

DXG DUV Air Cooled Series

DXG Nanosecond Lasers

TEM₀₀, Deep Ultra-Violet, Q-Switched Lasers

With over 26 years of laser innovation and a legacy of reliability proven by tens of thousands of units delivered since 1998, our DXG Nd:YAG DUV Air-Cooled Series builds on the trusted DX platform, now extended into the deep ultraviolet. This new generation of diode-pumped, air-cooled nanosecond lasers delivers up to 1 W of DUV power, all in a compact and efficient air-cooled package, no water cooling required.

Designed for seamless integration into precision-driven industrial systems, the DXG DUV Series offers a unique combination of compact size, high reliability, and deep-UV capability, making it ideal for demanding applications such as high-resolution marking, micro-structuring, semiconductor processing, and medical device manufacturing. By bringing deep-UV performance to an air-cooled format, the DXG DUV Series redefines what's possible in compact laser design, delivering industry-leading precision and versatility in a field-ready system.



APPLICATIONS

- Marking on glass, plastic, ceramics
- Micro-drilling polymers and thin films
- Processing medical devices and catheters
- Wafer dicing and edge trimming
- Scribing displays and solar panels
- Micron-scale surface cleaning and ablation
- Coating removal on sensitive substrates
- Fine-feature engraving for security marking

FEATURES

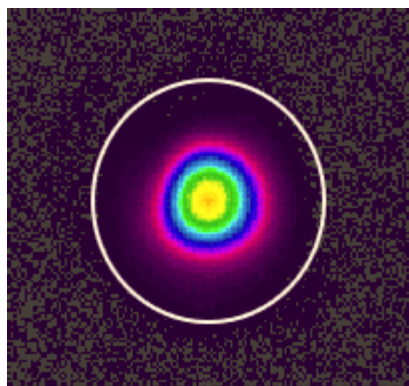
- Up to ~67μJ Pulse Energy at 15 kHz
- True TEM₀₀ Output
- Short Pulse Widths
- Air-cooled with Base Plate Cooled Option
- Robust & Compact Form Factor
- Dynamic Pulse Energy Control - **PEC**
- Position Synchronized Output - **PSO**
- Power Monitoring and Self-Calibration

Specifications – DXG DUV Air-Cooled Series			
	DXG-266-0.25	DXG-266-0.5	DXG-266-1
Wavelength (nm)	266		
Average Power (mW) @ 15kHz	250	500	1
Pulse Energy (μJ) @ 15kHz	~16	~33	~67
Pulse Width (ns) @ 15kHz	~10-15		
Pulse repetition rate (kHz) ¹	5 to 50		
Pulse-to-pulse stability (%RMS) ²	<3		
Long-term power stability (%RMS) ³	<2		
Beam spatial mode & M ²	TEM ₀₀ - M ² <1.2		
Beam divergence (nominal) (mrad)	~ 2.5		
Beam diameter at exit (mm)	~ 0.9		
Beam roundness (%)	>80		
Beam pointing stability (μrad)	<25		
Polarization ratio	Horizontal; >100:1		
	Operational Specifications and Characteristics		
Interface	RS232, Ethernet, Software GUI, External TTL Triggering		
Warm-up time	< 5 minutes from standby, <10 minutes from cold start		
Electrical requirement	100-240 V AC - 15 V DC, 13.4 A [PSU Included]		
Line frequency (Hz)	50-60		
Power consumption (W)	~130		
Dimensions	16 x 5 x 5in - [406.4 x 127 x 127 mm]		
Weight	~20 lbs [~9.1 kg]		
	Environmental Requirements		
Ambient temperature ⁴	Ambient 15°C to 30°C (59°F to 86°F) Operating Range		
	Relative humidity 0% to 80% max, non-condensing		
Storage conditions	-10°C to 40°C; sea level to 12000 m		
	0% to 80% relative Humidity, non-condensing		
Cooling system	Air-Cooled / Base Plate Cooled ⁵		

[1.] Lower pulse repetition rates (down to <5 kHz) performance achieved by pulse energy capping. [2.] Measured at ambient temperature ± 2°C. [3.] Measured over 8 hours ± 1°C.

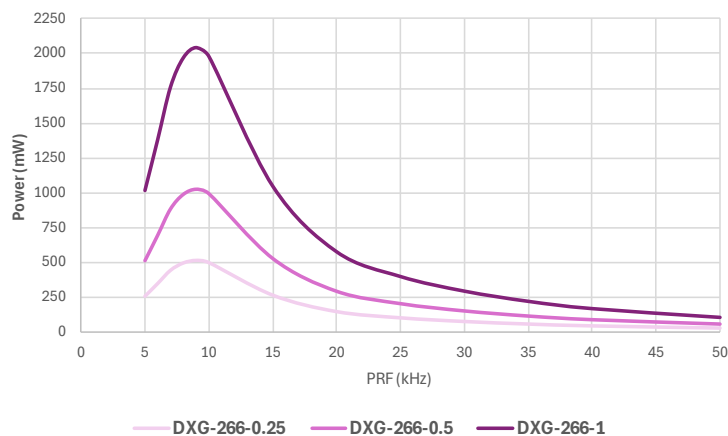
[4.] For operation of the laser outside of the specified temperature range, contact us. [5.] For water-cooled heatsink option, contact us.

