OPOTEK

RADIANT QX
Tunable Laser

Known for industry leading OPO engineering, OPOTEK has redesigned the RADIANT for the modern laboratory. With an improved mechanical design, the RADIANT QX tunable laser system can now be installed by you; saving time and money over competing solutions. By offering tuning ranges from the deep UV to the mid IR, choosing the best system for your application has never been easier. Never let fixed wavelength laser technology limit the boundaries of your discovery.

SYSTEM FEATURES

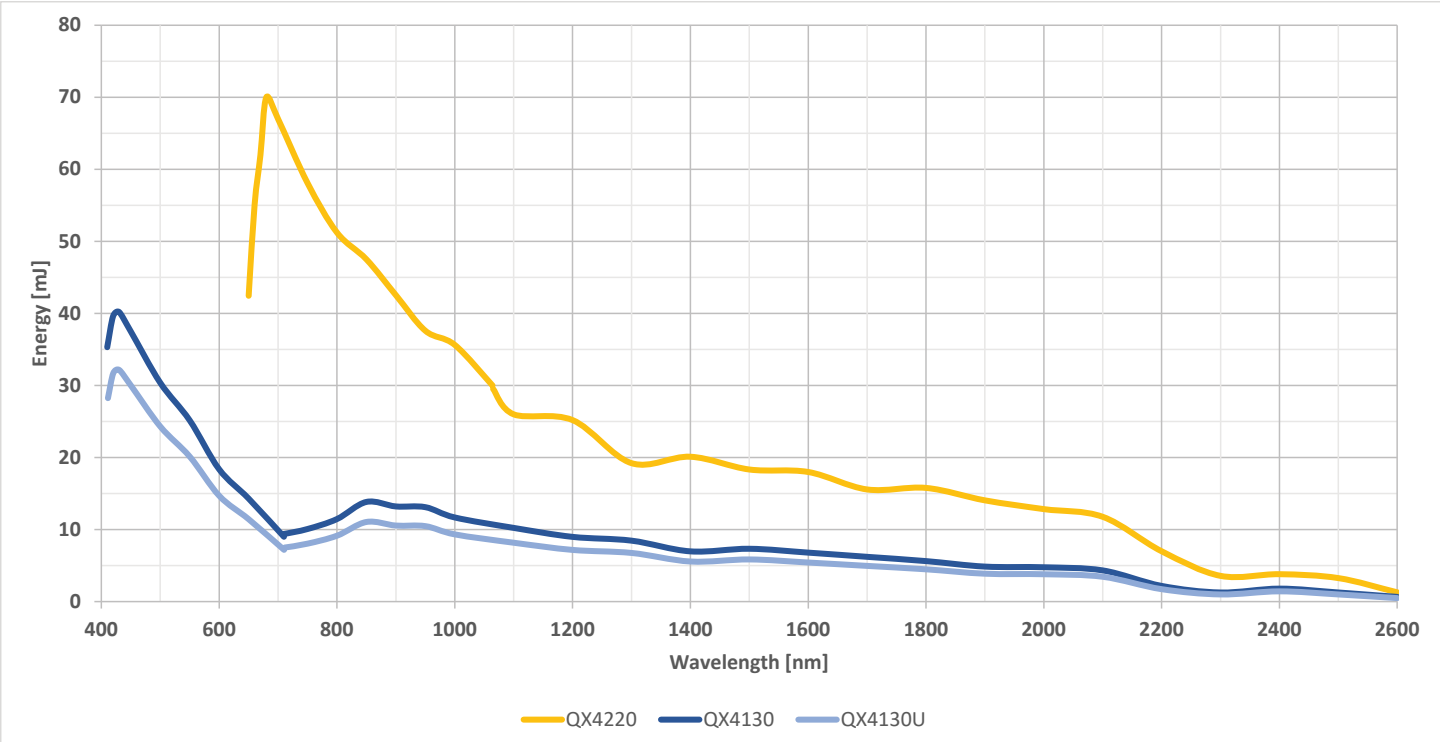
- Fully integrated optical layout
- Flashlamp based pump laser with minimal maintenance
- Flashlamp lifetime: 100 million laser shots
- Flashlamp and/or Q-Switch external triggering
- Computer controlled via a single USB connection
- Control software and software development kit (SDK)
- Programmable scans
- No factory installation required
- End user accessible alignment verification
- Fast temperature stabilized pump laser and harmonics (< 20 min)
- All tunable wavelengths output from a single port
- Access to 1064 nm and pump beam (532nm or 355nm)
- Fiber bundle compatible output ports

