AONano Precision-DiamondCut Series

Industrial Green nanosecond laser

- < Up to 3 mJ pulse energy
- < Long pulse width
- < Excellent beam quality
- < Diamond processing

▶ Features & Benefits:

This is the high power energy version of our AONano Precision-532 laser series. The all-in-one design makes the laser more compact and reduces the total weight. It saves space for installation on the customer side, lowers the integration cost and simplifies the installation process. The water-cooled design allows the laser to work reliably in various harsh and extreme environments and makes the laser to be the ideal candidate for the 7x24 non-stop production needs.

The output power of 15W and 20W are available for selection. The pulse energy is up to 3mJ with repetition rate from 5kHz to 30kHz. With its long pulse width of 90 ns, excellent beam quality, it is perfect candidate for super-hard material cutting, polishing, marking and engraving, especially for diamond.
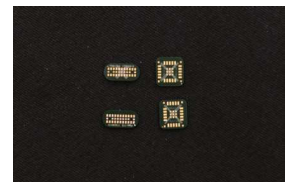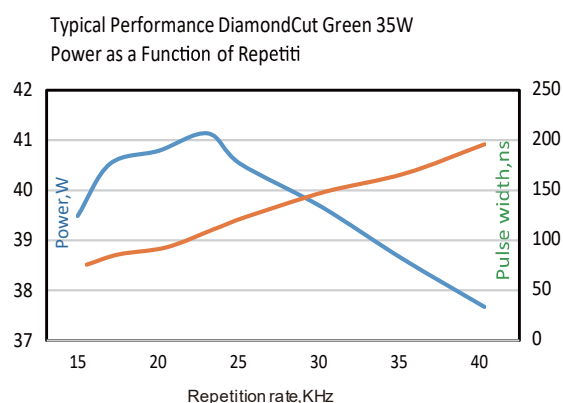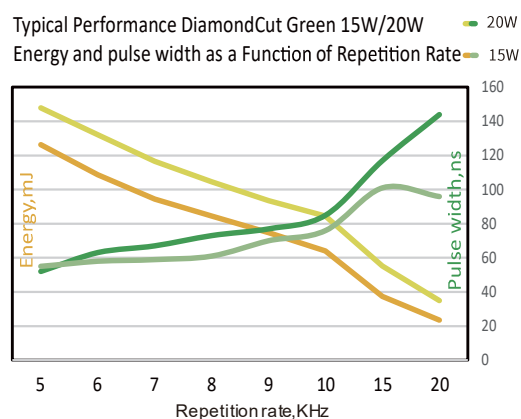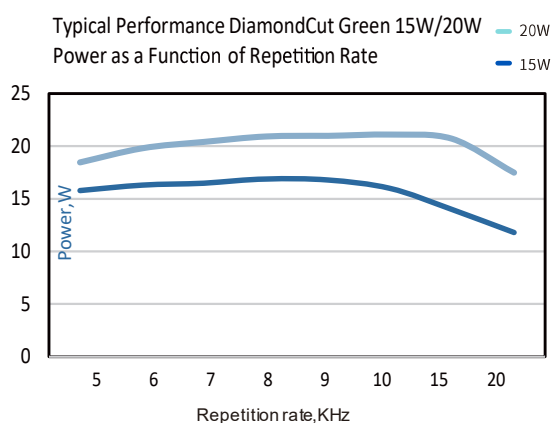
Diamond cutting   Carbon fiber cutting   Camera module cutting   Fingerprint module cutting

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Typical Performance DiamondCut Green 15W/20W Power as a Function of Repetition Rate — 20W — 15W

Typical Performance DiamondCut Green 15W/20W Energy and pulse width as a Function of Repetition Rate — 20W — 15W

Typical Performance DiamondCut Green 35W Power as a Function of Repetiti

DiamondCut 532			
Specification	**15W-8K**	**20W-8K**	**35W-15K**
Wavelength (nm)	532		
Average Power (Watts)	>15W@8KHz	>20W@8KHz	>35W@15KHz
Energy (mJ)	> 1.8	>2.5	>2
Specified Repetition Rate(kHz)	8	8	15
Repetition Rate (kHz)	5-20K	5-20K	14-40K
Pulse Width (ns)	~75		
Beam Quality (M^2)	<1.2		
Beam Roundness (%)	>90		
Beam Diameter (mm)	~1		
Beam Divergence (mRad)	<2		
Point Stability (µrad/°C)	<20		
Polarization Ratio	100:1 Linear,Vertical		
Pulse-to-Pulse Stability (% RMS)	<2		
Average Power Stability(% over12 hours)	<3		
Cold Start Warm-Up (mins.)	<40		
Standby Warm-Up (mins.)	<10		
Operational Temperature Range (°C)	15 to 35		
Operation Humidity Range (%)	20 to 80,non-condensing		
Storage Temperature Range (°C)	- 20 to 50		
Storage Humidity Range (%)	20 to 80,non-condensing		
Input Voltage (VDC)/Rated Power(W)	24/600		
Communication	RS232		
Cooling	Water		
Laser head (kg)	26		

AONano Precision DiamondCut SERIES

AONano Precision DiamondCut Laser CAD Drawing

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