

# FOTIA SERIES (water cooling)

## Industrial UV nanosecond laser



### Features & Benefits:

FOTIA(ONE)-355 adopts the latest all-in-one design with a compact size, which saves installation space and brings fast and low-cost integration to the integrators.

It combines the laser head and power supply. The reduced wire connections not only increases the anti-interference ability, but also reduces the risk of malfunction and improves stability.

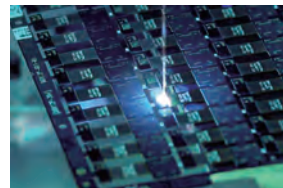
Its power ranges from 3 W, 5 W to 10 W. The water-cool design, the excellent beam quality, the outstanding beam roundness, and pulse stability make it easily adapt to various harsh environments. It is a perfect choice for industrial applications, such as material surface marking, on-fly marking, glass engraving, 3D printing, and so on. It provides a shorter product development period and faster return on investment.



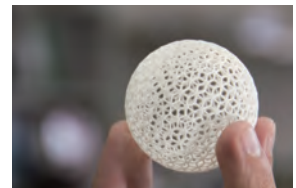
Package marking



3C marking



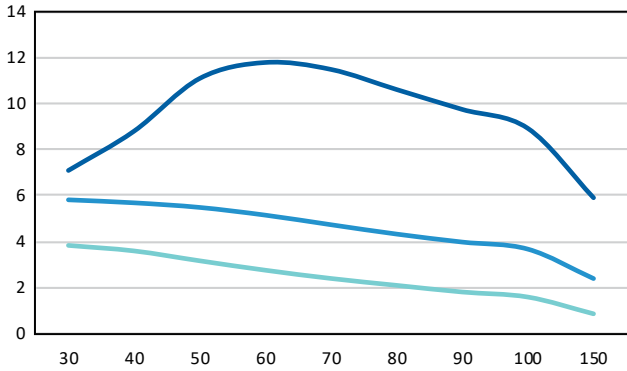
FPC/PCB marking



3D printing

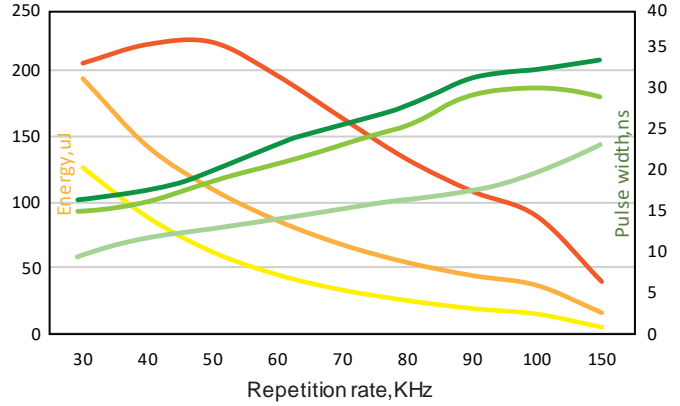
Typical Performance FOTIA-355-3W/5W/10W-W  
 Power vs Repetition Rate

