

# AONano Compact (i) Series Air-cooled

Industrial UV nanosecond laser

- Power auto-optimization
- Crystal indexing
- Real-time power feedback
- Long-term power consistency



## ► Features & Benefits:

This is the intelligent version of our air-cooled AONano Compact-355 laser series. With the intelligent features listed below, the long-term stability of the laser is significantly improved, and the service time/cost is greatly reduced.

**All-in-one format:** the optical cavity and electrical controller are integrated into a single box.

**Power monitoring:** the laser output power is monitored and consequently the real-time power reading is available in the laser GUI and RS232-command.

**Auto-optimization:** the laser output power can be auto-optimized with the feature of power monitoring. This means that the laser output power can be recovered by auto-optimization if it drops to a level below the pre-defined threshold. If the power cannot be recovered, the laser will report an alarm. This can significantly reduce the service time and cost.

**Crystal indexing:** there are multiple spots available for use on the THG crystal. The spot indexing can be controlled manually or automatically by a pre-defined sequence. There are five spots available on the THG crystal, which means the laser lifetime can be extended by five times.

The AONano Compact(i)-355 series laser is a perfect candidate for various laser micromachining applications. It is a great cost-effective combination of high reliability and high performance.



Package marking



3C marking



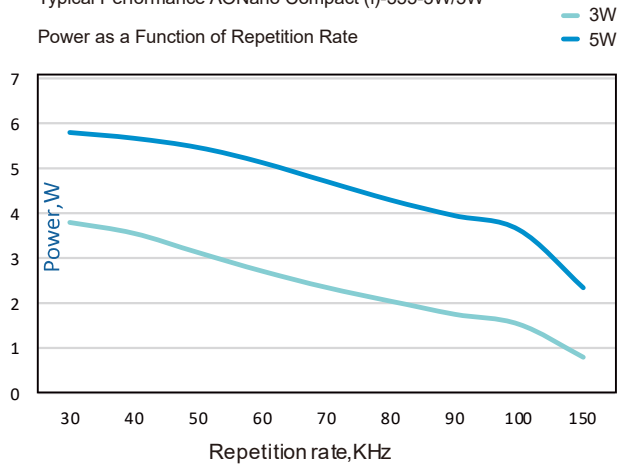
FPC/PCB marking



3D printing

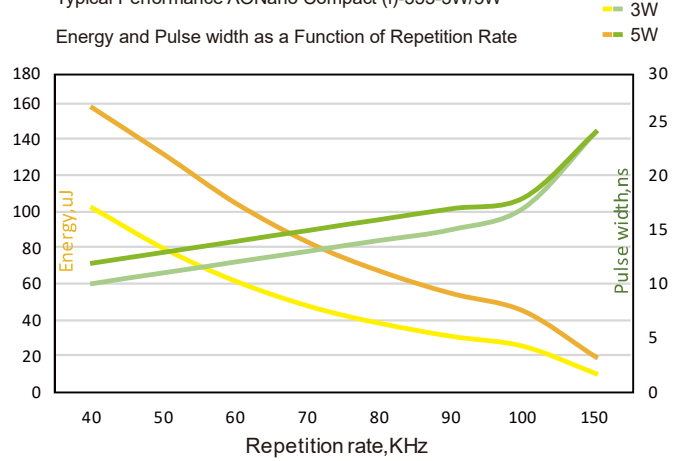
Typical Performance AONano Compact (i)-355-3W/5W

