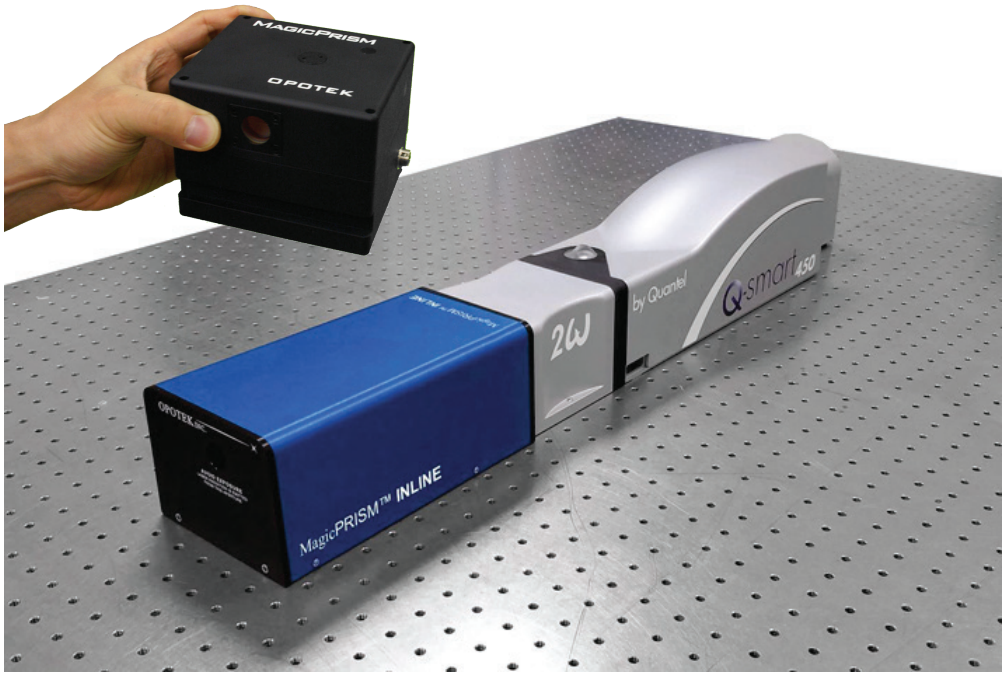
OPOTEK

MagicPRISM
Tunable Laser



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.

SYSTEM 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

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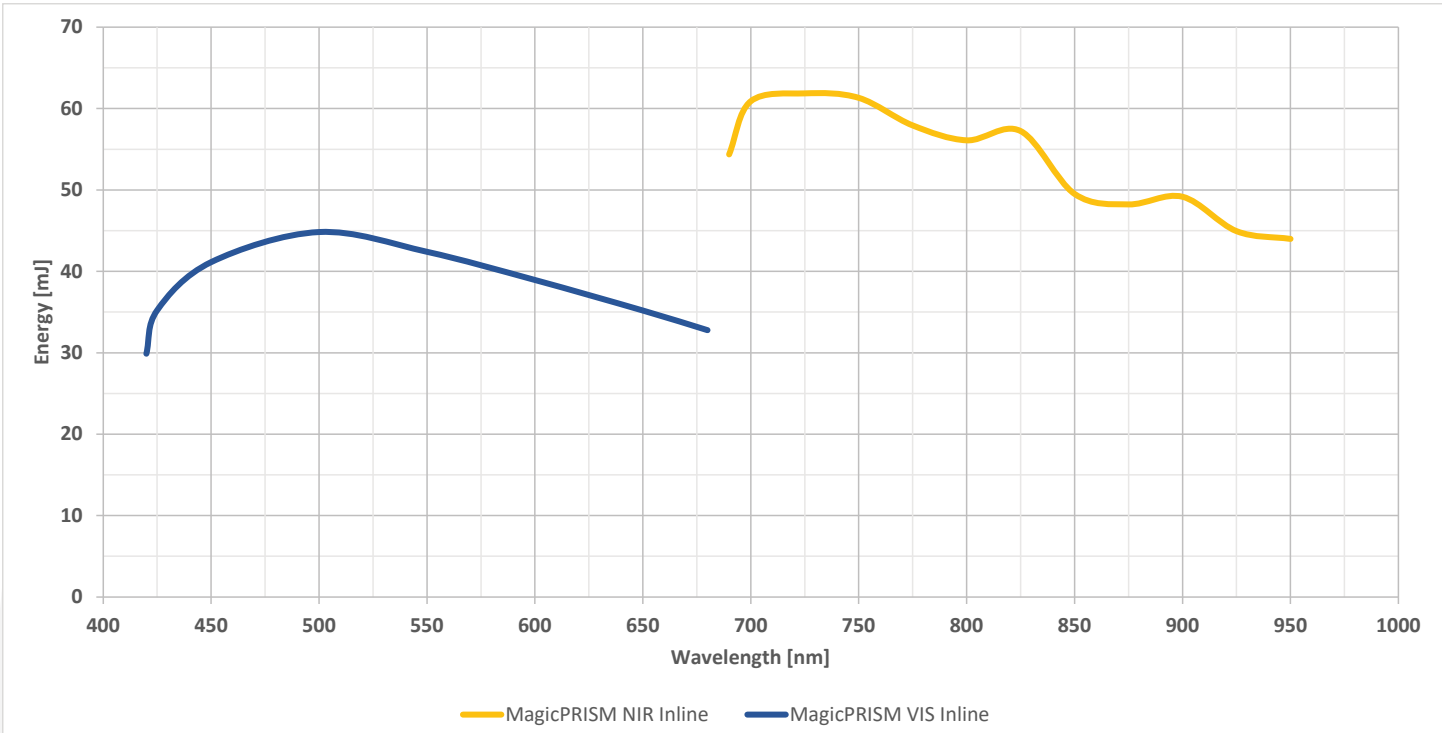

Tuning curves represent typical performance for Inline series only. Performance for end-user provided pump laser will vary depending on specifications and final alignment.

