

SPECTRA-PHYSICS Advantage™ 161C AIR-COOLED ION LASER SYSTEMS

PERFORMANCE SPECIFICATIONS¹

Wavelength Specific Characteristics			
Wavelength	514	488	458
Beam Diameter (mm)	0.69 ± 5%	0.69 ± 5%	0.69 ± 5%
Beam Divergence (mrad) (nominal)	0.95	0.95	0.95
Spatial Mode (TEM ₀₀)	M ² < 1.2	M ² < 1.2	M ² < 1.2

Common Beam Characteristics	
Polarization Extinction Ratio	> 100:1 (E-vector vertical ± 5°)
Longitudinal Mode Spacing (nominal)	638 MHz
Beam Waist Location	Output of laser head

Stability ²	
Power	
At turn on Stability over 2 hours ³	> 95% of stabilized power ± 1%
Beam Pointing	
Angular	± 30 μrad/±3° C

Noise	
Switching Frequency Synchronous Periodic	≤ 1% peak to peak
Broadband	
10 Hz – 3 kHz	< 0.1% rms
10 Hz – 2 MHz	< 0.3% rms
Periodic (for each single frequency)	
3 Hz – 20 MHz	≤ 0.1% rms

1. Specifications subject to change without notice.
 2. All measurements made in light control mode after a 30-minute warm-up, unless otherwise stated.
 3. Stability is measured over any 2-hour period after a 5-minute warm-up.

SERVICES AND OPERATING PARAMETERS¹

Services and Equipment	
Cooling Air Required	
Laser Head	3.4 m ³ (120 CFM)
Power Supply	0.68 m ³ (24 CFM)
Electric Service Required	
Voltage (Universal Input)	90 – 265 Vac
Current	20 A max
Frequency	47 – 63 Hz
Phase	Single
Leakage Current	≤ 2.0 mA (115 Vac) ≤ 3.5 mA (230 Vac)
Environmental	
Temperature Range	4 – 40° C
Humidity (noncondensing)	0 – 95%
Altitude	0 – 3000 m (0 – 9800 ft)

Operating Parameters/Interfaces	
Plasma Tube Operating Current Limits (nominal)	
Minimum	4 A
Maximum	10 A
Power Supply Switching Frequency	
Nominal	100 kHz
Power Supply Overall Efficiency	
Nominal	> 80%
Available Interface Provides These Controls^{4, 5}	
Power Adjust	Status (open collector, max. 50 ma)
Power Monitor	Current Monitor
Interlock	Run/Standby

4. Local control is available when the Model 361C Remote Control is attached to the REMOTE INTERFACE connector on the power supply. Remote operation is also possible when your own equipment is attached to this connector (Amp No. 206150-1).
 5. Interfaces that are compatible with other manufacturer's product are available upon request.

Compliance has been demonstrated to the following regulatory requirements for UL, CE, TÜV and CDRH:

EN 50082-1: 1992	73/23/EEC: 1973
EN 55011: 1991	89/336/EEC: 1989
EN 60950: 1993	FCC Part 15 Class B
EN 61000-3-2: 1995 (upon request)	CDRH, 21 CFR 1040.10
EN 61010-1: 1993	UL 1950

