



- Available with violet, blue, green, red, or all-lines output
- Output power to 300 mW, TEM<sub>00</sub>
- Linearly polarized with outstanding power stability
- Switching power supplies with power-factor correction
- CE, IEC, and CDRH compliant

The 35 L(X)L and 35 LAS series air-cooled ion laser systems are compact devices that produce high-quality, linearly polarized fixed or multiple wavelength outputs. The 35 LA(X) systems are argon-ion lasers that produce as much as 300 mW all lines or 150 mW single line in a clean Gaussian TEM<sub>00</sub> mode. The 35 L(X)L system argon/krypton and krypton lasers produce up to 100 mW in the red and up to 20 mW in the yellow. Single-wavelength and multiwavelength versions are available.

These fixed-wavelength lasers use carefully tailored reflective coatings to select the wavelength range. With broadband mirrors, all lines operate simultaneously. With narrowband mirrors, the output is limited to a specific range of wavelengths (e.g., blue or red) or to a specific line (e.g., 488 or 514 nm).

## Fixed-Wavelength Ion Laser Systems

### SPECIFICATIONS: Fixed-Wavelength Ion Laser Systems

<b>Beam Characteristics</b>	
Transverse Mode	TEM <sub>00</sub>
Coherence Length	~10 cm
Polarization	Linear (vertical ± 5°) >250:1
<b>Stability Characteristics</b>	
Power Stability	± 0.5% over 2 hours, ambient ± 3°C
Pointing Stability	<30 μrad/°C
<b>Operating Characteristics</b>	
Warm-up Time	<15 minutes from cold start
Recovery from Standby	1 second
Cooling	Forced air
<b>Environmental Requirements</b>	
Operating Temperature	5°C to 40°C
Nonoperating Temperature	– 30°C to + 60°C
Operating Humidity	0% to 90%, noncondensing
<b>Electrical Characteristics</b>	
Input Voltage	100, 120, 200, 208, 220, 230 or 240 Vac ± 10%
Input Frequency	47–63 Hz, single phase
Input Power	2 kVA (typical)
<b>Weight</b>	
Laser Head Weight	4.31 kg (9.5 lb)
Power Supply Weight	2.72 kg (6.0 lb)
<b>Safety Classification</b>	CDRH IIIb, IEC 3B, CE

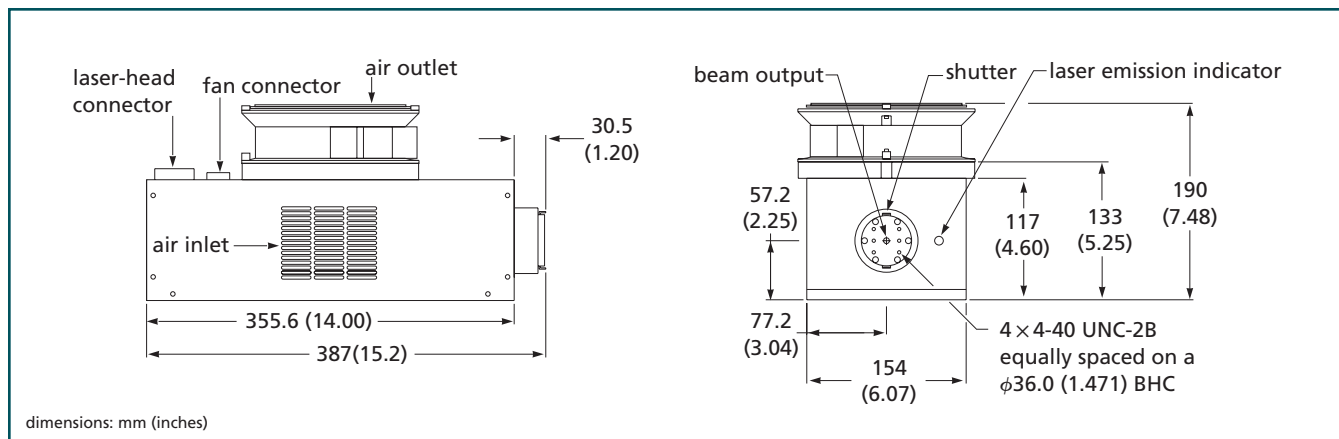
### Do you need . . .