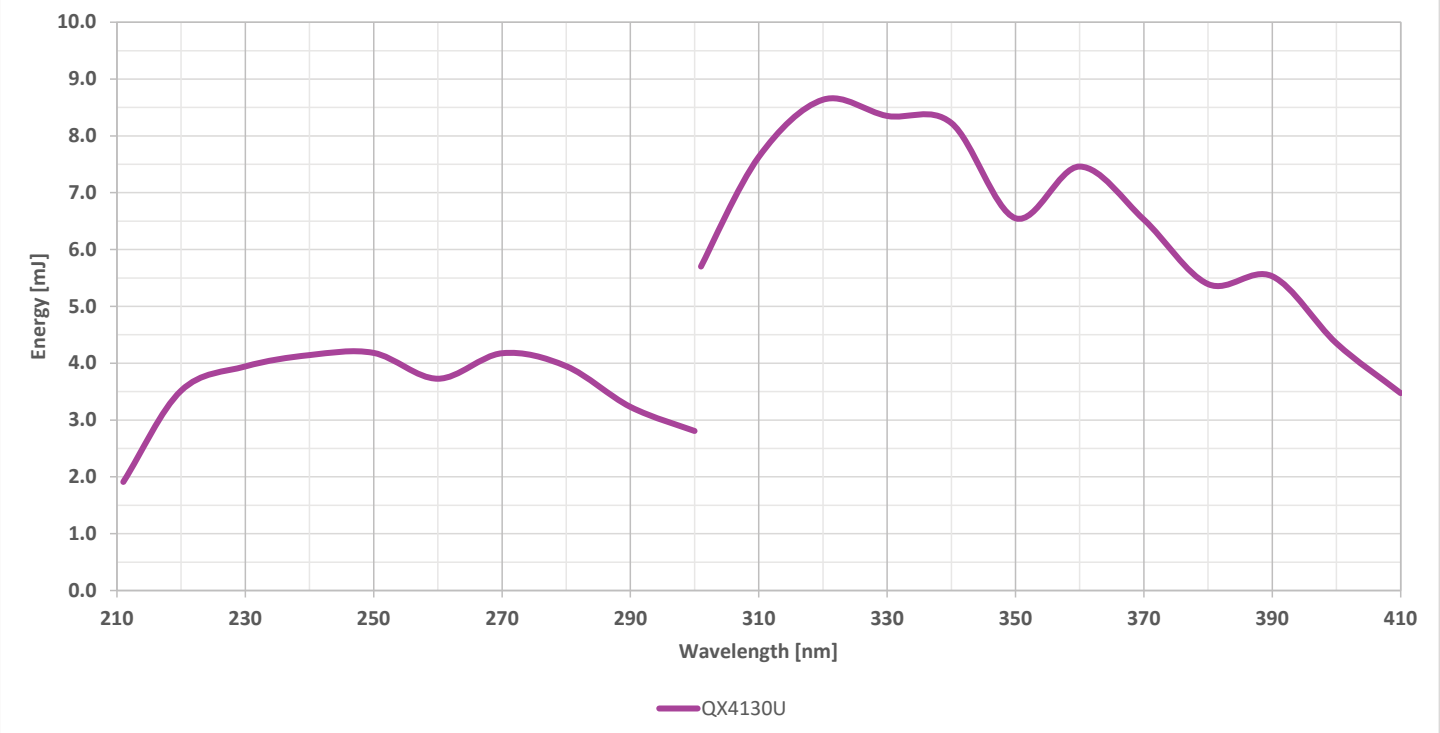
APPLICATIONS

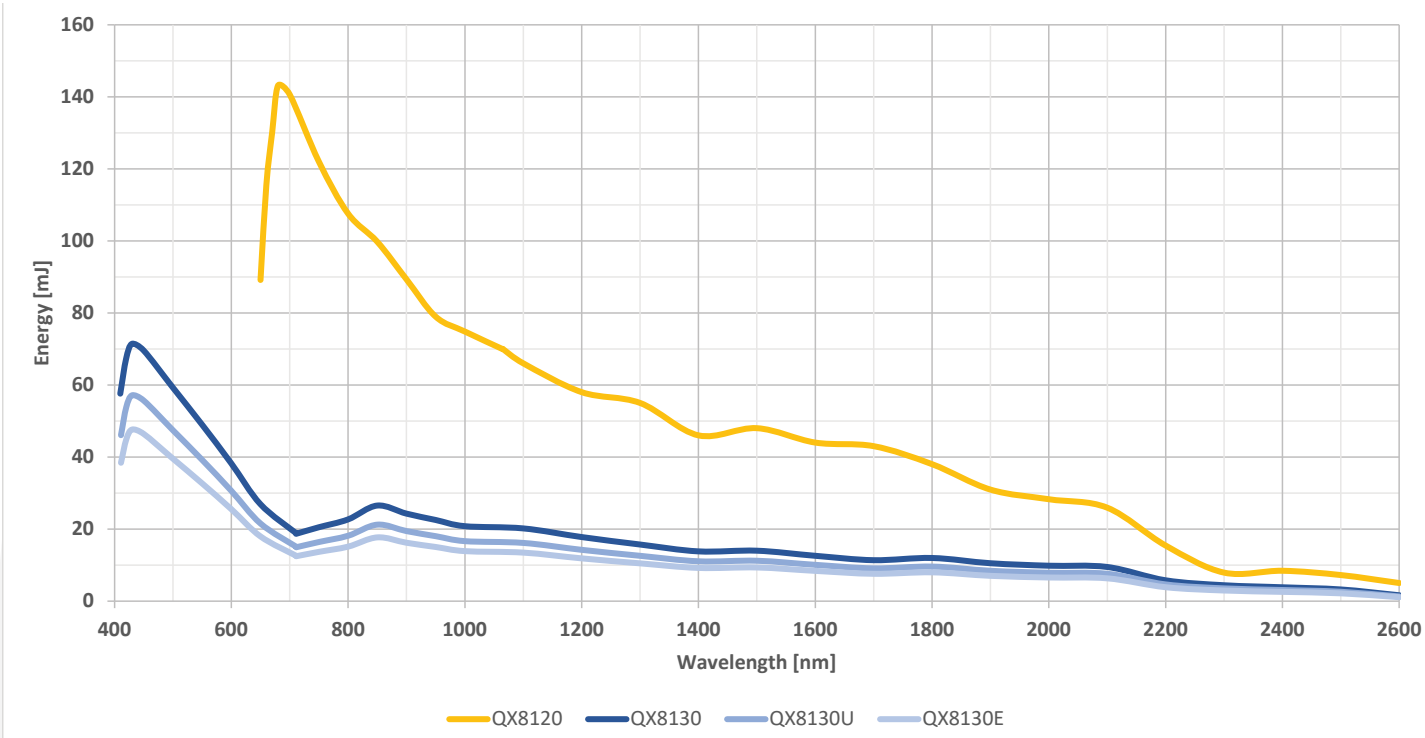
- Photoacoustic Imaging
- Hyperspectral Imaging
- Optical Damage Testing
- Resonance Enhanced Multiphoton Ionization (REMPI)
- Time Resolved Spectroscopy
- Light Detection and Ranging (LIDAR)
- Laser Induced Fluorescence
- Cavity Ring Down Spectroscopy (CRDS)
- Electron Paramagnetic Resonance (EPR)
- *Any application requiring tunable, high energy, pulsed laser light*

