Opolucis™ AIR
Tunable Laser

OPOTEK takes compactness and portability to the next level with the Opolucis™ AIR. Based on diode-pumped solid state (DPSS) technology, the Opolucis™ AIR is all air-cooled and includes the power supply, control electronics and optical platform all-in-one unit. With tuning ranges from the UV to the mid-infrared, the Opolucis™ AIR is suitable for integration into instrumentation or confined laboratory spaces that benefit from low RF noise equipment and cannot tolerate water cooled solutions.

SYSTEM FEATURES

- Fully integrated, all-in-one unit
- Completely air-cooled
- DPSS lifetime: 4 billion laser shots
- DPSS and/or Q-Switch external triggering
- Computer controlled via a single USB connection
- Control software and software development kit (SDK)
- Programmable scans
- No factory installation required
- End user accessible alignment verification
- Fast temperature stabilized pump laser and harmonics
- All tunable wavelengths output from a single port
- Access to higher energy 1064, 532 and 355 nm beams
- All wavelengths accessible without manual configuration changes

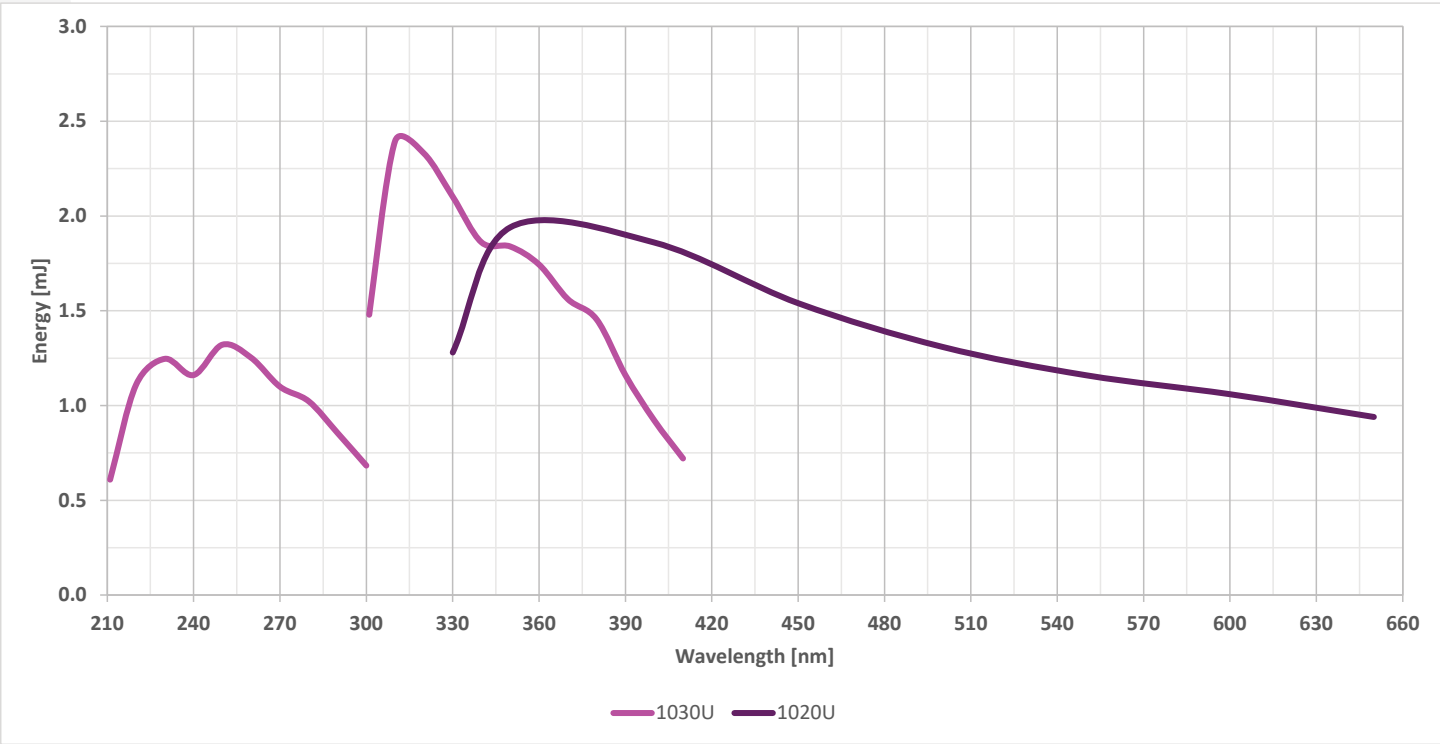
APPLICATIONS

- Solar Panel Characterization
- Non Destructive Testing (NDT)
- Optical Coating Calibration
- MALDI Mass Spectrometry
- Time Resolved Spectroscopy
- Raman Spectroscopy
- Laser Induced Fluorescence
- Confocal Microscopy
- Transient Absorption Spectroscopy
- *Any application requiring tunable, pulsed laser light in an all-in-one, air-cooled form factor*