#### MEASURING LASER BEAM PROFILE

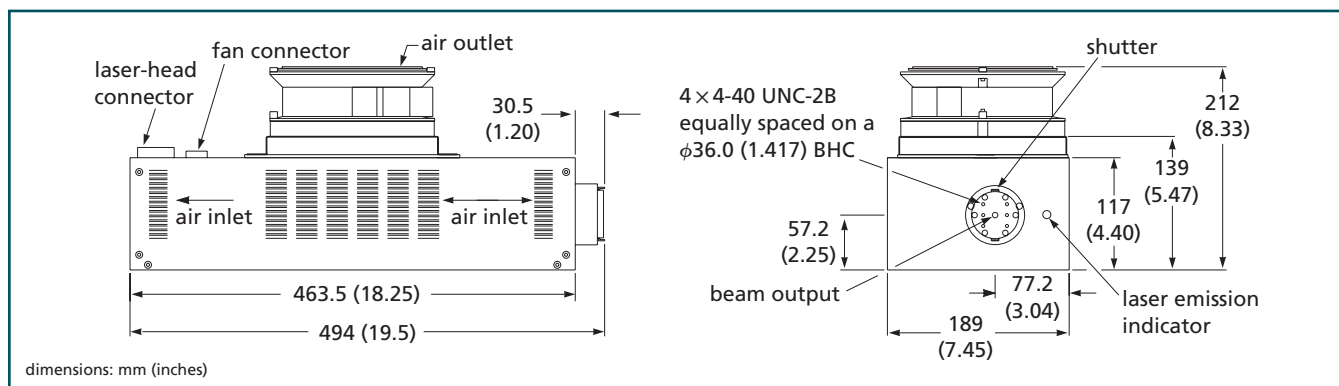
The 13 SKD series BeamScope™ profiler is designed to map intensity profiles of ion laser beams as small as 0.5 μm and as large as 25 mm.

- Slit and knife-edge modes
- Measures position, centroid, divergence, and relative power
- M<sup>2</sup> attachment available





Fixed wavelength ion laser head (35 LAS series)



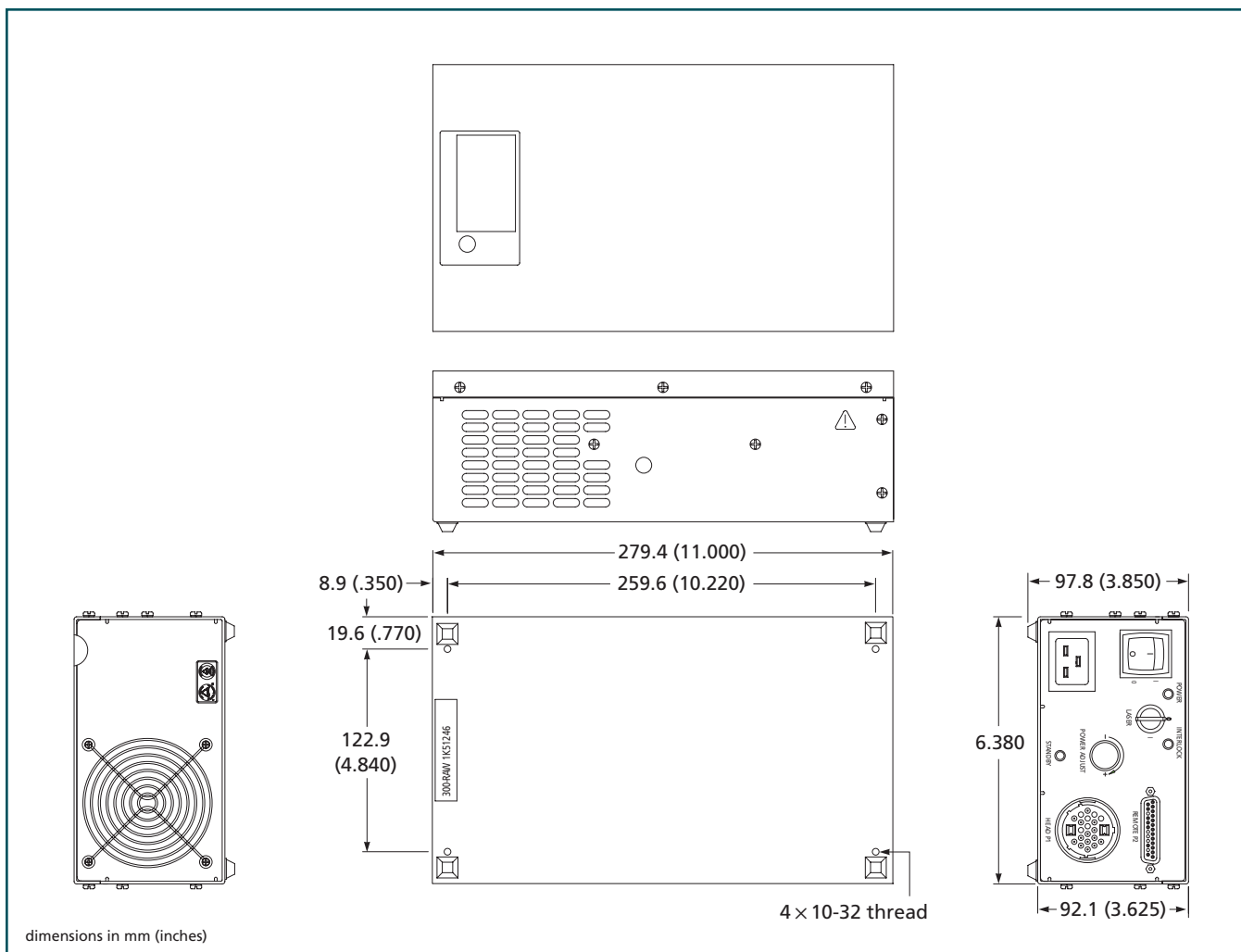
Fixed wavelength ion laser head (35 L(X)L series)

