Advanced Optowave impact through innovation.

PRODUCT DATA SHEET
NANO-UV-355/351

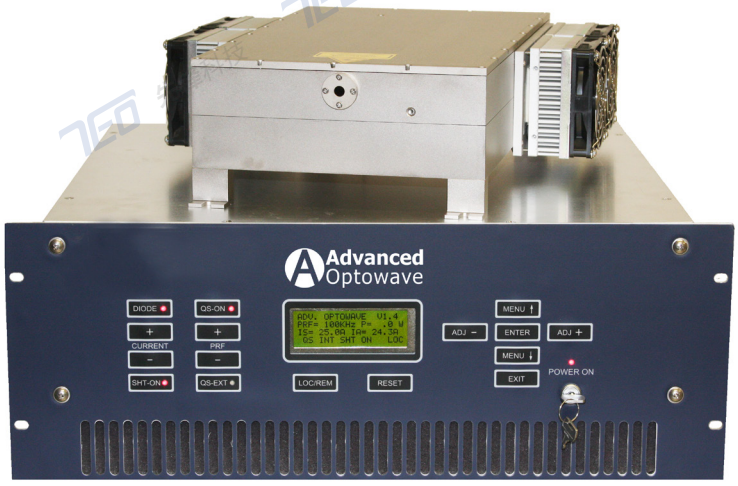
AWAVE SERIES
UV Industrial Lasers

features & benefits.

Innovative End-Pumping Technology
Air-Cooling (Average Power Up to 15W)
Excellent Beam Quality, Pulse Stability & Point Stability
Patent Pending Harmonic Conversion Technologies
Ultra-Compact & Light-Weight
Brand-New Focusing Optics
Field-Replaceable Diode
24/7 Proven Reliability
Low Operational Cost

AWAVE UV Series models are Q-switched TEM00 mode lasers and are engineered for the highly demanding 24/7 production environment. Each system consists of a laser head and a laser controller connected with a 2.5 meter umbilical cable. The fiber-coupled pumping diodes are located in the laser controller for easy field-replacement. The laser head is sealed in a clean room to assure long-term reliability.

AWAVE UV Series lasers are featured with pulse frequencies ranging from 1-300 kHz (up to 500 kHz is optional), average power covered from 500mW to 15W and pulse energy in excess of 3mJ. For a UV laser over 15W, please refer to the AW-HP Series. Our AWAVE UV lasers are designed and engineered with flexible laser architectures. Contact Advanced Optowave for any laser requirements exceeding standard specifications.



Nd:YLF UV Laser Systems

SPECIFICATIONS*	AWAVE 351-0.5W-3K	AWAVE 351-1W-3K	AWAVE 351-2W-3K	AWAVE 351-3W-3K	AWAVE 351-6W-3K
Wavelength[1]	351nm				
Average Power[2]	0.5W	1W	2W	3W	6W
Pulse Repetition Rate[3]	Single Shot to 20 kHz				
Beam Quality (M^2)	<1.2				
Spatial Mode	TEM00				
Beam Roundness	>90%				
Pulse Width	<40ns @1kHz <70ns @10kHz	<30ns @1kHz <70ns @10kHz	<30ns @1kHz <70ns @10kHz	<30ns @1kHz <60ns @10kHz	<30ns @1kHz <60ns @10kHz
Pulse Energy (mJ @ 1kHz)	>0.2mJ	>0.4mJ	>0.8mJ	>1.2mJ	>3mJ
Pulse-to-Pulse Stability[4]	<2% RMS				
Average Power Stability[4]	<3% over 12 hours				
Polarization Ratio	>100:1 LINEAR, HORIZONTAL				
Communication Protocol[5]	RS-232				
Operating Voltage (VAC)	90-260				
Line Frequency (Hz)	47-63				
Cooling	AIR	AIR	AIR	AIR	WATER
Operation Temperature	15° - 30° C				
Operation Humidity	20% - 80%				
Storage Temperature	-20° - 50° C				

Nd:YAG UV Laser Systems

SPECIFICATIONS*	AWAVE 355-0.5W-6K	AWAVE 355-1W-6K	AWAVE 355-2W-6K	AWAVE 351-4W-10K	AWAVE 355-8W-10K
Wavelength[1]	355nm				
Average Power[2]	0.5W	1W	2W	4W	8W
Pulse Repetition Rate[3]	Single Shot to 50 kHz				
Beam Quality (M^2)	<1.2				
Spatial Mode	TEM00				
Beam Roundness	>90%				
Pulse Width	<20ns @1kHz <40ns @10kHz	<30ns @1kHz <70ns @10kHz	<30ns @1kHz <70ns @10kHz	<30ns @1kHz <60ns @10kHz	<30ns @1kHz <60ns @10kHz
Pulse Energy (mJ @ 1kHz)	>0.1mJ	>0.3mJ	>0.5mJ	>0.8mJ	>1.5mJ
Pulse-to-Pulse Stability[4]	<2% RMS				
Average Power Stability[4]	<3% over 12 hours				
Polarization Ratio	>100:1 LINEAR, HORIZONTAL				
Communication Protocol[5]	RS-232				
Operating Voltage (VAC)	90-260				
Line Frequency (Hz)	47-63				
Cooling	AIR	AIR	AIR	AIR	WATER
Operation Temperature	15° - 30° C				
Operation Humidity	20% - 80%				
Storage Temperature	-20° - 50° C				

Note:
1. Contact AOC for additional wavelengths.
2. Contact AOC for higher power lasers.
3. Contact AOC for high frequency.
4. Defined as standard deviation/average.
5. Contact AOC for USB II & Ethernet.