— 3W  
 — 5W  
 — 10W



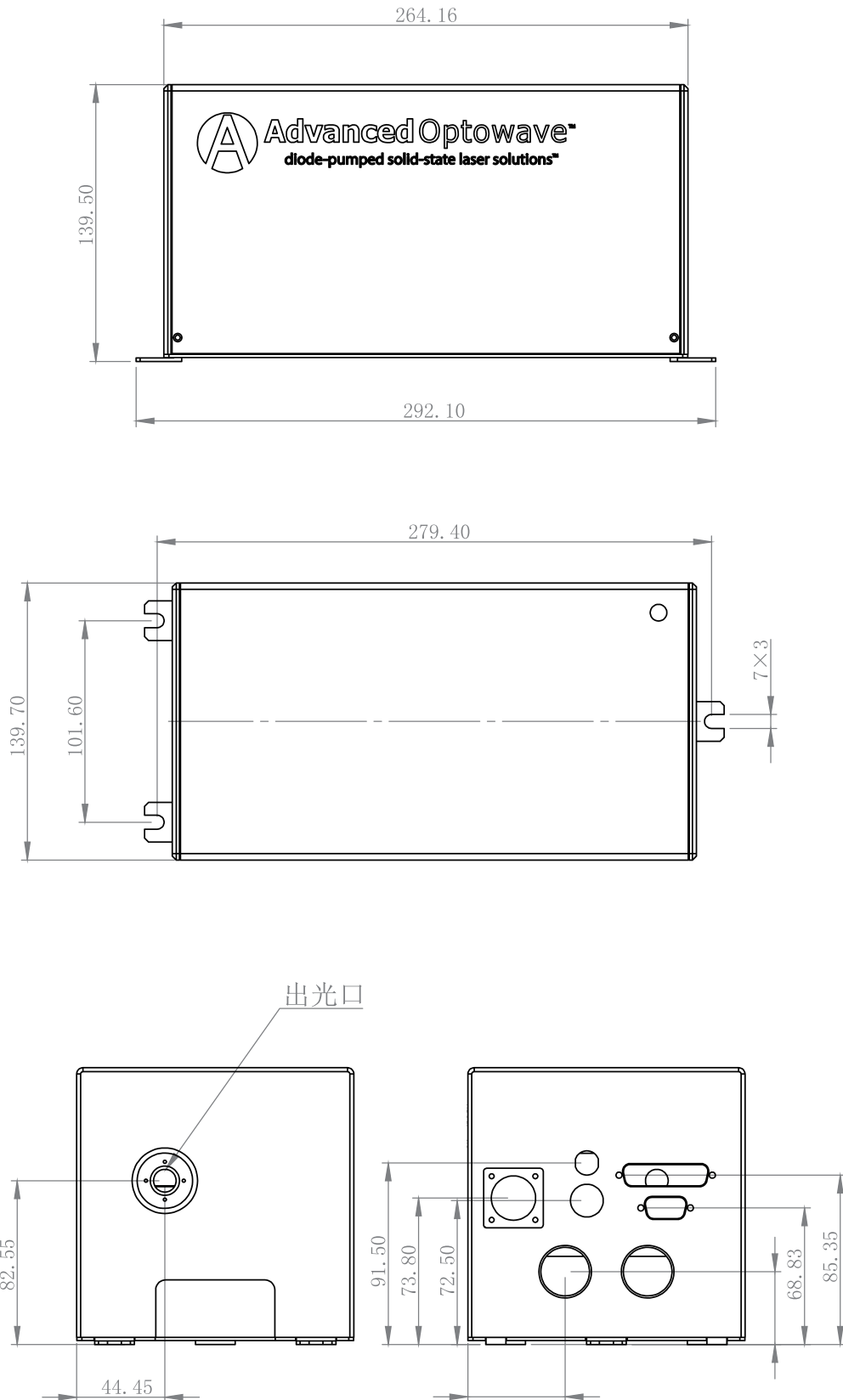
Typical Performance FOTIA-355-3W/5W/10W-W  
 Energy and Pulse width vs Repetition Rate

— 3W  
 — 5W  
 — 10W



FOTIA 355			
Specification	3W-30K	5W-30K	10W-50K
Wavelength (nm)	355		
Average Power (Watts)	>3W@30KHz	>5W@30KHz	>10W@50KHz
Energy (μJ)	>100	>160	>200
Specified Repetition Rate(kHz)	30	30	50
Repetition Rate (kHz)	30 ~ 150		
Pulse Width (ns)	<15		<13
Beam Quality (M <sup>2</sup> )	< 1.2		
Beam Roundness (%)	> 90		
Beam Diameter (mm)	~0.45		0.65
Beam Divergence (mRad)	< 1.5		
Point Stability (μrad/°C)	< 20		
Polarization Ratio	100:1 Linear, Horizontal		
Pulse-to-Pulse Stability (% RMS)	< 3		
Average Power Stability(% over12 hours)	< 3		
Cold Start Warm-Up (mins.)	< 40		
Standby Warm-Up (mins.)	< 10		
Operational Temperature Range (°C)	5-40°C		
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)	24/350		24/450
Communication	RS232		
Cooling	Water		
Weight (kg)	4.9		6.5

# FOTIA SERIES (water cooling)



# FOTIA SERIES (air cooling)

## Industrial UV nanosecond laser



### Features

FOTIA-355 air-cooled laser, including 3 W and 5 W model, has pulse energy up to 100uJ, repetition rate between 30K-150K. The low frequency lasers can be customized according to customer's demand.

It can be operated through both TTL level signals and external control PWM pulse width modulation signals. The PWF function allows customers to adjust the output power of the laser under internal control mode through software.

The air-cooled design and good heat dissipation structure ensure that it can be operated in an environment of 15-30 °C. The connection cable between the laser head and the controller can be customized according to customer's demand. Then, the laser can meet the requirement of various optical paths and mechanical designs.