## Fixed-Wavelength Ion Laser Systems

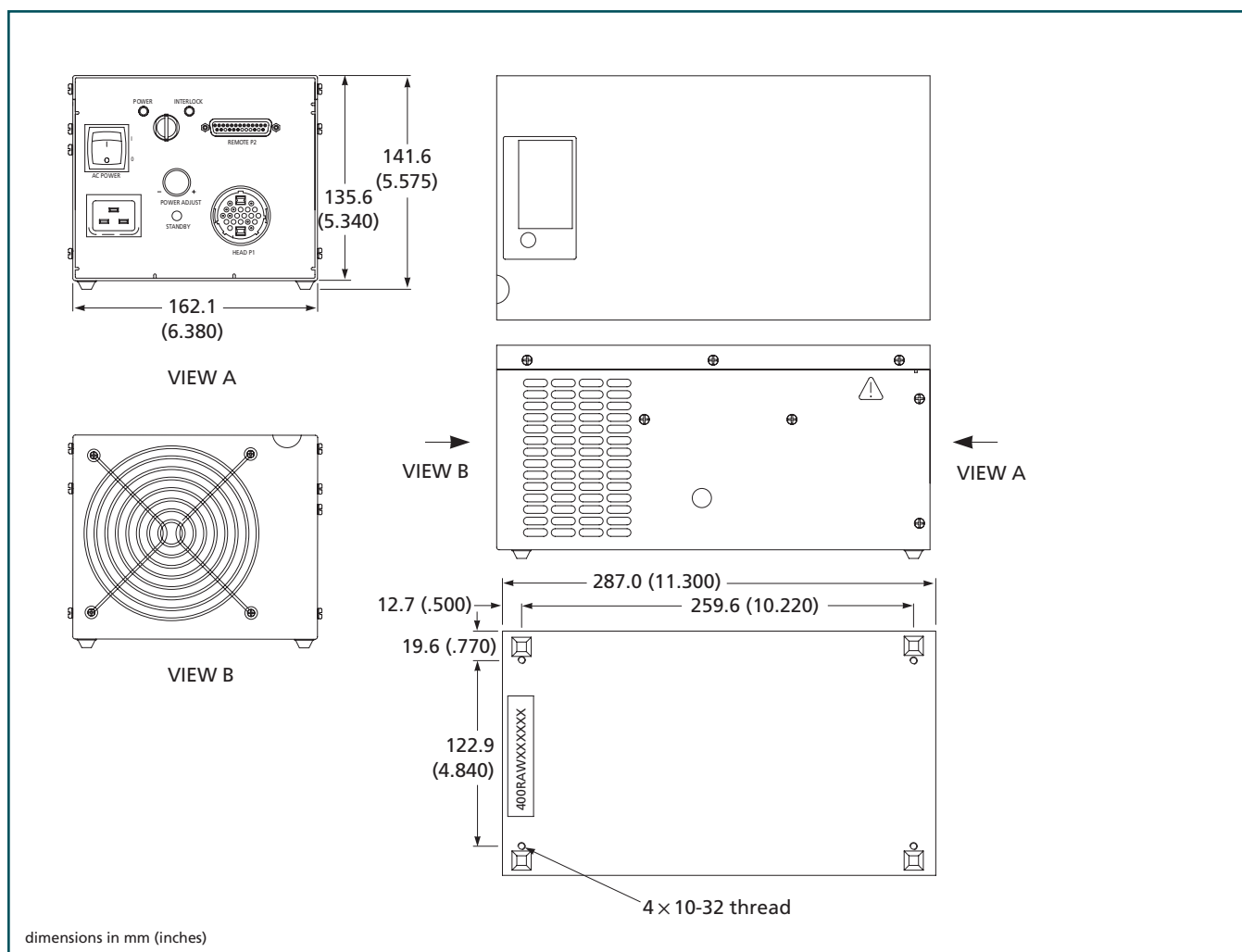
Wavelength (nm)	cw Output Power (mW)	Active Gas	Beam Diameter ( $1/e^2$ ) (mm)	Beam Divergence ( $1/e^2$ ) (mrad)	$M^2$	Optical Noise p-p @ <100 kHz / <1MHz	PART NUMBER <sup>2</sup>
<b>Single Wavelength</b>							
488	50	Argon	$0.72 \pm 5\%$	$1.1 \pm 5\%$	<1.2	<2% / <3%	35 LAS 450
488	150	Argon	$0.68 \pm 5\%$	$1.1 \pm 5\%$	<1.2	<4% / <6%	35 LAL 415
514	50	Argon	$0.70 \pm 5\%$	$1.1 \pm 5\%$	<1.2	<3% / <5%	35 LAS 550
514	150	Argon	$0.68 \pm 5\%$	$1.1 \pm 5\%$	<1.2	<4% / <6%	35 LAL 515
568	10	Argon/Krypton	$0.70 \pm 5\%$	$1.1 \pm 5\%$	<1.1	<4% / <5%	35 LYL 510
568	20	Argon/Krypton	$0.70 \pm 5\%$	$1.1 \pm 5\%$	<1.2	<4% / <5%	35 LYL 520
<b>Multiwavelength<sup>1</sup></b>							
457–514	100	Argon	$0.66 \pm 5\%$	$1.1 \pm 5\%$	<1.2	<4% / <6%	35 LAS 010
457–514	300	Argon	$0.68 \pm 5\%$	$1.1 \pm 5\%$	<1.2	<4% / <6%	35 LAL 030
488/568	20/20	Argon/Krypton	$0.80 / 0.70 \pm 5\%$	$1.1 / 1.0 \pm 5\%$	<1.4 / <1.2	See Note	35 LDL 840
488/568/647	10/10/15	Argon/Krypton	$0.8 / 0.7 / 0.7 \pm 5\%$	$1.1 / 1.0 / 1.1 \pm 5\%$	<1.4 / <1.2 / <1.1	See Note	35 LTL 835

