

Air-Cooled Argon Ion Laser Heads in Cylindrical and Rectangular Packages

2218/19 Series

**Key Features**

- Integral-mirror, metal-ceramic construction
- Hands-off operation
- Ultralow noise
- Fast warm-up
- Rugged construction
- Vibration isolation
- Ultrastable resonator and beam pointing

Applications

- DNA sequencing
- Flow cytometry
- Confocal microscopy
- Semiconductor inspection
- Hematology
- High speed printing
- Photo processing

Compliance

- CE per specification EN55011 and EN50082-2
- UL 1950 and 1262
- CDRH 21 CFR 1040.10
- EN60825-2
- EN60950, IEC 950, and EN61010

JDSU's air-cooled argon lasers are designed for complex, high-resolution OEM applications such as flow cytometry, DNA sequencing, graphic arts, and semiconductor inspection. They are available in two packages:

Cylindrical Package

Symmetric design and axial airflow in the cylindrical argon ion laser heads provide the best mechanical package to ensure optimum beam-pointing stability and fast warm-up. Both initial installation and routine maintenance are straightforward due to tight production control of optical and mechanical tolerances. Blower-induced mechanical vibration is virtually eliminated through the use of flexible ducting between the laser head and blower assembly.

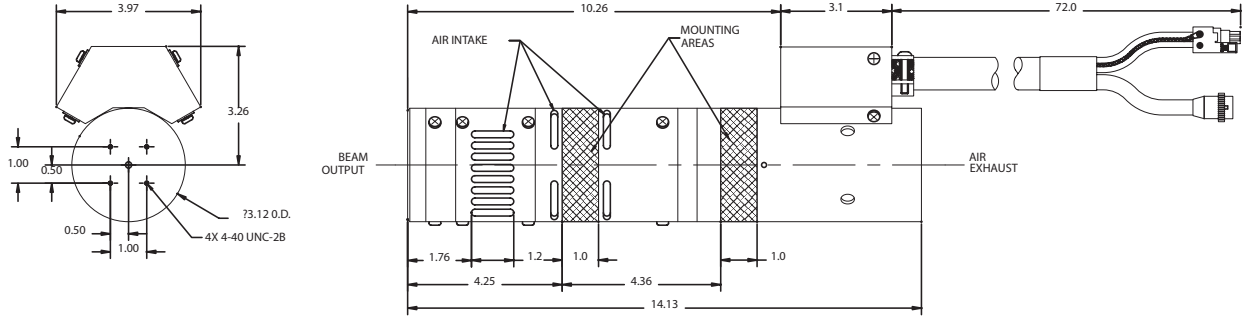
Rectangular Package

Industry-standard rectangular packaging and a variety of wavelength options ensure easy initial installation and field replacement for most applications. As with JDSU cylindrical laser heads, rectangular models incorporate axial airflow for exceptional beam pointing stability and fast warm-up. A top-mounted fan assembly simplifies installation. 2219 series laser packages offer a unique replaceable tube cartridge assembly that allows for five-minute laser tube changes in the field. Precise pre-alignment of tube cartridges reduces the need for end-user system realignment after tube replacement.