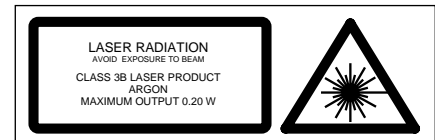


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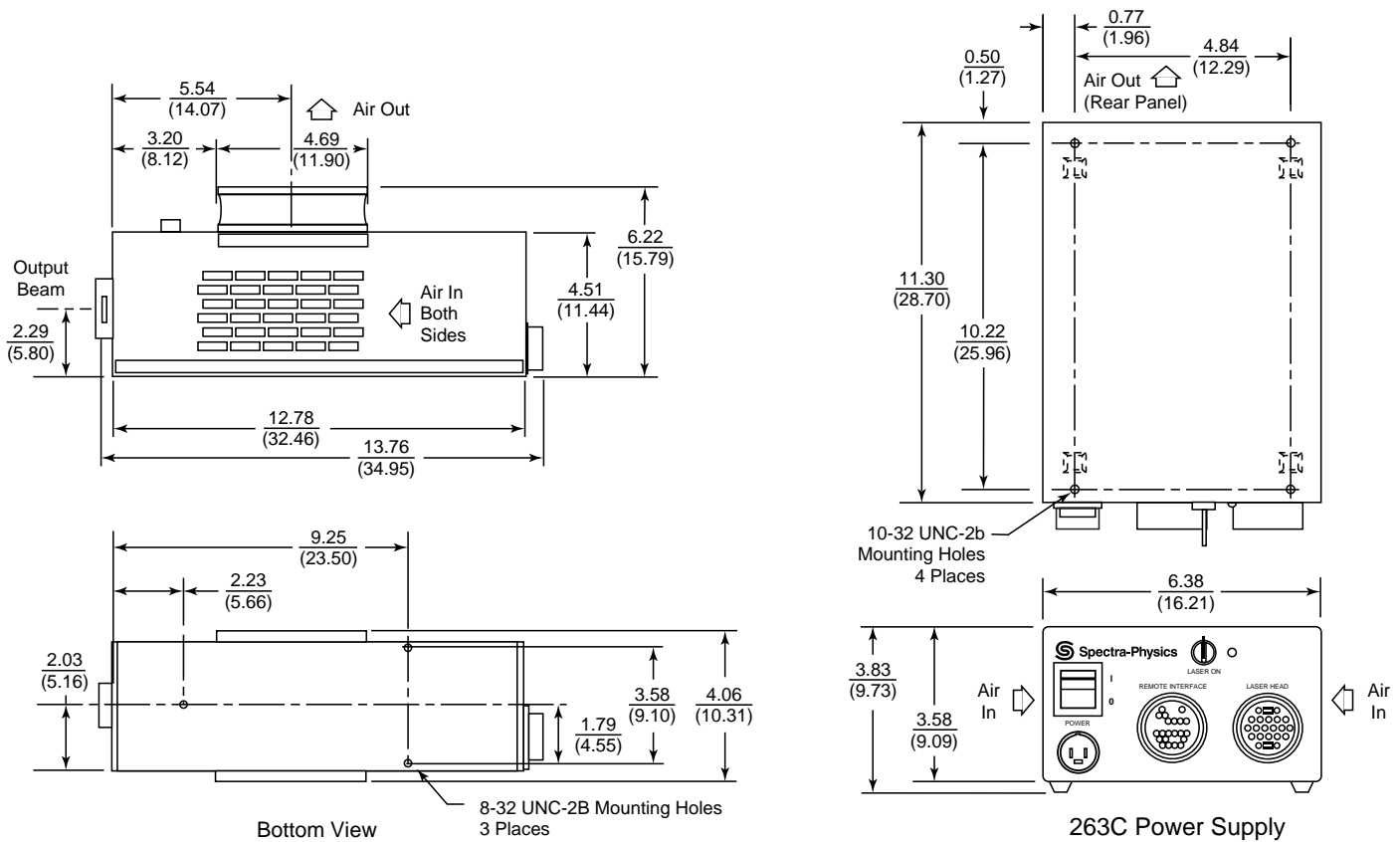
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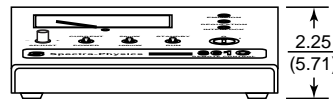
SPECTRA-PHYSICS Advantage™ 161C AIR-COOLED ION LASER SYSTEMS

The Advantage™ 161C is the air-cooled ion laser of choice when space is critical. This laser delivers all of the stability and reliability of the Model 161B laser in a package that occupies 1/3 less space. The plasma tube is based on Spectra-Physics' proven Metal/BeO tube technology and patented "Wavelength Selective Mirrors."* Designed for reliability and manufactured in a total quality environment, these lasers have demonstrated over 30,000 hours lifetime in many OEM applications. The "smart" power supply automatically senses the line voltage and compensates for all variations between 90 – 265 Vac.

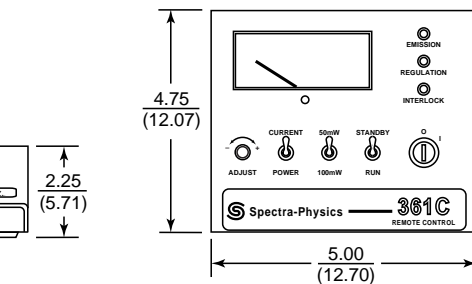


161C Laser Head

All dimensions in $\frac{\text{inches}}{\text{cm}}$



263C Power Supply



361C Remote Control

*Patent # 4,615,034

Model 161C Laser Head	Model 263C Power Supply
Size (L x W x H)	
13.76 x 4.06 x 6.22 in. (34.95 x 10.31 x 15.80 cm)	11.30 x 6.38 x 3.58 in. (28.70 x 16.21 x 9.09 cm)
Weight (actual/shipping)	
10.5 lb (4.8 kg)/20.9 lb (9.5 kg)	6.5 lb (2.95 kg)/10.1 lb (4.6 kg)