Power as a Function of Repetition Rate



Typical Performance AONano Compact (i)-355-3W/5W

Energy and Pulse width as a Function of Repetition Rate

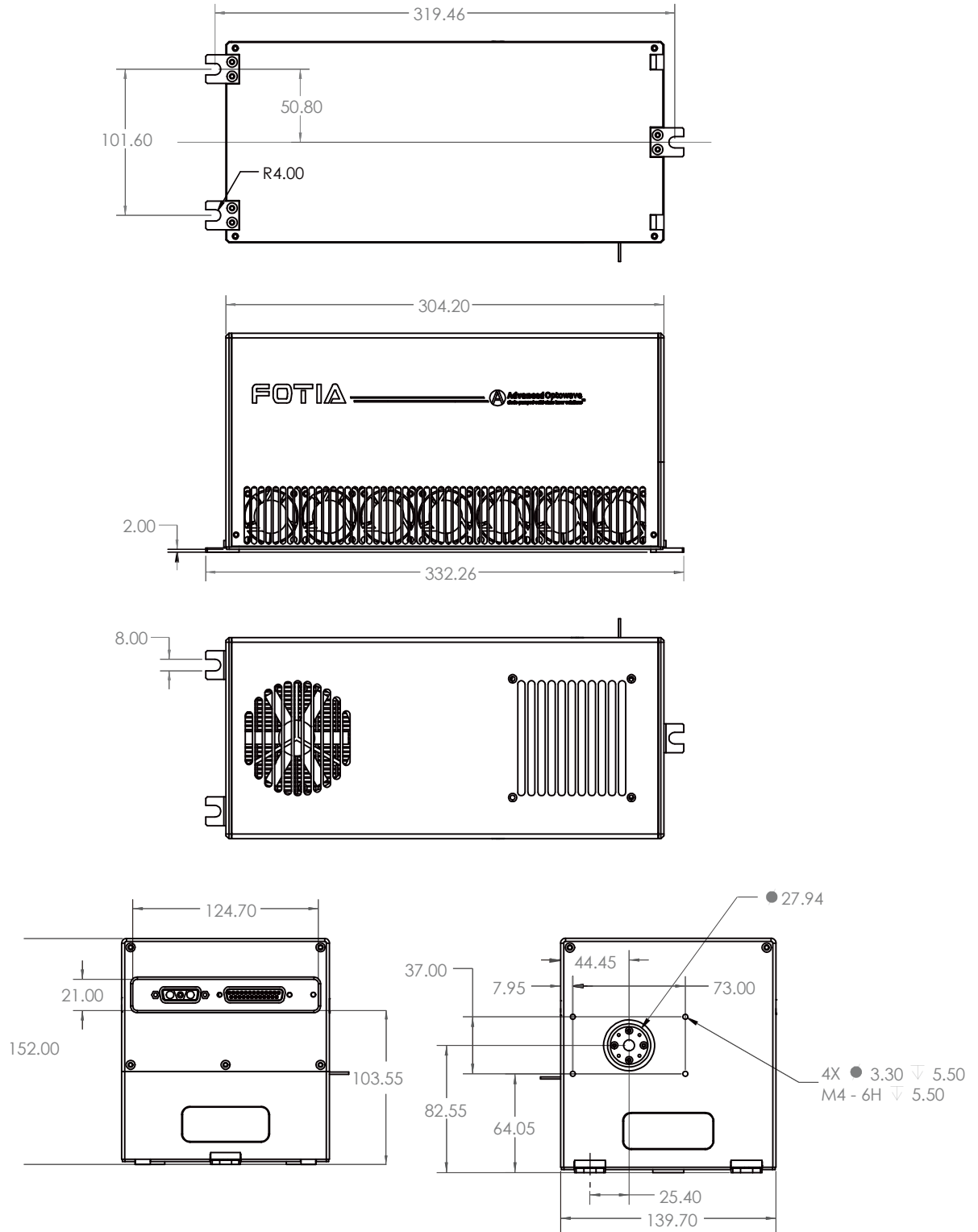


## AONano Compact (i) 355

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(% over 12 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)	12/350	
Communication	RS232	
Cooling	Air	
Laser head (kg)	5.24	
controller (kg)	3.9	

# AONano Compact(i) SERIES(air cooling)

AONano Compact (i) -355 (air cooling) Laser Size



# AONano Compact (i) Series Water-cooled

## Industrial UV nanosecond laser

- Power auto-optimaization
- Crystal indexing
- Real-time power feedback
- Long-term power consistency



### ► Features & Benefits:

This is the intelligent version of our water-cooled AONano Compact-355 laser serials. With the intelligent features listed below, the long-term stability of the laser is significantly improved, and the service time/cost is greatly reduced.

