Q-Switched Nanosecond Lasers

AVIA LX 355-Q25

Solid-State Q-Switched Second and Third Harmonic Lasers

Designed for demanding environments like beverage and food production, the AVIA LX enables high-contrast, permanent coding on glass, PET, and coated metals — all without consumables. With precise pulse control and Pulse Synchronized Output (PSO), it delivers clean, reliable marks across a wide range of packaging formats. Thanks to a robust optical design with no THG spot shifting, the system runs with virtually no downtime, enabling mission times of up to 50,000 hours in real-world production.

FEATURES

- Repetition rates single-shot to 100s of kHz
- High beam quality M^2 <1.3
- Industry leading compact footprint
- Simplified user interface at laser head
- High reliability between long maintenance cycles

APPLICATIONS

- Flex Materials Cutting
- 3D Package Manufacturing
- IC Package Trimming
- PCB Cutting
- High Speed Marking
- SIP Cutting
- Food and baverage marking and coding

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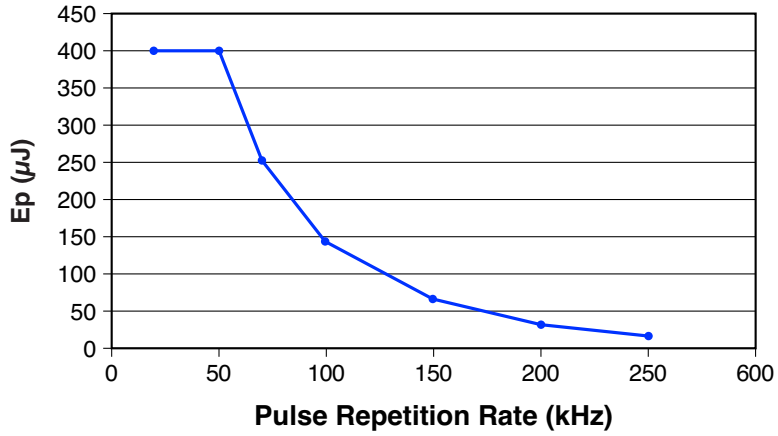
Specifications	AVIA LX 355-Q25
Collimated Beam Diameter (mm)	3.0
Output Power (W) (specified)	>20 at 50 kHz
Pulse Energy (µJ)	Up to 400
Repetition Rate	Single-shot to 300 kHz
Pulse Width (ns)	<30 at 50 kHz
Spatial Mode[1]	TEM_{00}, M^2 <1.3
Beam Divergence (mrad)	<0.3
Beam Waist Diameter at $1/e^2$ (mm)	3.0 ±20%
Beam Circularity (%)	>85
Polarization Ratio	>100:1
Polarization Direction	Vertical
Pulse Energy Stability (%) (RMS)	<4
Power Stability (%) (RMS, 2s) (over 8 hours)	<2
Warm-up Time (minutes) Cold Start Warm Start	 <20 <5
Head Weight	12.5 kg (27.5 lbs.)
External Interfaces	RS-232, Ethernet, USB
Power Consumption (W) (VAC)	<500
Operating Specifications	
Temperature (non-condensing) Laser Head Non-Operation (storage)	 +15 to 40°C (59 to 104°F) -20 to +60°C (-4 to 140°F)
Shipping Specifications Temperature Relative Humidity (%)	 -20 to +60°C (-4 to 140°F) 5 to 80

Notes:
1. Nominal M^2 at each fresh prequalfied THG spot.

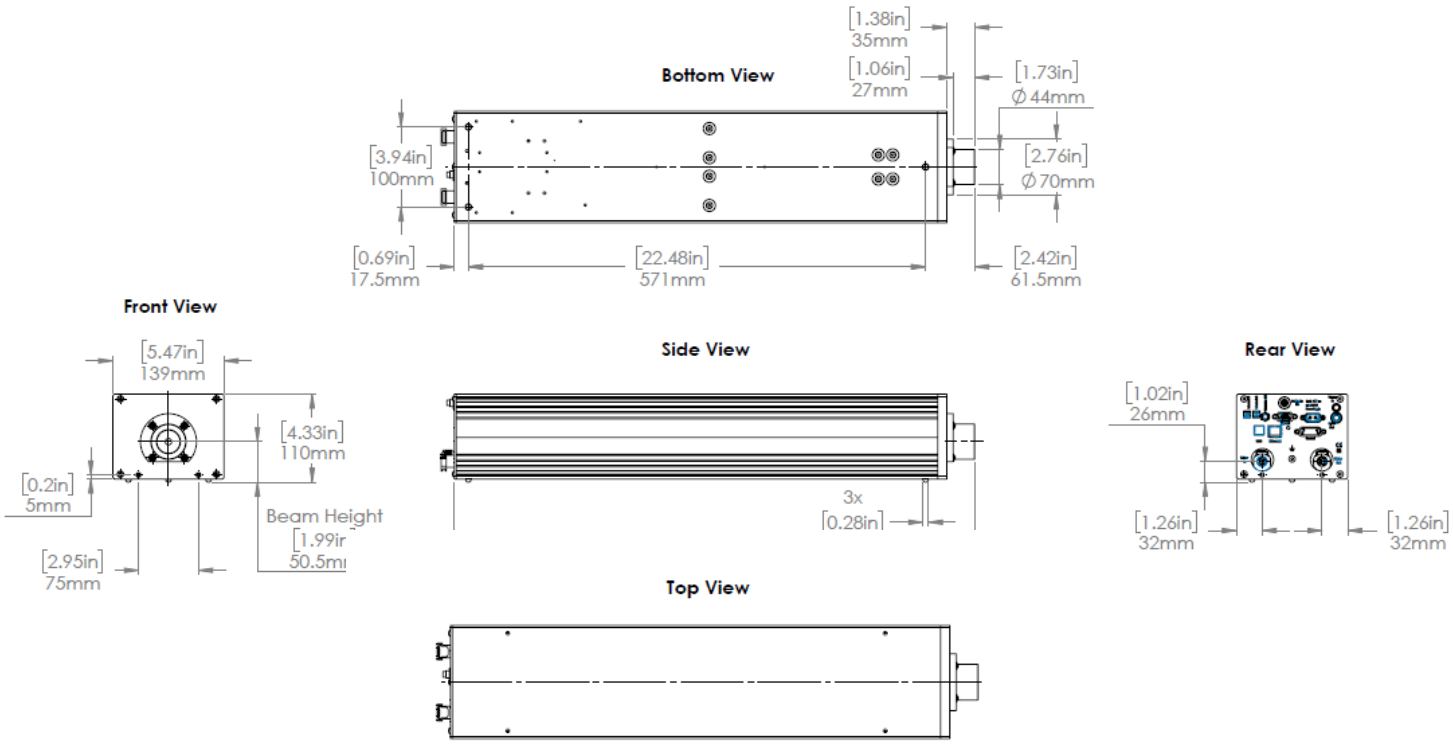
Typical Performance Data

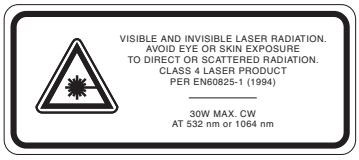
Pulse Energy vs Repetition Rate



Mechanical Specifications

AVIA LX 3.00 mm Collimated Beam





For more information
www.coherent.com