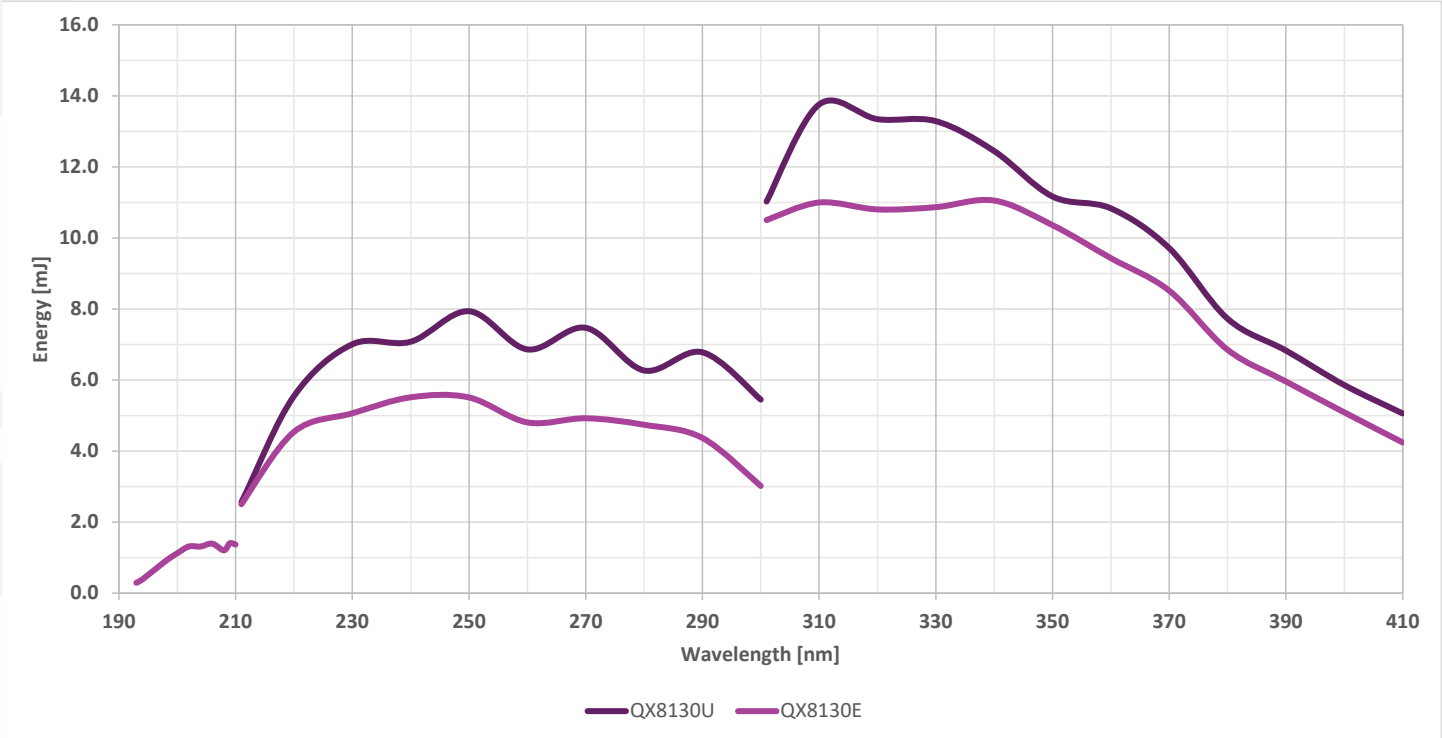
OPTIONS

- UV Tunability Add-on (210-410 nm)
- Extended UV Tunability Add-on (193-410 nm)
- Motorized Variable Attenuator
- Real-Time Wavelength Monitoring
- Access to Full Power 355 nm
- Access to Full Power 532 nm
- Fourth Harmonic Add-on (266 nm)


80
70
60
50
40
30
20
10
0
Energy [mJ]
400
600
800
1000
1200
1400
1600
1800
2000
2200
2400
2600
Wavelength [nm]
QX4220
QX4130
QX4130U


10.0
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
Energy [mJ]
210
230
250
270
290
310
330
350
370
390
410
Wavelength [nm]
QX4130U