OPTIONS

- UV Tunability Add-on (210-410 nm)
- UV-VIS Tunability Add-on (330-650 nm)
- Motorized Variable Attenuator
- Real-Time Wavelength Monitoring
- Fiber Delivery Kit (350-2000 nm)
- Fast Tuning (< 50 ms between wavelengths)

14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
Energy [mJ]
400
600
800
1000
1200
1400
1600
1800
2000
2200
2400
2600
2800
3000
3200
3400
3600
Wavelength [nm]
1020
1020U
1030
1030U
1010P
1010A


3.0
2.5
2.0
1.5
1.0
0.5
0.0
Energy [mJ]
210
240
270
300
330
360
390
420
450
480
510
540
570
600
630
660
Wavelength [nm]
1030U
1020U

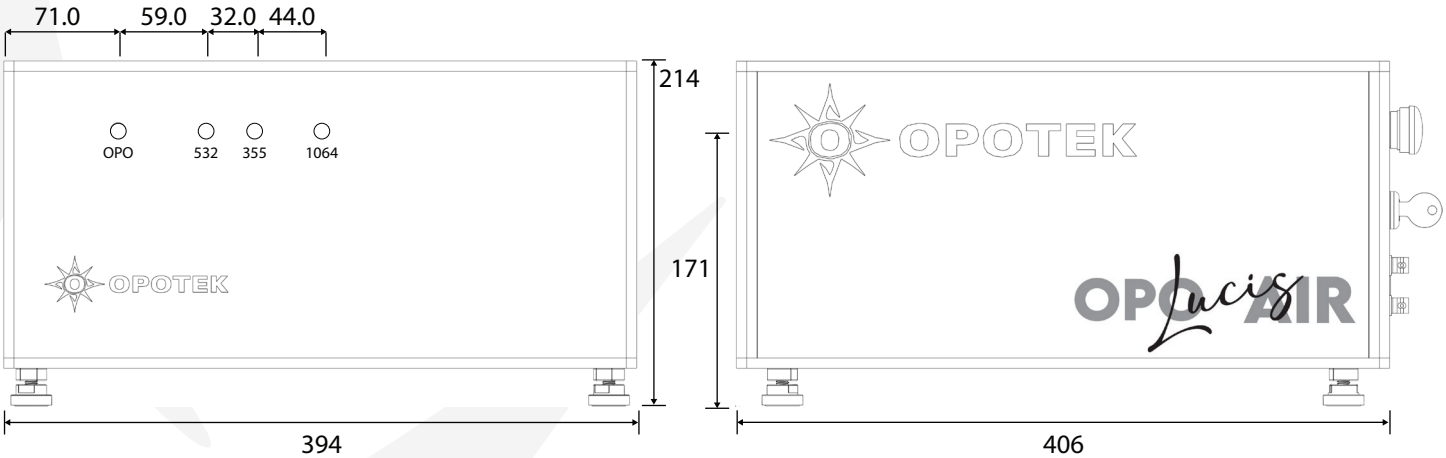
OPOTEK

Opolucis™ AIR
Tunable Laser

SPECIFICATIONS	1010A	1010P	1020	1030
WAVELENGTH RANGE (nm)	3000 - 3450	2700 - 3100	650 - 2300	410 - 2200
w/ UV (option)	--	--	330 - 2300 (1020U)	210 - 2200 (1030U)
Peak or Max OPO/UV Pulse Energy (mJ)	*See tuning curves*			
Repetition Rate (Hz)	20			
Pulse to Pulse Stability (%)[1]	2			
Linewidth (cm^{-1})	2.5 - 3.5		10 - 15[2]	3 - 5[3]
Tuning Step Resolution (nm)			< 1.0	< 0.5
Signal	--	--	< 0.5	< 0.1
Idler	< 0.5		< 1.0	< 0.5
Pump Energy (mJ)	100 @ 1064 nm		50 @ 532 nm	33 @ 355 nm
Pulse Duration (ns)[4]	< 9			
Beam Diameter (mm)[5]	5			
Beam Divergence (mrad)[6]	< 10		< 2	< 2
Signal Polarization	--		Horizontal	
Idler/UV Polarization	Vertical			
Residual 1064 nm Access (mJ)	50		40	25
Residual 532 nm Access (mJ)	--		20	20
Residual 355 nm Access (mJ)	--			10

[1] RMS @ peak OPO, 99% of shots
[2] 670 nm and higher
[3] 410 nm and higher
[4] FWHM
[5] At output port
[6] Full angle, at $1/e^2$ of the peak; @ peak OPO

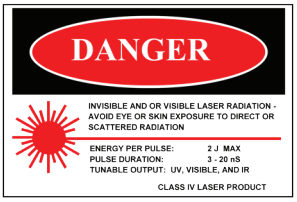
OPOLUCIS AIR LASERHEAD (20 KG)



PORT LAYOUT FOR MODEL 1030 & 1030U SHOWN

OPERATING REQUIREMENTS

- 64-82°F / 18-28 °C ambient operating environment
- 100-240 VAC, 50/60 Hz



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.
Designed and manufactured in California, USA.

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