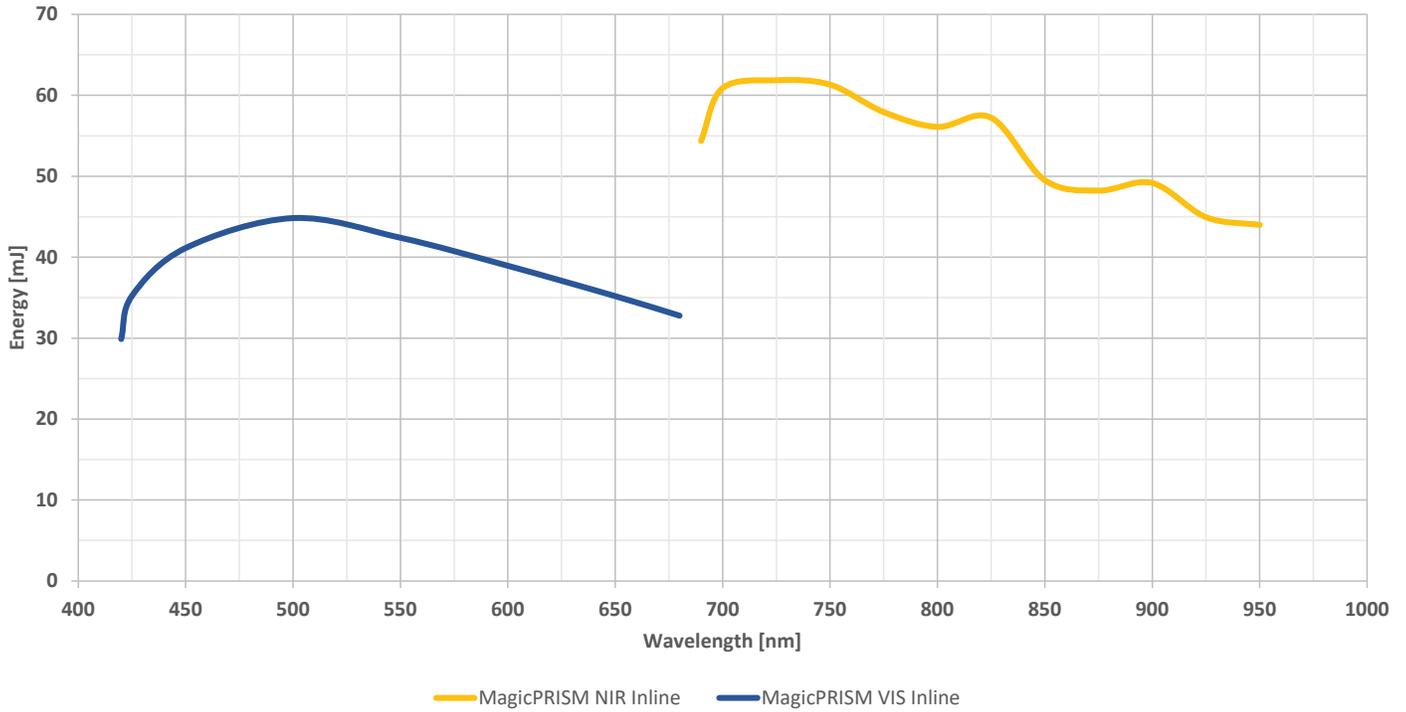
- Hand-size modular design
- Patented ring OPO cavity
- All tunable wavelengths output from a single port
- Complete computer controlled via a single USB connection
- Control software and software development kit (SDK)
- No factory installation required
- Requires ALIGNMENT KIT for alignment/mounting

APPLICATIONS

- Photoacoustic Imaging
- Hyperspectral Imaging
- Optical Damage Testing
- Resonance Enhanced Multiphoton Ionization (REMPI)
- Time Resolved Spectroscopy
- *Any application requiring tunable, high energy, pulsed laser light from a nanosecond Nd:YAG pump laser*

OPTIONS

- Alignment Kit
- Lumibird Q-smart Adapter



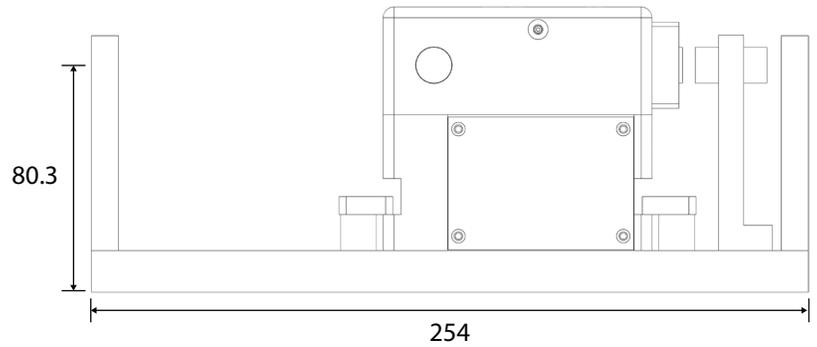
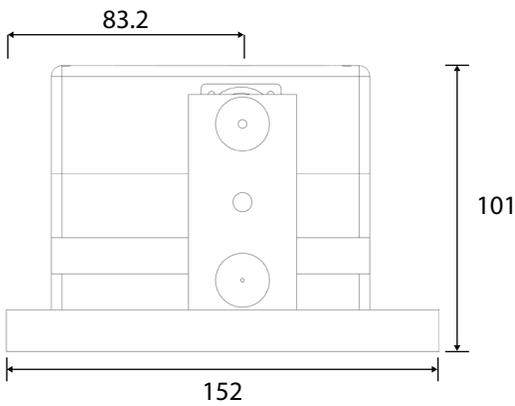
Tuning curves represent typical performance for Inline series only. Performance for end-user provided pump laser will vary depending on specifications and final alignment.

