

Air-Cooled Argon-Ion Laser Heads

2218



Lumentum air-cooled argon-ion lasers are designed for complex, high-resolution OEM applications such as flow cytometry, DNA sequencing, graphic arts, and semiconductor inspection.

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.

Key Features

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

Applications

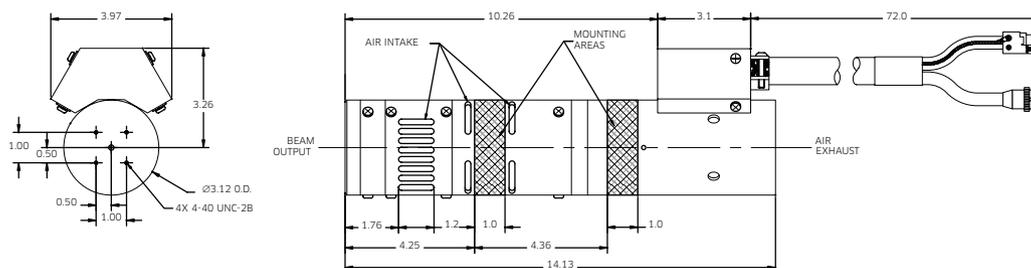
- DNA sequencing
- Flow cytometry
- Confocal microscopy
- Semiconductor inspection
- Hematology
- High-speed printing
- Photo processing

Compliance

- CE per specification IEC 61010-1:2001, EN 61326-1:2006 and IEC 60825-1:2007 ed2.0
- UL 61010-1 2nd Ed
- CDRH 21 CFR 1040.10

2218 Series Cylindrical Head

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



Specifications

Parameter	2218-0xxMLS	2218-0xxSLS
Optical		
Output power (TEM ₀₀)	25 mW	10/20/30 mW
Wavelength	458 to 515 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		
rms, 20 Hz to 2 kHz		≤0.1%
p-p, 20 Hz to 20 kHz		≤2.5%
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		IIb
Static alignment		
Beam position		±0.25 mm
Beam angle		±2.5 mrad
Environmental		
Temperature		
Operating		4 to 40°C
Non-operating		-30°C to 60°C
Altitude		
Operating		0 to 10,000 feet
Non-operating		0 to 70,000 feet
Relative humidity (non-condensing)		
Operating		<95%
Non-operating		<95%
Shock		
Operating		25 g for 11 ms
Non-operating		25 g for 11 ms
Physical		
Weight		8.5 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.

Ordering Information

For more information on this or other products and their availability, please contact your local Lumentum account manager or Lumentum directly at customer.service@lumentum.com.

Sample: 2218-010SLS

Product Code	Description
2218-010SLS	Argon laser head cylindrical package, 10 mW output power, single line operation at 488 nm, single mode
2218-020SLS	Argon laser head cylindrical package, 20 mW output power, single line operation at 488 nm, single mode
2218-030SLS	Argon laser head cylindrical package, 30 mW output power, single line operation at 488 nm, single mode
2218-025MLS	Argon laser head cylindrical package, 25 mW output power, multi line operation at 458 to 515 nm, single mode

Warranty

The 2218 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 the following regulatory compliance, and display the labels shown below.

Contact your local Lumentum sales representative for additional information on specific products or configurations.

CE Marking Directive

Low Voltage Directive (LVD - 2006/95/EC)

Laser Safety

IEC 60825-1:2007 report

Electrical Safety

IEC 61010-1:2001 2nd Ed certification

EMC Directive 2004/108/EC Harmonized standards

EMC Class A Emissions and Immunity

EN 61326-1:2006 Class A certification

US Requirements

Electrical Safety

UL 61010-1 2nd Ed

Laser Safety

Title 21, Code of Federal Regulations, Subchapter J

CDRH 21 CFR 1040.10

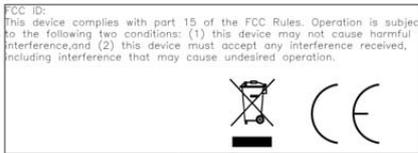
Environmental

Restriction of Hazardous Substances (RoHS) Directive 2002/95/EC

China Ministry of Information Order #39 (China RoHS)

Waste Electrical and Electronic Equipment (WEEE) Directive 2002/96/EC

Registration, Evaluation, Authorization and Restriction of Chemicals (REACH) Directive 1999/45/EC



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