

Opolette UX

TUNABLE LASER



OPOTEK continues its tradition of offering the smallest form factor tunable lasers with the Opolette UX. Built to accommodate the diverse needs of our customers, the Opolette UX fits the tight constraints of the modern laboratory while continuing to offer wide tunable ranges from the UV to MIR.

Opolette UX TUNABLE LASER

SYSTEM FEATURES

- Integrated pump laser with quick connect cables
- Flashlamp based pump laser with minimal maintenance
- End user replaceable flashlamp (50 million shot lifetime) and DI cartridge
- Flashlamp and/or Q-Switch external triggering
- Computer controlled via a single USB connection
- Control software and software development kit (SDK)
- No factory installation required
- End user accessible alignment verification
- Temperature controlled, motorized harmonic(s)
- All tunable wavelengths output from the same port
- Access to pump laser wavelengths (1064nm, 532nm, and/or 355nm)
- All tunable wavelengths accessible without any manual configuration changes

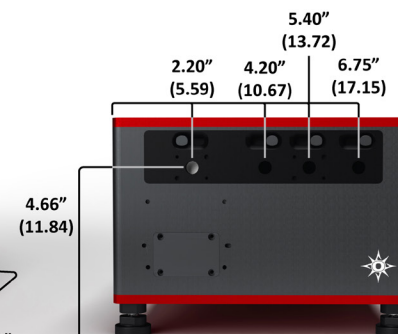
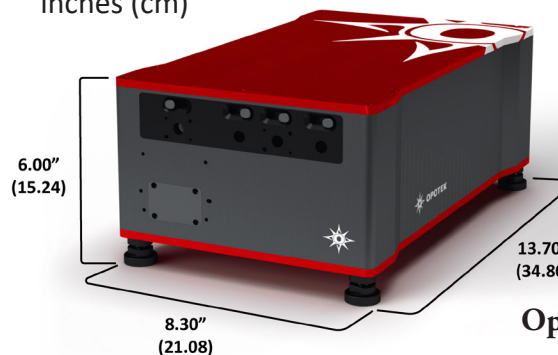
AVAILABLE OPTIONS AND ACCESSORIES

Motorized Variable Attenuator (MVA): Externally mounted, motorized and computer-controlled Glan Laser polarizer that allows continuously attenuation from 100% down to 1% while maintaining maximum pulse to pulse stability. End user removable/installable. Reduces max pulse energy by 10-15% when installed. Wavelength ranges from 400 to 3450 nm supported.

Fiber Delivery Kit (FD): Externally mounted fiber delivery kit includes mounts, coupling lens and fiber. Fiber specifications: 2.0 m long, 0.5 to 1 mm diameter cores, NA = 0.22. Fiber is terminated with a high-power SMA connectors on both ends. Wavelength ranges from 250 to 3450 nm supported.

Wavemeter (WM): Integrated Wavemeter for real-time monitoring of tunable wavelengths (some ranges through interpolation) and enabling harmonic auto optimization from near peak energies. Patch fiber and optics included to connect laserhead to Wavemeter. Available for models QX10220, QX10230 and QX10230U.

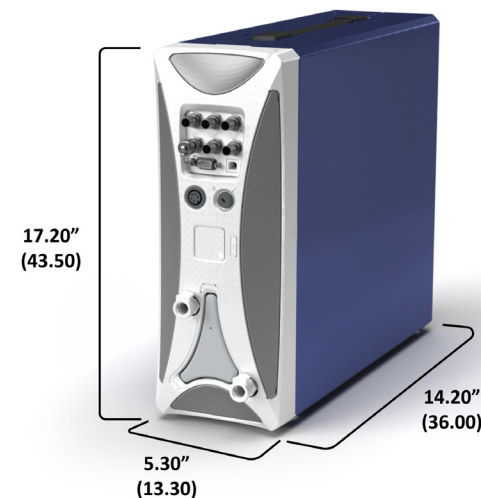
DIMENSIONS inches (cm)