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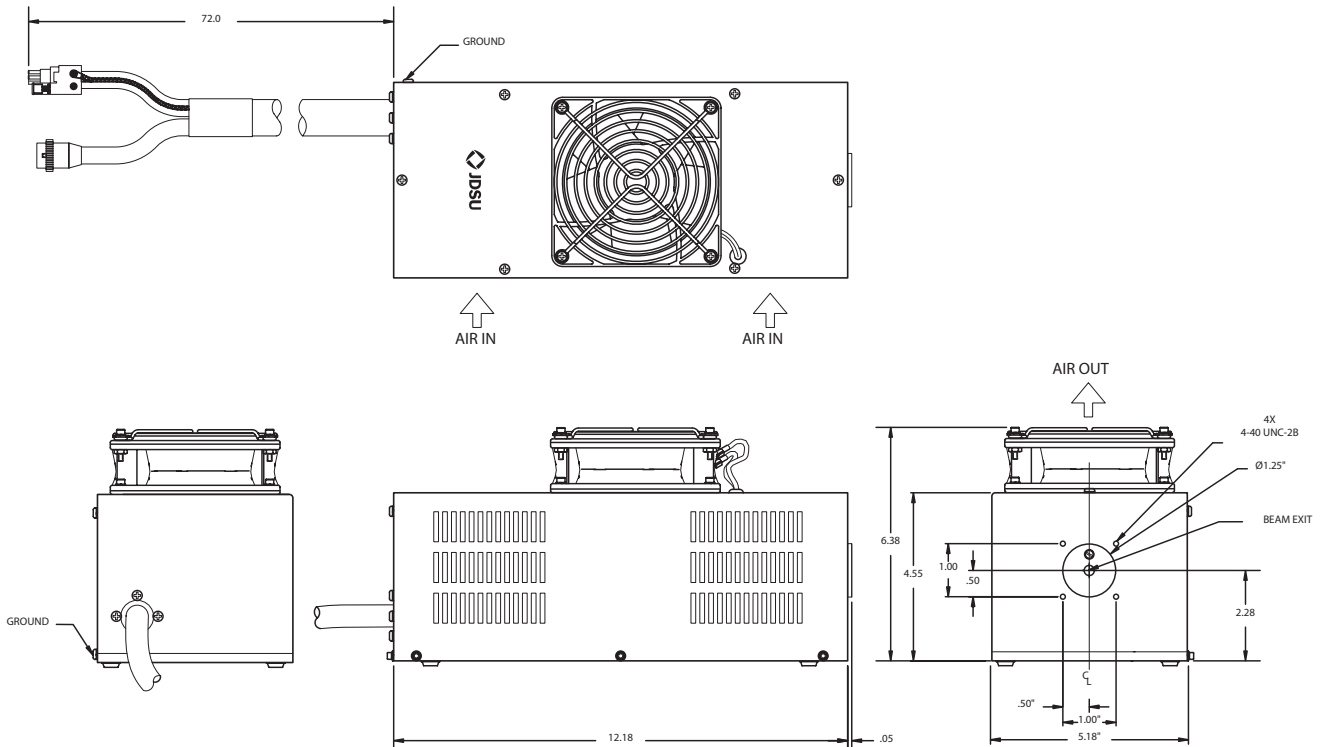
2218 Series Cylindrical Head

(Specifications in inches unless otherwise noted. E-vector is vertical with respect to laser housing. Refer to mechanical drawing for details.)



2219 Series Rectangular Head

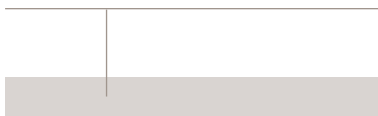
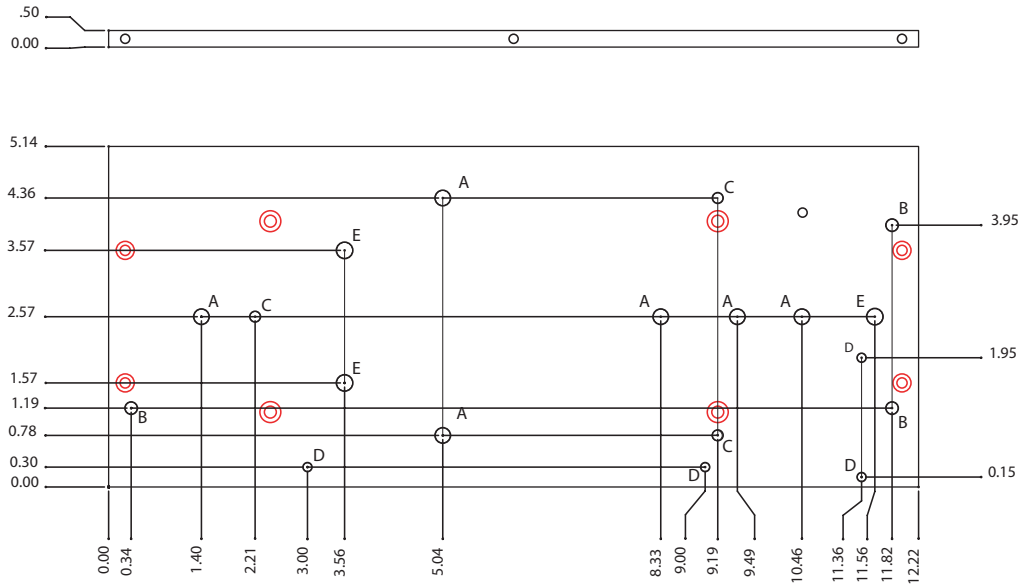
(Specifications in inches unless otherwise noted. E-vector is vertical with respect to laser housing. Refer to mechanical drawing for details.)



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2219 Series Base Plate

(Specifications in inches unless otherwise noted.)



