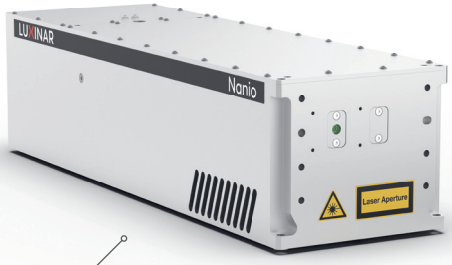
LUXINAR
Industrial lasers that last

Nanio Air | Nanosecond lasers

Customized solutions for perfect results

Highest reliability
High-end components for best lifetime



Adapted to your application needs
Customization of laser design

Better process results
Benefits from our advanced pulse control features

Part of Pulsecore® - Every pulse predictable.
With Pulsecore®, you get absolute process stability for short- and ultrashort-pulse laser manufacturing.

Highest flexibility

Air-cooled with a compact design
The Nanio Air Q-switched DPSS laser is specifically designed for easy customization and is available in a variety of wavelengths. The air-cooled system has all the advantages of the Nanio series, highest reliability and is designed to be easily customized for your application. And, without the need for water cooling, it is even easier to integrate. with this compact short-pulse laser you can rapidly match the laser parameters to the actual needs of your application.

Benefits

Customized performance and pulse control
Find a nanosecond DPSS laser that exactly matches your application. The Nanio Air offers advanced pulse control features for best stability and accurate process repeatability.

Applications

Flexible Nanosecond DPSS lasers for wide range of applications in the following markets:

- Resistor trimming
- ID card
- LED and display
- Chip and PCB
- Photovoltaics

Advantages

Engineered for challenging industrial applications
The Nanio Air is designed for applications that benefit from excellent beam quality with optimized pulse widths across a wide range of operating conditions. Its features:

- Superior pulse-to-pulse stability
- Advanced pulse control features
- High peak power and short pulse width
- Low cost of ownership
- Integrated air cooling

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Specifications

Nanio Air	355	
Laser		
Model	355-5-V	355-3-V
Laser medium	Nd:YVO_4	Nd:YVO_4
Central wavelength	355 nm	355 nm
Laser performance		
Nominal power	5 W @ 40 kHz	3 W @ 40 kHz
Repetition rate	single shot to 300 kHz	single shot to 300 kHz
Pulse width	< 20 ns @ 40 kHz	< 35 ns @ 40 kHz
Pulse energy	125 µJ @ 40 kHz	75 µJ @ 40 kHz
Peak power	> 6.2 kW @ 40 kHz	> 2.1 kW @ 40 kHz
Pulse-to-pulse stability (rms)	< 2.0 % @ 40 kHz	< 2.0 % @ 40 kHz
Power stability (rms, 8 h)	< 2.0 %	< 2.0 %
Laser beam propagation		
Spatial mode	M^2 < 1.3, TEM_{00}	M^2 < 1.3, TEM_{00}
Nom. beam diameter (at waist)	0.3 mm	0.4 mm
Nom. waist location (from output)	-380 mm	-408 mm
Nom. beam diameter (at output)	0.8 mm	0.7 mm
Beam divergence (full angle)	1.9 mrad	1.4 mrad
Polarization	vertical, > 100:1	vertical, > 100:1
Circularity	> 90 %	> 90 %
Operating specifications		
Warm-up time	< 15 min	< 15 min
Operating voltage laser	115 – 230 VAC ± 10 %, 50 – 60 Hz	115 – 230 VAC ± 10 %, 50 – 60 Hz
Laser power consumption	< 350 W	< 350 W
External control	RS232, USB, TTL, analog Q-switch control	
Cooling and ambient		
Cooling	air, optional: water	air, optional: water
Ambient temperature	15 – 35 °C, non-condensing	15 – 35 °C, non-condensing
Dimensions and weights		
Dimensions laser head (L × W × H)	510 × 150 × 125 mm^3	510 × 150 × 125 mm^3
Dimensions 19“ control unit (L × W × H)	358 × 447 × 44 mm^3, 1 RU high	358 × 447 × 44 mm^3, 1 RU high
Weight laser head	12 kg	12 kg
Weight control unit	6 kg	6 kg