Opolette UX Laser Head

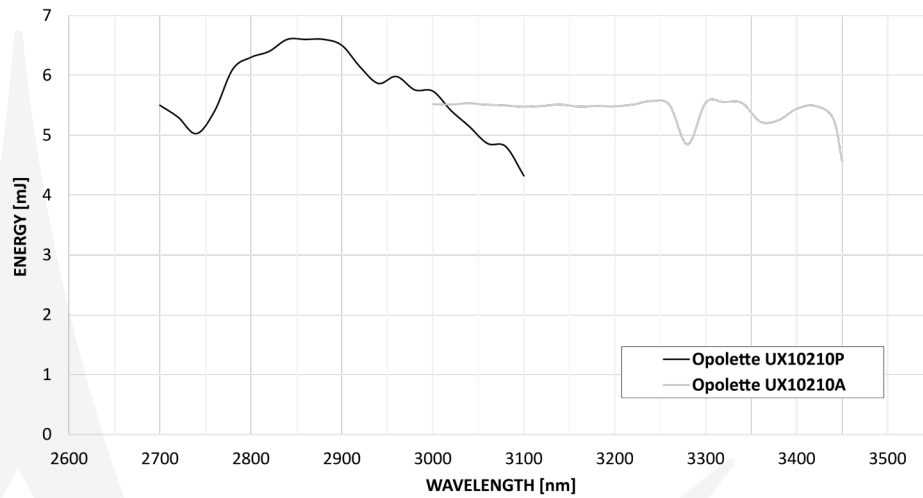


Electronics Box

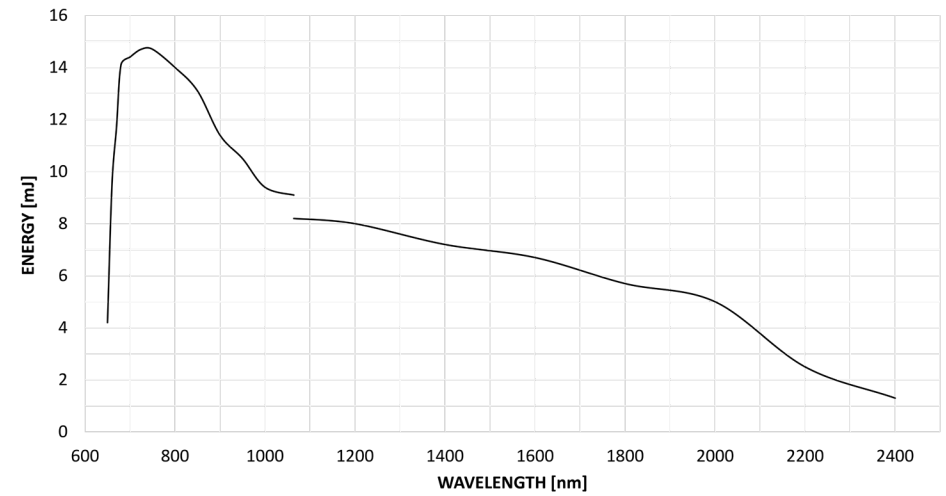


Power Supply

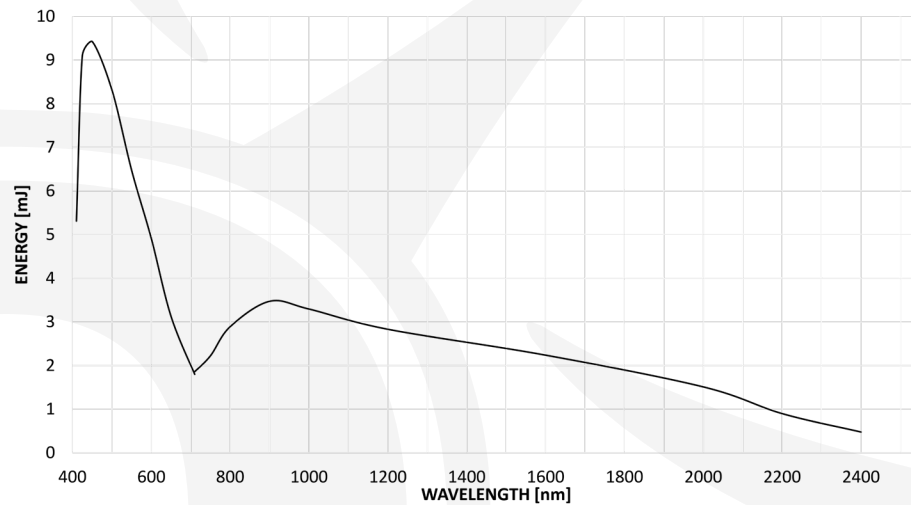
Opolette UX10210
MIR TUNING RANGE



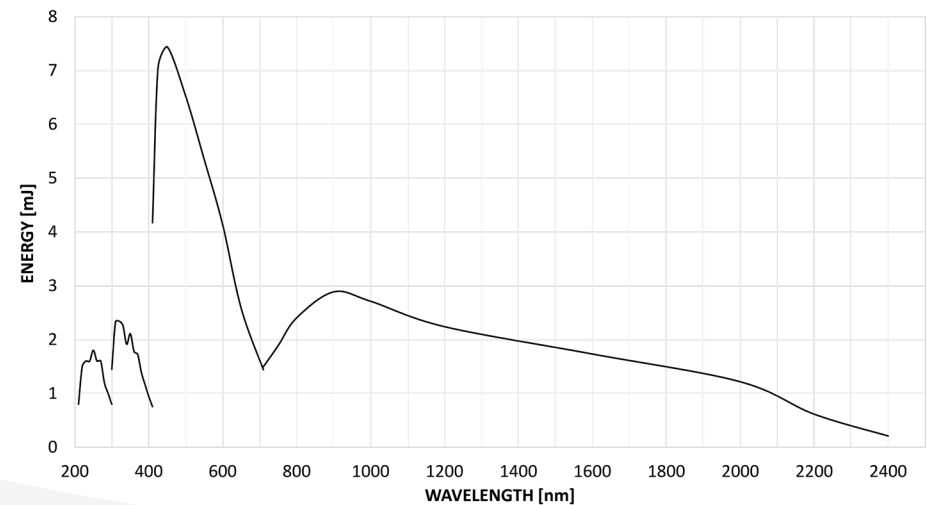
Opolette UX10220
NIR TUNING RANGE



Opolette UX10230
VIS/NIR TUNING RANGE



Opolette UX10230U
UV/VIS/NIR TUNING RANGE



NOTE: All tuning curves represent nominal values.

OPO SPECIFICATIONS	Opolette UX10210		Opolette UX10220	Opolette UX10230	
	Opolette UX10210A	Opolette UX10210AP		Opolette UX10230	Opolette UX10230U
Wavelength Range (nm)	3000-3450	2700-3100	650-2400	410-2400	210-2400
Peak (Max) OPO Energy (mJ)	5.5	6.6	15	9.5	7.5
Max UV Energy (mJ)	--		--	---	2.3
Pulse to Pulse Stability (%) ¹	< 2		< 2	< 2	
Pump Laser Residual Energy (mJ)	60 at 1064 nm		18-22 at 532 nm	15-20 at 355 nm	
Linewidth (cm ⁻¹)	4 - 7		10 - 15	4 - 7	
Tuning Resolution (nm)	< 1		< 1	< 1	
Pulse Duration (ns)	6		6	6	
Beam Diameter (mm) ²	4		4	4	
Beam Divergence (mrad) ³	< 5 (vertical); < 10 (horizontal)		< 2 (Both Axis)	< 1.5 (Both Axis)	