SPECIFICATIONS	MagicPRISM NIR	MagicPRISM VIS	MagicPRISM NIR Inline	MagicPRISM VIS Inline
WAVELENGTH RANGE (nm)	690 - 950	420 - 680	690 - 950	420 - 680
Peak OPO Energy (mJ)	--	--	<i>See tuning curves</i>	
Repetition Rate (Hz)	--	--	20	10
Linewidth (cm⁻¹)	30 - 100	5 - 80	30 - 100	5 - 80
Tuning Step Resolution (nm)	< 1			
Pump Energy (mJ)	--	--	150 @ 532 nm	110 @ 355 nm
Pulse Duration (ns)¹	--	--	< 5	
Beam Diameter (mm)²	--	--	7	
Beam Divergence (mrad)³	10 - 15			
Polarization	Vertical			
Pump Laser Requirements				
Wavelength (nm)	532	355	--	
Pulse Energy (mJ) ⁴	140 - 180	90 - 110	--	
Pulse Width (ns) ¹	5 - 10		--	
Beam Diameter (mm) ⁵	5 - 6		--	
Beam Divergence (mrad) ³	< 1		--	
Polarization	Horizontal		--	
Beam Profile ⁶	< 1.5:1 pk to avg fluence		--	



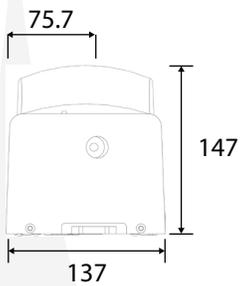
MagicPRISM TUNABLE LASER

MODULE w/ ALIGNMENT KIT: 2.5 Kg

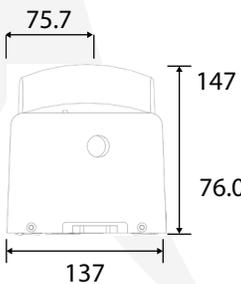
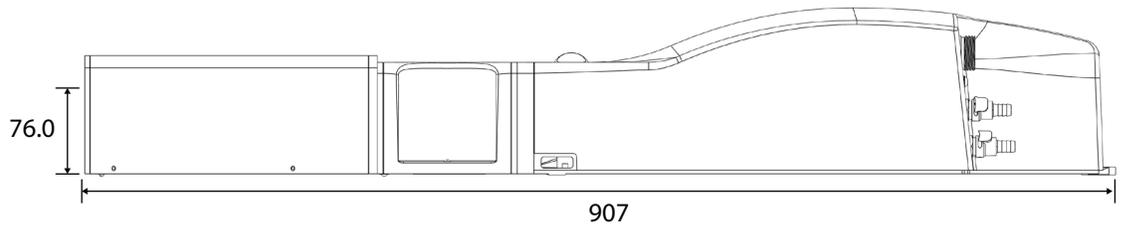


OPO ELECTRONICS BOX (2.3 Kg)

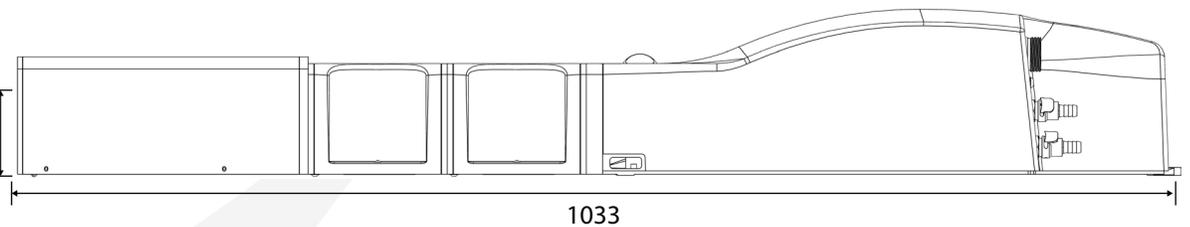
- 330 x 280 x 89.0 (L x W x H)
- 64-82°F / 18-28 °C ambient operating environment
- 100-240 VAC, 50/60 Hz



MAGICPRISM INLINE NIR: 11 Kg



MAGICPRISM INLINE VIS: 14 Kg



POWER SUPPLY (27.0 Kg)

- 507 x 283 x 513 (L x W x H)
- Integrated air-water heat exchanger
- Distilled water coolant
- 64-82°F / 18-28 °C ambient operating environment
- 100-240 VAC, 50/60 Hz, single phase 1000 VA
- Easy to replace inline DI filter

OPO ELECTRONICS BOX (2.3 Kg)

- 330 x 280 x 89.0 (L x W x H)
- 64-82°F / 18-28 °C ambient operating environment
- 100-240 VAC, 50/60 Hz
- External for easy service and upgrading

OPOTEK LLC is certified to ISO 9001:2015. VERSION 1.11
Tuning curves represent nominal values.
Dimensions approximate in millimeters.

Due to ongoing product improvements, all specifications are subject to change without notice.

WWW.OPOTEK.COM | SALES@OPOTEK.COM | CARSLBAD, CA USA

