

# AONano™ | YAG Series

## Industrial Nanosecond Lasers

### Features & Benefits

*Lowest Cost of Ownership in the Industry*  
*Available in IR, Green, UV and Deep UV*  
*High Performance, Reliable Design*  
*Excellent Beam Quality of  $M^2 < 1.2$*   
*Simple, Intuitive Control Features*  
*Pulse Energies up to 10mJ*

### Applications

*Rapid Prototyping*  
*Marking, Engraving & Coding*  
*Diamond Cutting and Marking*  
*Scientific and Biomedical Injector*  
*Rigid PCB and Flex Circuit Processing*  
*Semiconductor/PV Processing/Wafer Scribing*



<b>AONano   YAG 1064</b>			
SPECIFICATIONS*	3-10-Y	6-10-Y	15-10-Y
Wavelength (nm)	1064		
Average Power (Watts)	3	6	15
Energy (μJ)	300	600	1500
Specified Repetition Rate (kHz)	10		
Repetition Rate (kHz)	Single Shot to 50		
Pulse Width (ns)	<30	<40	<70
Beam Quality (M <sup>2</sup> )	<1.3		
Beam Roundness (%)	>90		
Beam Diameter (mm)	~0.8	~0.8	~1.0
Beam Divergence (mRad)	<2.5	<2.5	<2.0
Point Stability (μrad/°C)	<20		
Polarization Ratio	100:1 Linear, Horizontal		
Pulse-to-Pulse Stability (% RMS)	<2		
Average Power Stability (% over 12 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 (VAC)	90 to 260		
Line Frequency (Hz)	47 - 63		
Communication	RS-232		
Cooling	Air	Air	Water

<b>AONano   YAG 532</b>						
SPECIFICATIONS*	5-10-Y	6-10-Y	15-10-Y	20-15-Y	25-15-Y	30-15-Y
Wavelength (nm)	532					
Average Power (Watts)	2	6	15	20	25	30
Energy (μJ)	200	600	1500	1330	1660	2000
Specified Repetition Rate (kHz)	10			15		
Repetition Rate (kHz)	Single Shot to 50					
Pulse Width (ns)	<30	<40	<70	<150	<150	<50
Beam Quality (M <sup>2</sup> )	<1.2					
Beam Roundness (%)	>90					
Beam Diameter (mm)	~0.6	~0.6	~0.7			
Beam Divergence (mRad)	<2.0	<1.8	<1.5	<1.8	<1.7	<1.7
Point Stability (μrad/°C)	<20					
Polarization Ratio	100:1 Linear, Vertical					
Pulse-to-Pulse Stability (% RMS)	<2					
Average Power Stability (% over 12 hours)	<3					
Cold Start Warm-Up (mins.)	<40					
Standby Warm-Up (mins.)	<10					
Operational Temperature Range (°C)	15 to 30					
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 (VAC)	90 to 260					
Line Frequency (Hz)	47 - 63					
Communication	RS-232					
Cooling	Air	Air	Air/Water	Water	Water	Water

<b>AONano   YAG 355</b>				
SPECIFICATIONS*	1-10-Y	3-10-Y	4-10-Y	8-10-Y
Wavelength (nm)	355			
Average Power (Watts)	1	3	4	8
Energy (μJ)	100	300	400	800
Specified Repetition Rate (kHz)	10			
Repetition Rate (kHz)	Single Shot to 50			
Pulse Width (ns)	<50	<30	<30	<40
Beam Quality (M <sup>2</sup> )	<1.2			
Beam Roundness (%)	>90			
Beam Diameter (mm)	~0.4			~0.6
Beam Divergence (mRad)	<2.0			<1.6
Point Stability (μrad/°C)	<20			
Polarization Ratio	100:1 Linear, Horizontal			
Pulse-to-Pulse Stability (% RMS)	<2			
Average Power Stability (% over 12 hours)	<3			
Cold Start Warm-Up (mins.)	<40			
Standby Warm-Up (mins.)	<10			
Operational Temperature Range (°C)	15 to 30			
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 (VAC)	90 to 260			
Line Frequency (Hz)	47 - 63			
Communication	RS-232			
Cooling	Air	Air	Air	Water

<b>AONano   YAG 266</b>				
SPECIFICATIONS*	0.5-10-Y	1-10-Y	2-10-Y	4-10-Y
Wavelength (nm)	266			
Average Power (Watts)	0.5	1	2	4
Energy (μJ)	50	100	200	400
Specified Repetition Rate (kHz)	10			
Repetition Rate (kHz)	Single Shot to 50			
Pulse Width (ns)	<20			
Beam Quality (M <sup>2</sup> )	<1.3			
Beam Roundness (%)	>85			
Beam Diameter (mm)	~3.0			
Beam Divergence (mRad)	<1.0			
Point Stability (μrad/°C)	<20			
Polarization Ratio	100:1 Linear, Horizontal			
Pulse-to-Pulse Stability (% RMS)	<2			
Average Power Stability (% over 12 hours)	<3			
Cold Start Warm-Up (mins.)	<40			
Standby Warm-Up (mins.)	<10			
Operational Temperature Range (°C)	15 to 30			
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 (VAC)	90 to 260			
Line Frequency (Hz)	47 - 63			
Communication	RS-232			
Cooling	Air	Air	Water	Water

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**Nanosecond Industrial Lasers**

## Dimensions & Weight

DIMENSIONS	COMPACT	MEDIUM	LARGE
Laser Head, in (mm) L x D x H	8 x 5 x 3.45 (203 x 127 x 88)	9 x 8 x 3.75 (229 x 203 x 95)	13.74 x 8 x 3.75 (350 x 203 x 95)
Laser Controller, in (mm) W x D x H	15 x 15 x 5 (381 x 381 x 5)	19 x 17 x 7 (482 x 432 x 178)	
Umbilical, in (m)	100 (2.5)		

  

WEIGHTS	COMPACT	MEDIUM	LARGE
Laser Head, lbs (kg)	13 (5.9)	19 (8.6)	25 (11.3)
Laser Controller, lbs (kg)	15 (6.8)	22 (10)	25 (11.3)

**COMPLIANCE:** CDRH, ROHS, CE

*\*Advanced Optowave Corporation follows a policy of continuous product improvement. Specifications are subject to change without notice. Advanced Optowave Corporation offers a limited warranty for all Femtosecond IR/GR laser systems. For full details on warranty coverage, or for further product information, please contact us.*