**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 laser systems. For full details on warranty coverage, or for further product information, please contact us.*

Nd:YV04 UV Laser Systems

SPECIFICATIONS*	AWAVE 355-0.5W-20K	AWAVE 355-1.5W-20K	AWAVE 355-4W-30K	AWAVE 355-6W-30K
Wavelength[1]	355nm			
Average Power[2]	0.5W	1.5W	4W	6W
Pulse Repetition Rate[3]	Single Shot to 300 kHz			
Beam Quality (M^2)	<1.2			
Spatial Mode	TEM00			
Beam Roundness	>90%			
Pulse Width	<15ns @20kHz <35ns @100kHz	<20ns @20kHz <45ns @100kHz	<15ns @20kHz <30ns @100kHz	<15ns @20kHz <50ns @100kHz
Pulse Energy (mJ @ 30kHz)	>25µJ	>75µJ	>100µJ	>250µJ
Pulse-to-Pulse Stability[4]	<2% RMS			
Average Power Stability[4]	<3% over 12 hours			
Polarization Ratio	>100:1 LINEAR, HORIZONTAL			
Communication Protocol[5]	RS-232			
Operating Voltage (VAC)	90-260			
Line Frequency (Hz)	47-63			
Cooling	AIR	AIR	AIR	AIR
Operation Temperature	15° - 30° C			
Operation Humidity	20% - 80%			
Storage Temperature	-20° - 50° C			

Nd:YV04 UV Laser Systems

SPECIFICATIONS*	AWAVE 355-8W-30K	AWAVE 355-10W-30K	AWAVE 355-12W-30K	AWAVE 355-15W-30K
Wavelength[1]	355nm			
Average Power[2]	8W	10W	12W	15W
Pulse Repetition Rate[3]	Single Shot to 300 kHz			
Beam Quality (M^2)	<1.2			
Spatial Mode	TEM00			
Beam Roundness	>90%			
Pulse Width	<15ns @20kHz <35ns @100kHz	<15ns @20kHz <50ns @100kHz	<15ns @20kHz <50ns @100kHz	<15ns @20kHz <50ns @100kHz
Pulse Energy (mJ @ 30kHz)	>400µJ	>450µJ	>450µJ	>450µJ
Pulse-to-Pulse Stability[4]	<2% RMS			
Average Power Stability[4]	<3% over 12 hours			
Polarization Ratio	>100:1 LINEAR, HORIZONTAL			
Communication Protocol[5]	RS-232			
Operating Voltage (VAC)	90-260			
Line Frequency (Hz)	47-63			
Cooling	AIR/WATER	WATER	WATER	WATER
Operation Temperature	15° - 30° C			
Operation Humidity	20% - 80%			
Storage Temperature	-20° - 50° C			

Note:
1. Contact AOC for additional wavelengths.
2. Contact AOC for higher power lasers.
3. Contact AOC for high frequency.
4. Defined as standard deviation/average.
5. Contact AOC for USB II & Ethernet.

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105 Comac Street | Ronkonkoma, NY 11779 | USA
www.a-optowave.com | phone 631-750-6035 | fax 631-803-4445

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AWAVE SERIES
UV Industrial Lasers

Dimensions & Weight

DIMENSIONS	COMPACT	MEDIUM	LARGE
Laser Head (in.)	8 x 5 x 3.45	9 x 8 x 3.75	13.75 x 8 x 3.75
Laser Controller (in.)	15 x 15 x 5	19 x 17 x 7	19 x 17 x 7
Umbilical (in./m.)	100 inches / 2.5 meters (standard length)		

WEIGHT	COMPACT	MEDIUM	LARGE
Laser Head (lbs.)	4.5	6	20
Laser Controller (lbs.)	12	15	20

Order Information

Our lasers are designed and engineered with flexible laser architectures. Customers can specify laser requirements based on their needs. Please contact us for any laser requirements exceeding the specifications of standard products.

AWAVE	—	WAVELENGTH	—	10W/POWER	—	100K	—	SP/LP/HF
LASER SERIES		355 or 351		AVERAGE POWER		PULSE REPETITION RATE		SP-SHORT PULSE LP - LONG PULSE HF - HIGH FREQUENCY

COMPLIANCE: CDRH, ROHS, CE