<sup>1</sup> Other wavelengths may be present.<sup>2</sup> Append the appropriate suffix to the product number to specify input voltage: -100 for 100 Vac, -120 for 120 Vac, -200 for 200 Vac, -208 for 208 Vac, -220 for 220 Vac, -230 for 230 Vac, or -240 for 240 Vac. (-100 and -120 available only on 35 LAS series lasers)

Note: For 35 LDL 840, 4%/5% at 488 nm, 7%/12% at 568 nm. For 35 LTL 835, 4%/5% at 488 nm, 10%/14% at 568, and 8%/12% at 647 nm.



Power and control unit for 35 LAS ion laser systems



Power and control unit for 35 L(X)L ion laser systems

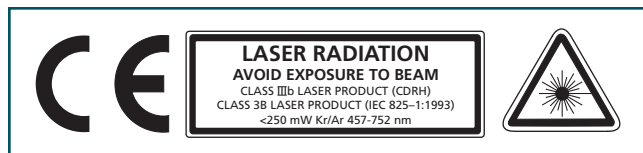


All CVI Melles Griot air-cooled ion laser systems are designed, tested, and manufactured for compliance with applicable international and laser safety standards, including CDRH performance standard 21 CFR 1040 and European directives 89/336/EEC and 73/23/EEC.

The labels below are attached, as indicated, to all complying product.



Compliance label for all Class IIIb, 3B, LAS and LAP/MAP 321 series argon-ion laser with output from 454 nm to 529 nm

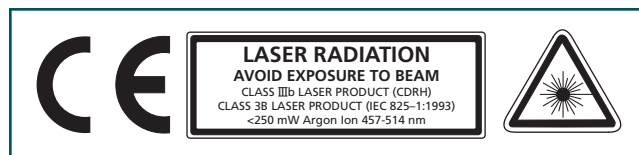


Compliance label for all Class IIIb, 3B, KAP, LDL, LTL, LYL series argon/krypton lasers with output from 457 nm to 752 nm

## Air-Cooled Ion Laser Emission Compliance Labels



Compliance label for all Class IIIb, 3B, LAL and LAP/MAP 431 series lasers with output from 454 to 529 nm



Compliance label for all Class IIIb, 3B, internal mirror 35 IMA series lasers with output from 457 to 514 nm