



AVIA LX

Solid-State Q-Switched Ultraviolet Lasers

AVIA LX is the newest addition to the AVIA ns UV product family. With an available power level of 20W, the AVIA LX is built on the same proven architecture as the current generation of AVIA and MATRIX. The entire optical design and electronics, however, have been streamlined and cleverly integrated into a single compact package.

AVIA LX sets a new level of reliability, cost of ownership and performance, unmatched by other ns competitor lasers. Coherent's PureUV™ active laser-cleaning engine enables longest field lifetime and hands-off functionality. The AVIA LX design and build utilizes Coherent's PermAlign™ technology. This enables the industry's most stringent test benchmarks to outperform. Hence, the AVIA LX is the leading customers choice for demanding application in any environment.

AVIA LX is ideal for applications such as via drilling in PCB and Flex materials, cutting of Flex material, 3D chip package manufacturing, IC package trimming, and wafer scribing. The AVIA LX offers effortless ease of integration into laser based tools through its small footprint and a product overarching simplified interface.

AVIA LX represents the pinnacle of performance and reliability for 24/7 microelectronics applications in which factory up-time is the true measure of success.

FEATURES

- Rep rates single-shot to 100s of kHz
- High beam quality $M^2 < 1.2$
- Industry leading compact footprint
- Simplified user interface at laser head
- High reliability between long maintenance cycles

APPLICATIONS

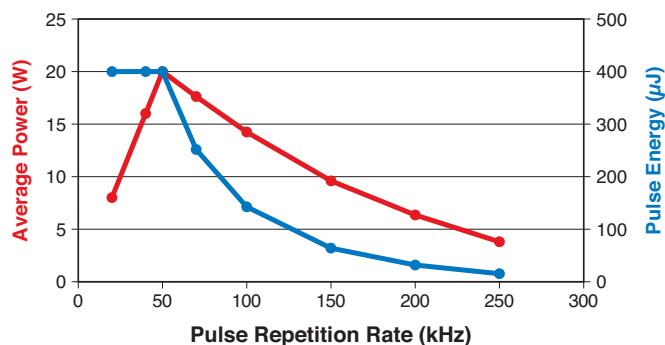
- Via Hole Drilling
- Flex Materials Cutting
- 3D Package Manufacturing
- IC Package Trimming
- Wafer Scribing and Singulation
- Solar Cell Scribing



SPECIFICATIONS ¹	AVIA LX 355-20
Fundamental Center Wavelength (nm)	354.7
Output Power (W) (specified)	>20 at 50 kHz
Output Power (W) (typical)	>15 at 100 kHz >10 at 150 kHz >5 at 200 kHz
Pulse Energy (μJ)	Up to 400
Repetition Rate	Single-shot to 300 kHz
Pulse Width (ns)	<30 at 50 kHz
Spatial Mode	TEM ₀₀ , M ² <1.3
Beam Divergence (mrad)	<2.5
Beam Waist Diameter (μm, 1/e ²)	290 ±10%
Beam Circularity (%)	>90
Polarization Ratio	>100:1
Polarization Direction	Vertical
Pulse Energy Stability (%) (RMS)	<4
Power Stability (%) (RMS, 2σ) (over 8 hours)	<2
Warm-up Time (minutes)	
Cold Start	<20
Warm Start	<5
Head Weight	12.5 kg (27.5 lbs.)
External Comms	RS-232, Ethernet, USB
Power Consumption (W) (VAC)	<600
OPERATING SPECIFICATIONS	
Temperature (non-condensing)	
Laser Head	+15 to 40°C (59 to 104°F)
Non-Operation (storage)	-20 to +60°C (-4 to 140°F)
Shipping Specifications	
Temperature	-20 to +60°C (-4 to 140°F)
Relative Humidity (%)	5 to 80

¹ All specifications measured at nominal PRF.

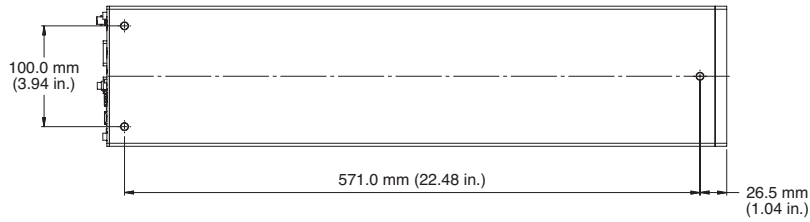
AVIA LX 355-20 Spec UV Performance



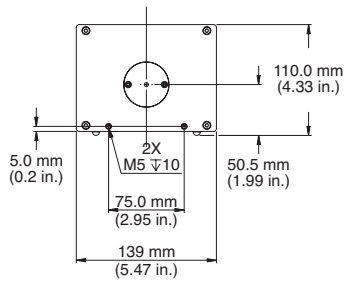
MECHANICAL SPECIFICATIONS

AVIA LX

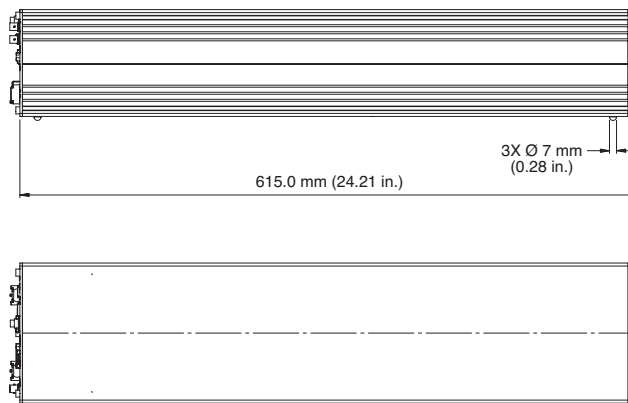
Top View



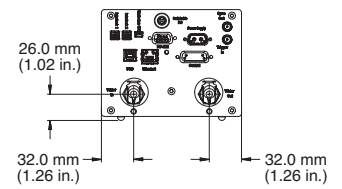
Front View



Side View



Rear View



Bottom View



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Coherent follows a policy of continuous product improvement. Specifications are subject to change without notice. Coherent's scientific and industrial lasers are certified to comply with the Federal Regulations (21 CFR Subchapter J) as administered by the Center for Devices and Radiological Health on all systems ordered for shipment after August 2, 1976.

Coherent offers a limited warranty for all AVIA LX lasers. For full details of this warranty coverage, please refer to the Service section at www.Coherent.com or contact your local Sales or Service Representative. Printed in the U.S.A. MC-009-17-0M0417 Copyright ©2017 Coherent, Inc.