**All-in-one format:** the optical cavity and electrical controller are integrated into a single box.

**Power monitoring:** the laser output power is monitored and consequently the real-time power reading is available in the laser GUI and RS232-command.

**Auto-optimization:** the laser output power can be auto-optimized with the feature of power monitoring. This means that the laser output power can be recovered by auto-optimization if it drops to a level below the pre-defined threshold. If the power cannot be recovered, the laser will report an alarm. This can significantly reduce the service time and cost.

**Crystal indexing:** there are multiple spots available for use on the THG crystal. The spot indexing can be controlled manually or automatically by a pre-defined sequence. There are five spots available on the THG crystal, which means the laser lifetime can be extended by five times.

The AONano Compact(i)-355 series laser is a perfect candidate for various laser micromachining applications. It is a great cost-effective combination of high reliability and high performance.



Package marking



3C marking



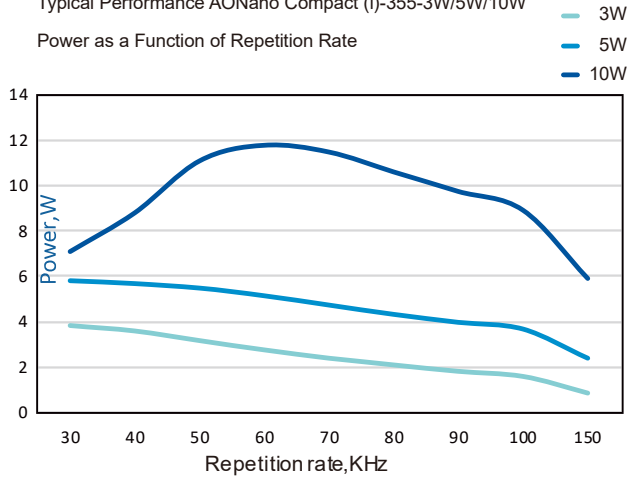
FPC/PCB marking



3D printing

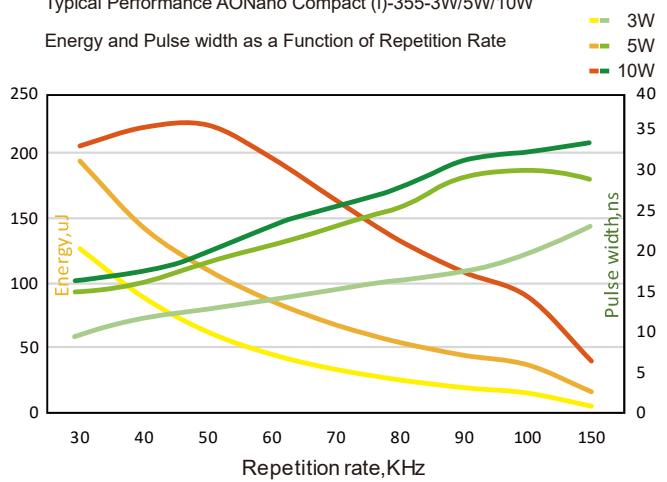
Typical Performance AONano Compact (i)-355-3W/5W/10W

Power as a Function of Repetition Rate



Typical Performance AONano Compact (i)-355-3W/5W/10W

Energy and Pulse width as a Function of Repetition Rate



AONano Compact (i) 355			
Specification	3W-50K	5W-50K	10W-50K
Wavelength (nm)	355		
Average Power (Watts)	>3W@50KHz	>5W@50KHz	>10W@50KHz
Energy (μJ)	>100	>160	>200
Specified Repetition Rate(kHz)	50		
Repetition Rate (kHz)	30 ~ 150		
Pulse Width (ns)	<15		<13
Beam Quality (M')	< 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)	12/350		
Communication	RS232		
Cooling	Water		
Weight (kg)	5.3		

# AONano Compact (i) SERIES (water cooling)

AONano Compact(i) -355 (water cooling) Laser Size