160
140
120
100
80
60
40
20
0
Energy [mJ]
400
600
800
1000
1200
1400
1600
1800
2000
2200
2400
2600
Wavelength [nm]
QX8120
QX8130
QX8130U
QX8130E


16.0
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
Energy [mJ]
190
210
230
250
270
290
310
330
350
370
390
410
Wavelength [nm]
QX8130U
QX8130E

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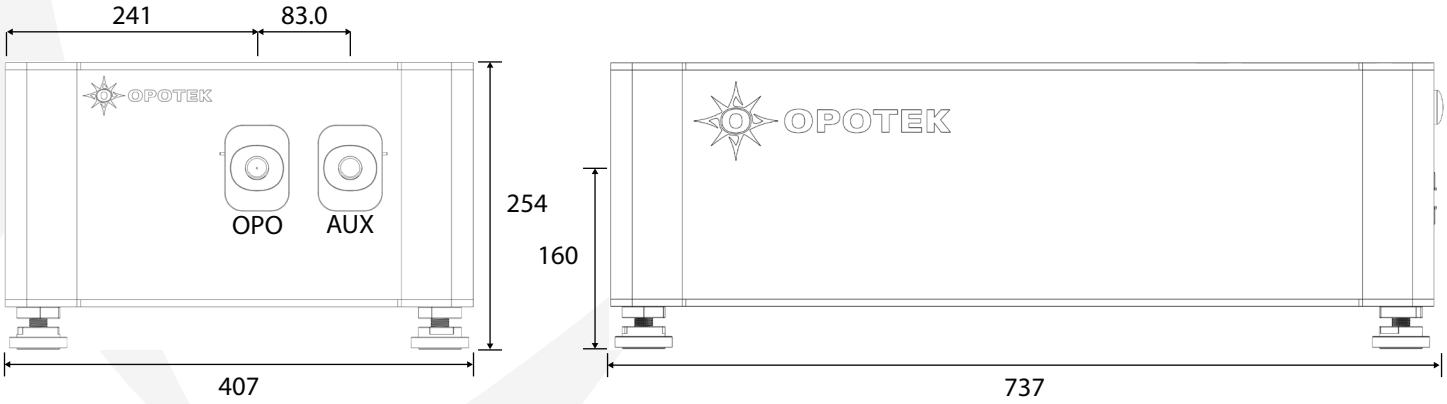
RADIANT QX
Tunable Laser

SPECIFICATIONS	RADIANT QX4220	RADIANT QX8120	RADIANT QX4130	RADIANT QX8130
WAVELENGTH RANGE (nm)	650 - 2600		410 - 2600	
w/ UV (optional)	--		210 - 2600 (QX4130U)	210 - 2600 (QX8130U)
w/ EUV (optional)	--		--	193 - 2600 (QX8130E)
Peak OPO/UV/EUV Energy (mJ)	*See tuning curves*			
Repetition Rate (Hz)	20	10	10	10
Pulse to Pulse Stability (%)[1]	2			
Linewidth (cm^{-1})	10 - 15[2]		3 - 5[3]	
Tuning Step Resolution (nm)				
Signal	< 0.5		< 0.1	
Idler	< 1.5		< 1.0	
Pump Energy (mJ)	175 @ 532 nm	385 @ 532 nm	110 @ 355 nm	190 @ 355 nm
Pulse Duration (ns)[4]	< 5			
Beam Diameter (mm)[5]	7	9	7	9
Beam Divergence (mrad)[6]	< 2			
Signal Polarization	Horizontal			
Idler/UV Polarization	Vertical			
Full Power 1064 nm Access (mJ)	350	750	400	700
Residual 532 nm Access (mJ)	50	100	--	
Residual 355 nm Access (mJ)	--		30	40

LASERHEAD (45.4 KG)

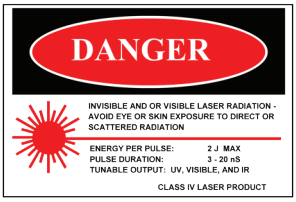


POWER SUPPLY (27.0 KG)

- 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.

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