AVIA 355-5

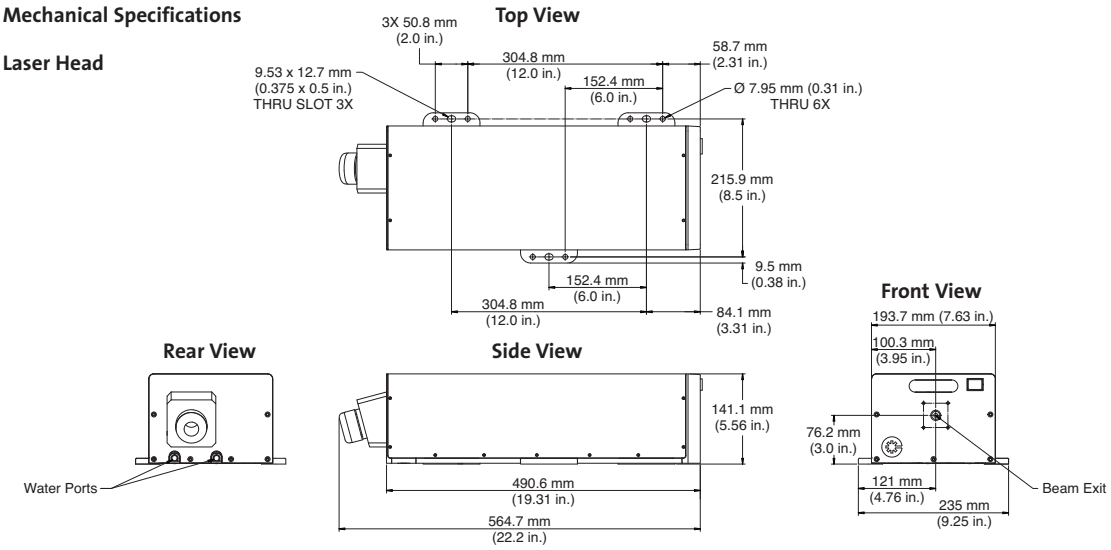
Solid-State Q-Switched Ultraviolet Lasers

Features

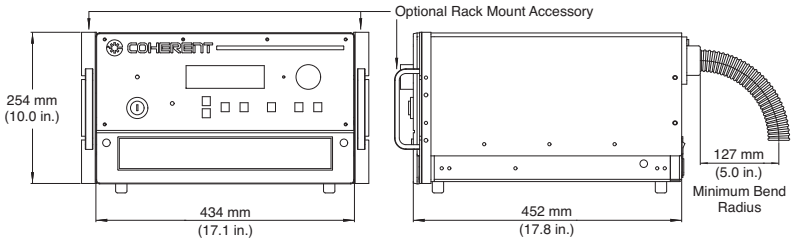
- 5W of 355 nm at 50 kHz
- Excellent beam quality M^2 <1.3
- PermAlign™ solder-bonded optics technology
- Field replaceable pump diode module
- Smart power supply with RS-232 interface
- HGX UV generation technology
- Total Pulse Control system
- ThermEQ™ for uniform pulse energy across a burst of pulses
- PulseEQ™ for locked pulse energy across a range of pulse repetition rates
- PulseTrack™ for on-the-fly pulse energy control

Mechanical Specifications

Laser Head



Power Supply



Superior Reliability & Performance

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System Specifications

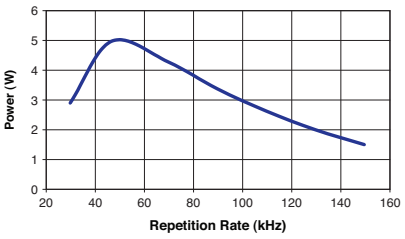
Wavelength (nm)	354.7
Average Output Power (W)	5 at 50 kHz
Nominal Repetition Rate (kHz)	50
Pulse Repetition Rate	Single-shot to 150 kHz
Motorized Crystal Shifter	40 spots at >500 hrs. each = >20,000 hrs.
Pulse-to-Pulse Stability (rms 1σ)	<5% up to 60 kHz
Average Power Stability (rms 2σ)	<2% over 8 hours
Polarization Ratio[1]	>100:1 Vertical
Spatial Mode[1]	TEM_{00} (M^2 <1.3)
Beam Divergence Full Angle[1] (mrad)	<0.5
Pulse Width (ns)	<20 up to 60 kHz
Beam Pointing Drift[2] (µrad/°C)	<15
Near-Field Pointing vs. Rep. Rate with PosiLock (µm)	50
1/e^2 Beam Diameter[1] (mm)	2.4 ±10%
Beam Circularity	>85%
Warm-up Time (typical)	<15 minutes from standby mode; <40 minutes from cold start
Bore-Sight Accuracy	±0.5 mm and ±5 mrad referenced to mounting features on laser head
RoHS Compliant	Yes
Warranty	24 months or 10,000 hours

Utility and Environmental Requirements

Single Phase Operating Voltage	100 to 240 VAC auto ranging
Line Frequency	50 to 60 Hz auto ranging
Power Consumption	400W typical 800W maximum
Cooling Requirements	
Power Supply	Air-cooled (650W max. heat load)
Laser Head[3]	Water-cooled (300W max. heat load)
Ambient Temperature Range	+10 to +30°C (operating) -25 to +65°C (non-operating-short term)
Relative Humidity	10 to 80% (non-condensing)
Weight of Laser Head	12.0 kg (26.5 lbs.)
Weight of Power Supply	38.6 kg (85 lbs.)
Umbilical Length	3m (10 ft.)

[1] All tests are at 50 kHz with diode current set to achieve 5W.
[2] Referenced to base plate temperature.
[3] Recommended water temperature is 18 to 22°C with a flow rate of 2.0 l/min.

AVIA 355-5 Power Curve



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 355-5 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.

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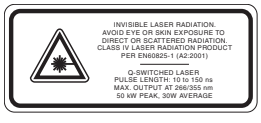

Printed in the U.S.A. MC-027-09-0M0409

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