

HighQ-2™

ULTRA-COMPACT, AIR COOLED, FIXED WAVELENGTH FEMTOSECOND LASERS

HighQ-2™ is an ultra-compact, air cooled, turn-key, fixed wavelength femtosecond laser. It features high peak power and ideal, highly focusable Gaussian spatial beam profile, making it the perfect laser source for fixed wavelength multiphoton imaging in vivo, micro- and nano-structuring, micro- and nano-surgery and micro-dissection applications.

Designed as a reliable OEM laser for 24/7 operation, the HighQ-2 laser combines true turn-key operation and fast cold start turn-on, ensuring quick installation and easy operation.

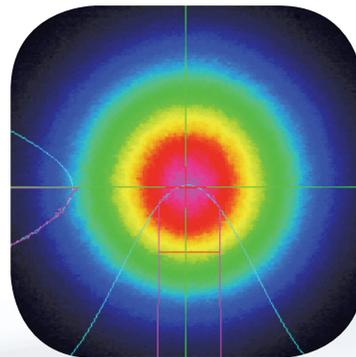
HighQ-2 is equipped with long life diodes, a sealed optical cavity design and is manufactured in a controlled, cleanroom environment. The result is a highly dependable laser with long lifetime, high uptime and low cost of ownership.

The HighQ-2 Advantage

- Ultra-compact, air cooled
- High peak power for multiphoton imaging and micro-processing
- True turn-key operation
- Proven, dependable performance under 24/7 operation



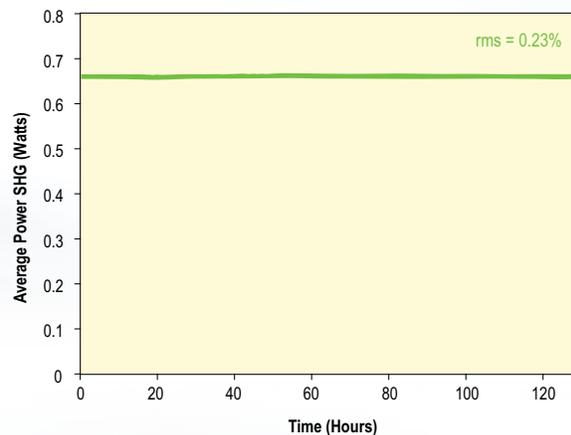
Gaussian Beam Profile



Applications

- Multiphoton imaging (YFP, RFP, SHG, THG)
- Opto-genetics
- Two-photon polymerization
- Micro- and nano-surgery, micro-dissection

Typical Long Term Power Stability >100 hours¹



1. Typically measured performance; not a guaranteed or warranted specification.

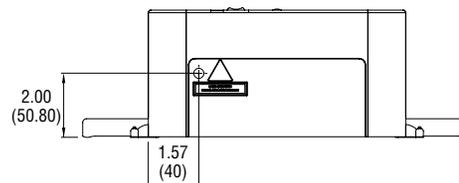
HighQ-2™

Specifications^{1, 5}

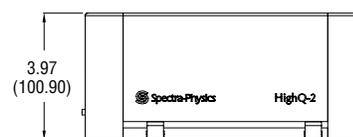
	HighQ-2	HighQ-2-SHG
Output Characteristics	IR	SHG
Average Power	>1.5 W	>0.65 W
Central Wavelength ²	1045 ±5.0 nm	522 ±3.0 nm
Spectral Width (FWHM), typical	6 nm	2 nm
Repetition Rate	63 ± 0.6 MHz	
Pulse Width (FWHM)	<250 fs	
Pulse Energy	>23 nJ	>10 nJ
Peak Power	>92 kW	>40 kW
Power Stability	<1% rms (100 hours) <0.5 % rms (12 hours)	
Beam Quality	TEM ₀₀ ³ M ² <1.15	
Beam Diameter, at waist	0.9 ±0.2 mm	1.0 ±0.2 mm
Beam Waist Position	at exit	
Beam Divergence	<1.0 mrad	<0.5 mrad
Polarization	100:1, vertical ³	100:1, horizontal
Ellipticity	<10%	
Beam Height ⁴	2 inches	
Cold Start Time	≤10 min	
Warm Start Time	≤10 min	
Operating Temperature Range	18-32°C	
Cooling Requirements		
Laser Head	Air cooled	
Power Supply	Air cooled	
Utility Requirements		
Voltage	100-240 VAC, 50/60 Hz, 175 W	
Laser Head		
Dimensions (L × W × H)	8.74 × 8.03 × 3.97 in (222 × 204 × 100.9 mm)	
Weight	13.7 lbs (6.2 kg)	
Power Supply Physical		
Dimensions (L × W × H)	19" rack mountable, 2U. 18.03 × 19.02 × 3.46 in (458 × 483 × 88 mm)	
Weight	28.2 lbs (12.8 kg)	

1. Due to our continuous improvement program, specifications are subject to change without notice.
2. Fixed wavelength laser, ±5.0 nm and ±3.0 nm refer to manufacturing tolerances.
3. Horizontal polarization orientation available by request
4. Mounting posts for matching the beam height to Mai Tai® or InSight® DS+™ beam height are available by request.
5. HighQ-2 is a Class IV - High Power Laser, whose beam is, by definition, a safety and fire hazard. Take precautions to prevent exposure to direct and reflected beams. Diffuse as well as specular reflections can cause severe skin or eye damage.

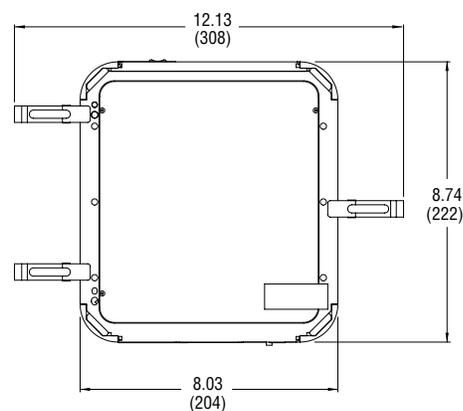
HighQ-2 Dimensions



Front View



Side View



Top View

Dimensions in inch (mm)



www.spectra-physics.com

3635 Peterson Way, Santa Clara, CA 95054, USA
PHONE: 1-800-775-5273 1-408-980-4300 **FAX:** 1-408-980-6921 **EMAIL:** sales@spectra-physics.com

China	+86-10-6267-0065	info@spectra-physics.com.cn	Belgium	+32-(0)0800-11 257	belgium@newport.com
France	+33-(0)1-60-91-68-68	france@newport.com	Netherlands	+31-(0)30 6592111	netherlands@newport.com
Japan	+81-3-3794-5511	spectra-physics@splasers.co.jp	United Kingdom	+44-1235-432-710	uk@newport.com
Taiwan	+886-(0)2-2508-4977	sales@newport.com.tw	Germany / Austria / Switzerland	+49-(0)6151-708-0	germany@newport.com
Singapore	+65-6664-0400	sales.sg@newport.com			