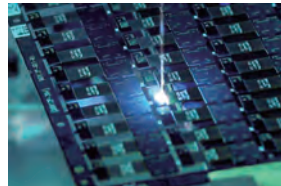
The short pulse width (<15ns@50k), excellent beam quality ( $M2 < 1.2$ ) and outstanding beam roundness (>90%) make it a perfect choice for material surface marking, on-fly marking, glass engraving, 3D printing, and so on.



package marking



3C marking



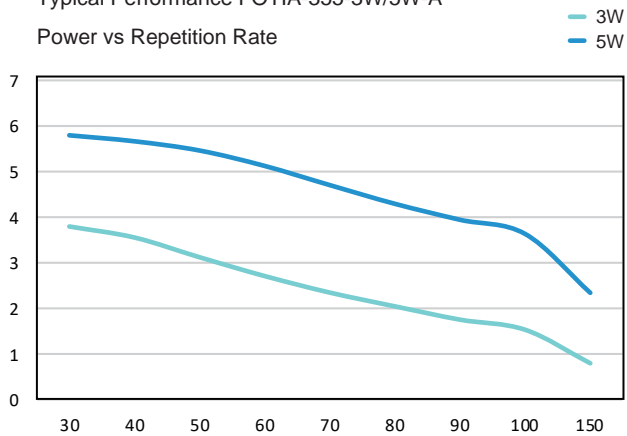
FPC/PCB marking



3D printing

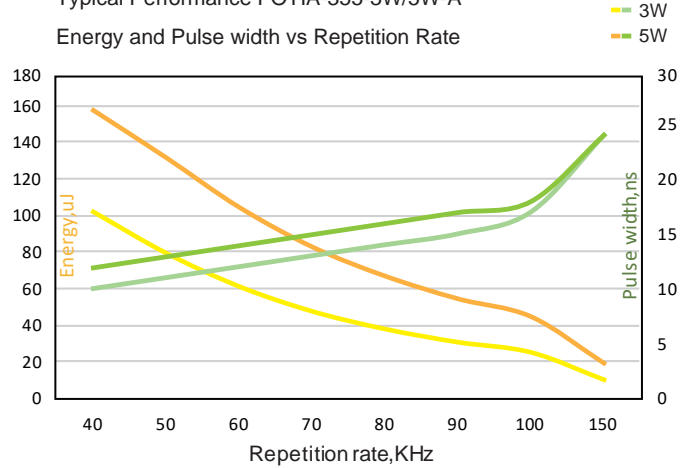
Typical Performance FOTIA-355-3W/5W-A

Power vs Repetition Rate



Typical Performance FOTIA-355-3W/5W-A

Energy and Pulse width vs Repetition Rate

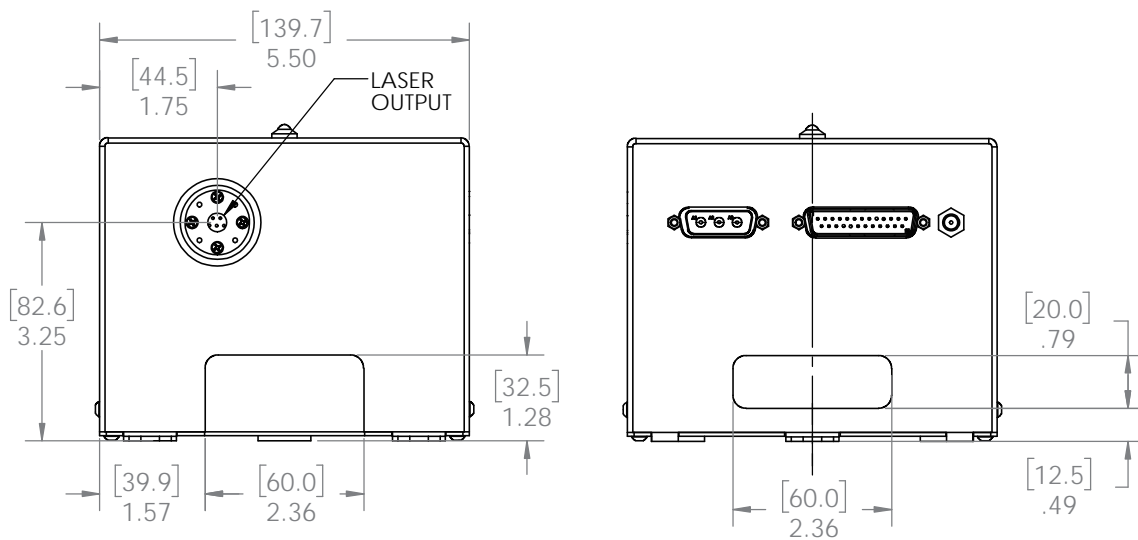
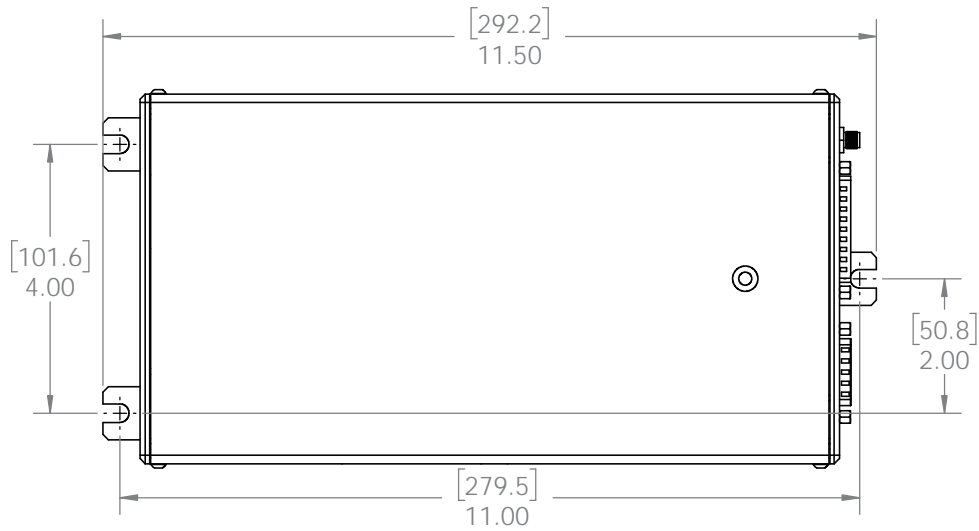
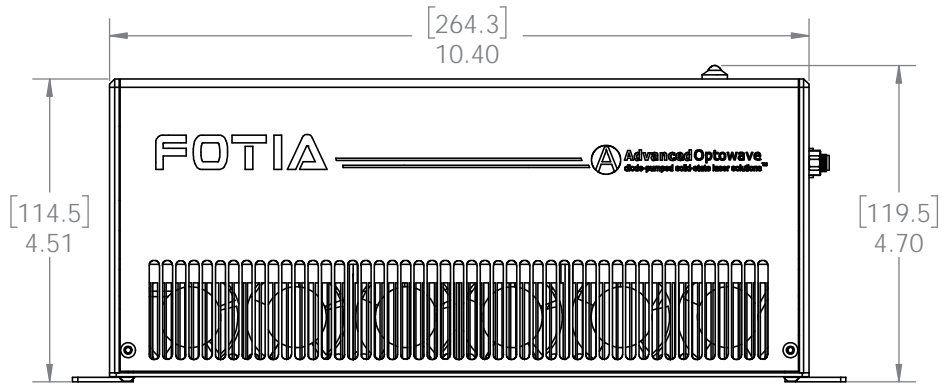


FOTIA 355		
Specification	3W-50K	5W-50K
Wavelength (nm)	355	
Average Power (Watts)	>3W@50KHz	>5W@50KHz
Energy (μJ)	>60	>100
Specified Repetition Rate(kHz)	50	
Repetition Rate (kHz)	30 ~ 150	
Pulse Width (ns)	<15	
Beam Quality (M <sup>2</sup> )	< 1.2	
Beam Roundness (%)	> 90	
Beam Diameter (mm)	~0.45	
Beam Divergence (mRad)	< 1.5	
Point Stability (μrad/°C)	< 20	
Polarization Ratio	100:1 Linear, Horizontal	
Pulse-to-Pulse Stability (% RMS)	< 3	
Average Power Stability(% over12 hours)	< 3	
Cold Start Warm-Up (mins.)	< 40	
Standby Warm-Up (mins.)	< 10	
Operational Temperature Range (°C)	15-35°C	
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)	24/450	
Communication	RS232	
Cooling	Air	
Laser head (kg)	5.24	
controller (kg)	3.9	

# FOTIA SERIES (air cooling)

FOTIA-355 (air-cooled)

Laser Dimension



FOTIA-355 (air-cooled)  
 Controller Dimension