Typical Beam Profile



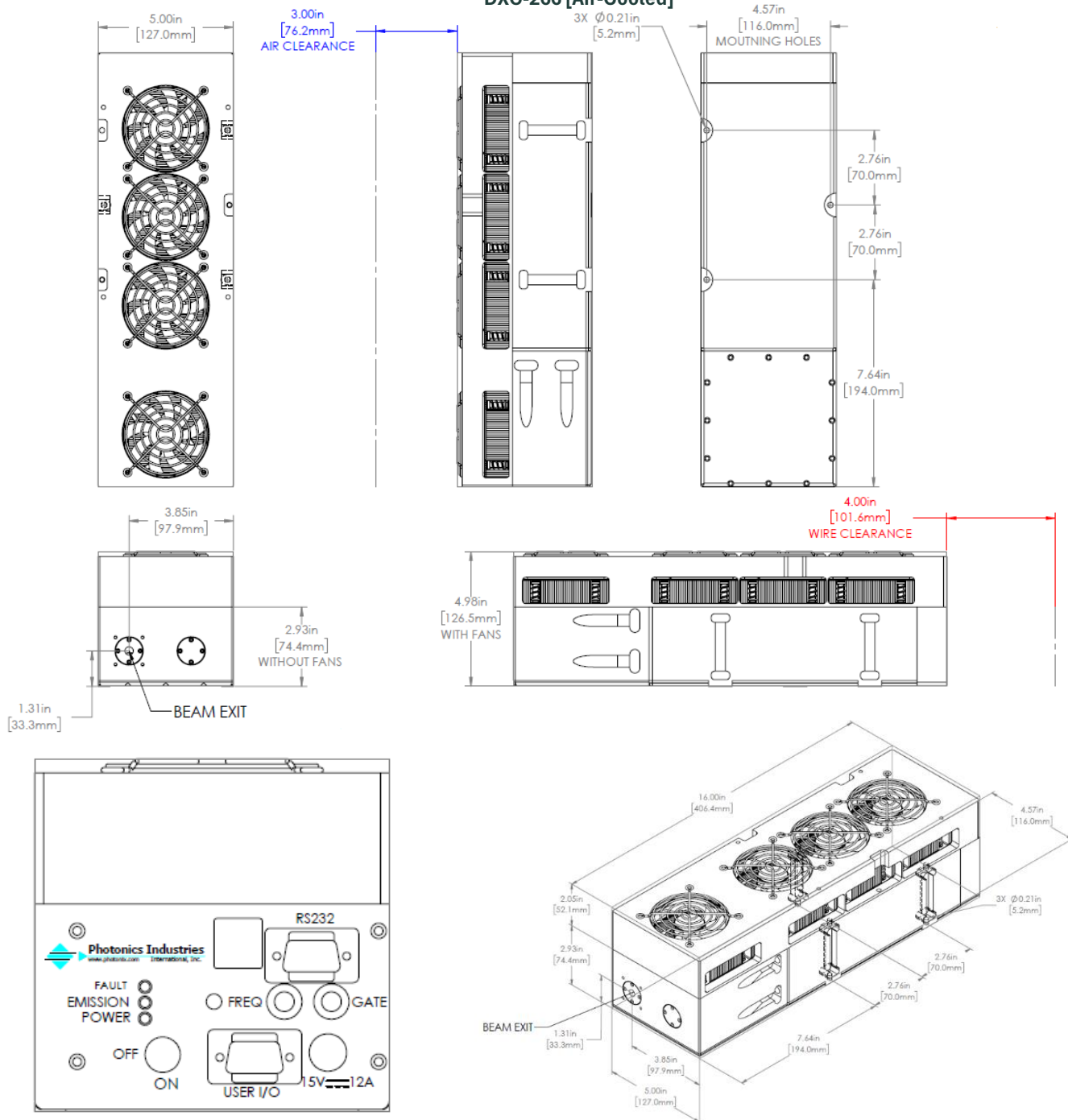
DXG-266-0.25

Power Vs. PRF



Dimensional Drawings

DXG-266 [Air-Cooled]



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Photonics Industries International Inc. is the pioneer of intracavity harmonic lasers and is at the forefront of developing, manufacturing, and marketing a wide range of nanosecond, sub-nanosecond, picosecond, and femtosecond lasers for the industrial, scientific, defense and medical industries.

For more information www.photonix.com