Polarization	Vertical		Horizontal (650 - 1064 nm) Vertical (1064 - 2400 nm)	Vertical (210 - 410 nm) Horizontal (410 - 710 nm) Vertical (710 - 2400 nm)	

PUMP LASER SPECIFICATIONS

OPO Pump Wavelength (nm)	1064	532	355
OPO Pump Energy (mJ)	100	50	33
Pulse Duration (ns)	7	7	7
Beam Divergence (mrad)	< 3	< 3	< 3
Pulse to Pulse Stability (%) ⁴	< 2	< 2	< 2
Pulse Repetition Rate (Hz)	20	20	20

¹ RMS @ peak OPO wavelength, 99% of shots

² at output of the laser

³ Full angle, at 1/e² of the peak

⁴ RMS, 99% of shots

DIMENSIONS (all systems)

Laser Head (L x W x H; inches [cm])	13.70 x 8.30.0 x 6.00 [34.80 x 21.08 x 15.24]
Electronics Box (L x W x H; inches [cm])	13.00 x 11.00 x 3.50 [33.00 x 28.00 x 8.90]
Power Supply (L x W x H; inches [cm])	14.20 x 5.30 x 17.20 [36.00 x 13.30 x 43.50]
Laser Head Weight (lbs [kg])	30.00 [13.63]
Electronics Box Weight (lbs [kg])	5.00 [2.30]
Power Supply Weight (lbs [kg])	31 [14.09]

OPERATING REQUIREMENTS (all systems)

Cooling System	Integrated air-water heat exchanger (included)
Coolant	Distilled water
Temperature	64-82°F / 18-28 °C
Power	100-240 VAC, 50/60 Hz, single phase 1000VAC