Hole	Description
A	M6
B	10-32 UNC-2B
C	8-32 UNC-2B
D	6-32 UNC-2B
E	1/4-20 UNC-2B

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Specifications

Parameter	2218-0xxMLS/2219-0xxMLS	2218-0xxSLS/2219-0xxSLS
Optical		
Output power (TEM ₀₀)	25 mW	10/20/30 mW
Wavelength	458 to 514 nm	488 nm
Mode purity (TEM ₀₀)	>95%	>95%
Beam diameter (1/e ² ±5%)	0.70	0.69
Beam divergence (mrad ±5%)	0.90	0.95
Minimum polarization ratio		250:1
Longitudinal mode spacing (TEM ₀₀ only)		566
Noise		
p-p, 20 Hz to 2 kHz		≤0.1%
p-p, 20 Hz to 20 kHz		≤1.0%
rms, 20 Hz 2 MHz		≤1.0%
Maximum drift (light control mode over 2 hours)		≤1.0%
Maximum warm-up time		5 minutes
Beam pointing stability after warm-up (2 hours, 25±3 °C)		<30 μRad
CDRH class		3a
Static alignment		
Beam position		±0.25 mm
Beam angle		±2.5 mrad
Environmental		
Temperature		
Operating		4 to 40 °C
Non-operating		30 to 60 °C
Altitude		
Operating		0 to 10,000 feet
Non-operating		0 to 70,000 feet
Relative humidity (non-condensing)		
Operating		0 to 90%
Non-operating		0 to 100%
Shock		
Operating		25 g for 11 ms
Non-operating		25 g for 11 ms
Physical		
Weight		14 lbs.
Umbilical length		72±2 inches

Note: Nominal airflow is 52 CFM. Use Dayton model 4C442 or equivalent fan rated for 140 CFM free air and typical pressure head of 0.95 inches of water.

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Ordering Information

For more information on this or other products and their availability, please contact your local JDSU account manager or JDSU directly at 1-800-498-JDSU (5378) in North America and +800-5378-JDSU worldwide or via e-mail at customer.service@jdsu.com.

Sample: 2218-010SLS

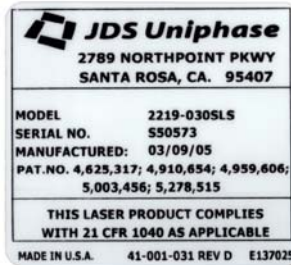
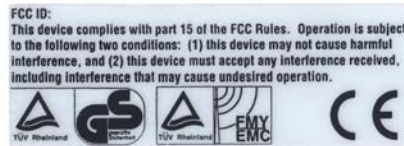
Product Code	Description
2218-010MLS	Argon laser head cylindrical package, 10 mW output power, multi line operation at 458 to 514 nm, single mode
2218-010SLS	Argon laser head cylindrical package, 10 mW output power, single line operation at 488 nm, single mode
2218-020MLS	Argon laser head cylindrical package, 20 mW output power, multi line operation at 458 to 514 nm, single mode
2218-020SLS	Argon laser head cylindrical package, 20 mW output power, single line operation at 488 nm, single mode
2218-030MLS	Argon laser head cylindrical package, 30 mW output power, multi line operation at 458 to 514 nm, single mode
2218-030SLS	Argon laser head cylindrical package, 30 mW output power, single line operation at 488 nm, single mode
2219-010MLS	Argon laser head, rectangular package, 10 mW output power, multi line operation at 458 to 514 nm, single mode
2219-010SLS	Argon laser head, rectangular package, 10 mW output power, single line operation at 488 nm, single mode
2219-020MLS	Argon laser head, rectangular package, 20 mW output power, multi line operation at 458 to 514 nm, single mode
2219-020SLS	Argon laser head, rectangular package, 20 mW output power, single line operation at 488 nm, single mode
2219-030MLS	Argon laser head, rectangular package, 30 mW output power, multi line operation at 458 to 514 nm, single mode
2219-030SLS	Argon laser head, rectangular package, 30 mW output power, single line operation at 488 nm, single mode

Warranty

The 2218/19 laser heads are warranted to be free from defects in materials and workmanship for 8,000 hours of operation at or below specified power, or for 24 months from the date of shipment, whichever occurs first. All other components of the laser and power supply are warranted to be free from defects and workmanship for 12 months from the date of shipment.

Regulatory Compliance

The products listed in this datasheet comply with one or more of the following regulatory standards, and may display one or more of the safety labels shown below. Contact your local JDSU sales representative for additional information on specific products or configurations.



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