SPECIFICATIONS	MagicPRISM NIR	MagicPRISM VIS	MagicPRISM NIR Inline	MagicPRISM VIS Inline
WAVELENGTH RANGE (nm)	690 - 950	420 - 680	690 - 950	420 - 680
Repetition Rate (Hz)	--		20	10
Linewidth (cm^{-1})	30 - 100	5 - 80	30 - 100	5 - 80
Tuning Step Resolution (nm)	< 1			
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 - 220	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		--	

[1] FWHM

[2] At output port

[3] Full angle, at $1/e^2$ of the peak

[4] min to max

[5] 4-sigma

[6] Flat top beam with no hot spots

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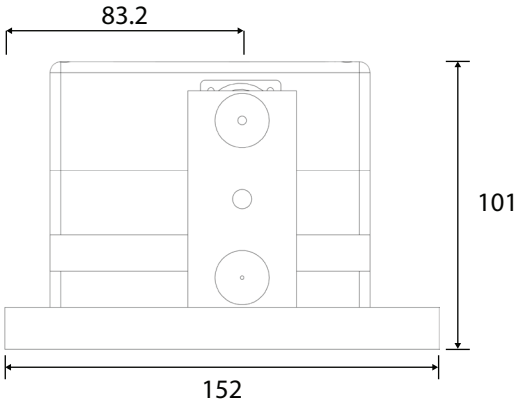
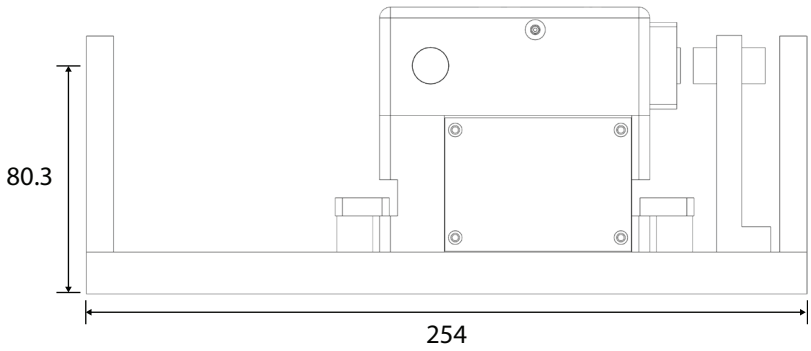
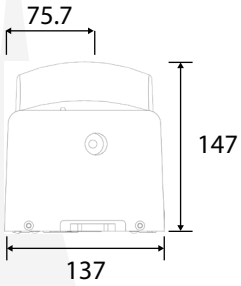
MODULE w/ ALIGNMENT KIT: 2.5 Kg



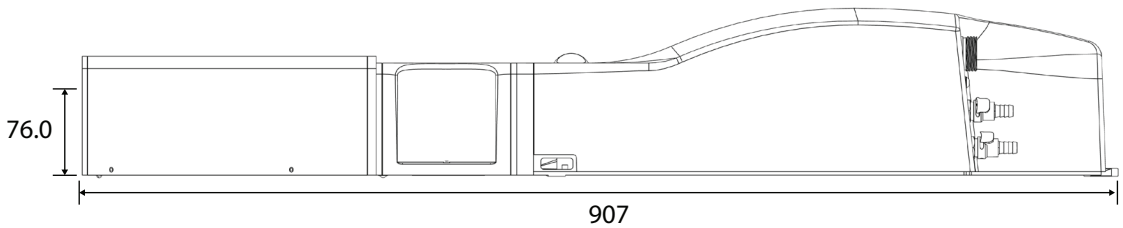


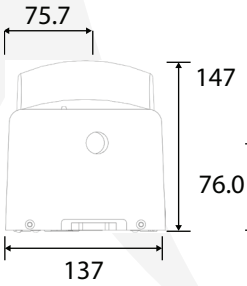
OPO ELECTRONICS BOX (2.3 Kg)

- 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

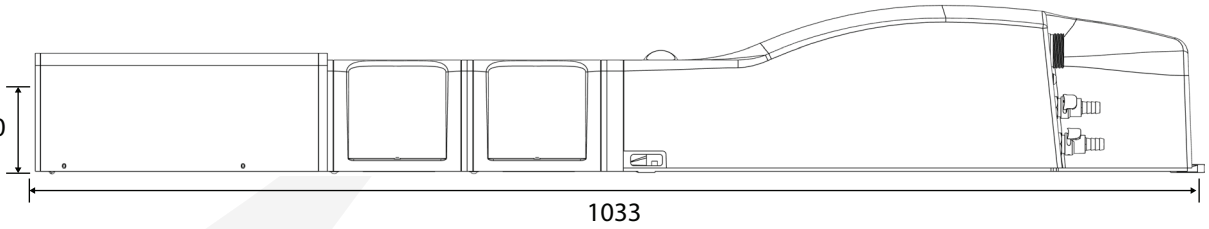


MagicPRISM INLINE NIR: 11 Kg





MagicPRISM INLINE VIS: 14 Kg



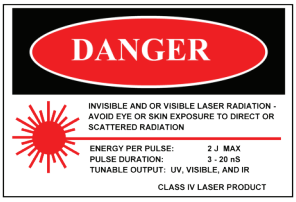
POWER SUPPLY (27.0 Kg)

- 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

RoHS CE



OPOTEK LLC is certified to ISO 9001:2015. VERSION 1.10
Tuning curves represent nominal values.
Dimensions approximate in millimeters.
Due to ongoing product improvements, all specifications are subject to change without notice.

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