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Specifications

Nanio Air	532		
Laser			
Model	532-10-V	532-10-V-SP	532-4-Y-50
Laser medium	Nd:YVO_4	Nd:YVO_4	Nd:YAG
Central wavelength	532 nm	532 nm	532 nm
Laser performance			
Nominal power	10 W @ 40 kHz	10 W @ 40 kHz	4 W @ 10 kHz
Repetition rate	single shot to 300 kHz	single shot to 300 kHz	single shot to 100 kHz
Pulse width	< 30 ns @ 40 kHz	< 20 ns @ 40 kHz	< 50 ns @ 10 kHz
Pulse energy	250 µJ @ 40 kHz	250 µJ @ 40 kHz	400 µJ @ 10 kHz
Peak power	> 8.3 kW @ 40 kHz	> 12.5 kW @ 40 kHz	> 8 kW @ 10 kHz
Pulse-to-pulse stability (rms)	< 1.0 % @ 40 kHz	< 1.0 % @ 40 kHz	< 1.0 % @ 10 kHz
Power stability (rms, 8 h)	< 2.0 %	< 2.0 %	< 2.0 %
Laser beam propagation			
Spatial mode	M^2 < 1.2, TEM_{00}	M^2 < 1.2, TEM_{00}	M^2 < 1.2, TEM_{00}
Nom. beam diameter (at waist)	0.5 mm	0.4 mm	0.28 mm
Nom. waist location (from output)	-408 mm	-350 mm	-408 mm
Nom. beam diameter (at output)	0.8 mm	0.8 mm	0.8 mm
Beam divergence (full angle)	1.6 mrad	2.0 mrad	1.9 mrad
Polarization	horizontal, > 100:1	horizontal, > 100:1	horizontal, > 100:1
Circularity	> 90 %	> 90 %	> 90 %
Operating specifications			
Warm-up time	< 15 min	< 15 min	< 15 min
Operating voltage laser	115 – 230 VAC ± 10 %, 50 – 60 Hz	115 – 230 VAC ± 10 %, 50 – 60 Hz	115 – 230 VAC ± 10 %, 50 – 60 Hz
Laser power consumption	< 350 W	< 350 W	< 350 W
External control	RS232, USB, TTL, analog Q-switch control		
Cooling and ambient			
Cooling	air, optional: water	air, optional: water	air, optional: water
Ambient temperature	15 – 35 °C, non-condensing	15 – 35 °C, non-condensing	15 – 35 °C, non-condensing
Dimensions and weights			
Dimensions laser head (L × W × H)	510 × 150 × 125 mm^3	510 × 150 × 125 mm^3	510 × 150 × 125 mm^3
Dimensions 19“ control unit (L × W × H)	358 × 447 × 44 mm^3, 1 RU high	358 × 447 × 44 mm^3, 1 RU high	358 × 447 × 44 mm^3, 1 RU high
Weight laser head	12 kg	12 kg	12 kg
Weight control unit	6 kg	6 kg	6 kg

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Specifications

Nanio Air	1064		
Laser			
Model	1064-16-V	1064-7-Y-30	1064-7-Y-50
Laser medium	Nd:YVO_4	Nd:YAG	Nd:YAG
Central wavelength	1064 nm	1064 nm	1064 nm
Laser performance			
Nominal power	14 W @ 50 kHz	7 W @ 10 kHz	7 W @ 10 kHz
Repetition rate	single shot to 300 kHz	single shot to 100 kHz	single shot to 100 kHz
Pulse width	< 45 ns @ 50 kHz	< 35 ns @ 10 kHz	< 50 ns @ 10 kHz
Pulse energy	280 µJ @ 50 kHz	700 µJ @ 10 kHz	700 µJ @ 10 kHz
Peak power	> 6.2 kW @ 50 kHz	> 20 kW @ 10 kHz	> 14 kW @ 10 kHz
Pulse-to-pulse stability (rms)	< 0.5 % @ 50 kHz	< 1.0 % @ 10 kHz	< 0.5 % @ 10 kHz
Power stability (rms, 8 h)	< 1.0 %	< 1.0 %	< 1.0 %
Laser beam propagation			
Spatial mode	M^2 < 1.2, TEM_{00}	M^2 < 1.15, TEM_{00}	M^2 < 1.15, TEM_{00}
Nom. beam diameter (at waist)	0.7 mm	0.5 mm	0.5 mm
Nom. waist location (from output)	-44 mm	-164 mm	-132 mm
Nom. beam diameter (at output)	0.7 mm	0.7 mm	0.7 mm
Beam divergence (full angle)	2.3 mrad	3.1 mrad	3.1 mrad
Polarization	vertical, > 100:1	vertical, > 100:1	vertical, > 100:1
Circularity	> 90 %	> 90 %	> 90 %
Operating specifications			
Warm-up time	< 10 min	< 10 min	< 10 min
Operating voltage laser	115 – 230 VAC ± 10 %, 50 – 60 Hz	115 – 230 VAC ± 10 %, 50 – 60 Hz	115 – 230 VAC ± 10 %, 50 – 60 Hz
Laser power consumption	< 350 W	< 350 W	< 350 W
External control	RS232, USB, TTL, analog Q-switch control		
Cooling and ambient			
Cooling	air, optional: water	air, optional: water	air, optional: water
Ambient temperature	15 – 35 °C, non-condensing	15 – 35 °C, non-condensing	15 – 35 °C, non-condensing
Dimensions and weights			
Dimensions laser head (L × W × H)	400 × 150 × 125 mm^3	400 × 150 × 125 mm^3	400 × 150 × 125 mm^3
Dimensions 19” control unit (L × W × H)	358 × 447 × 44 mm^3, 1 RU high	358 × 447 × 44 mm^3, 1 RU high	358 × 447 × 44 mm^3, 1 RU high
Weight laser head	10.5 kg	10.5 kg	10.5 kg
Weight control unit	6 kg	6 kg	6 kg

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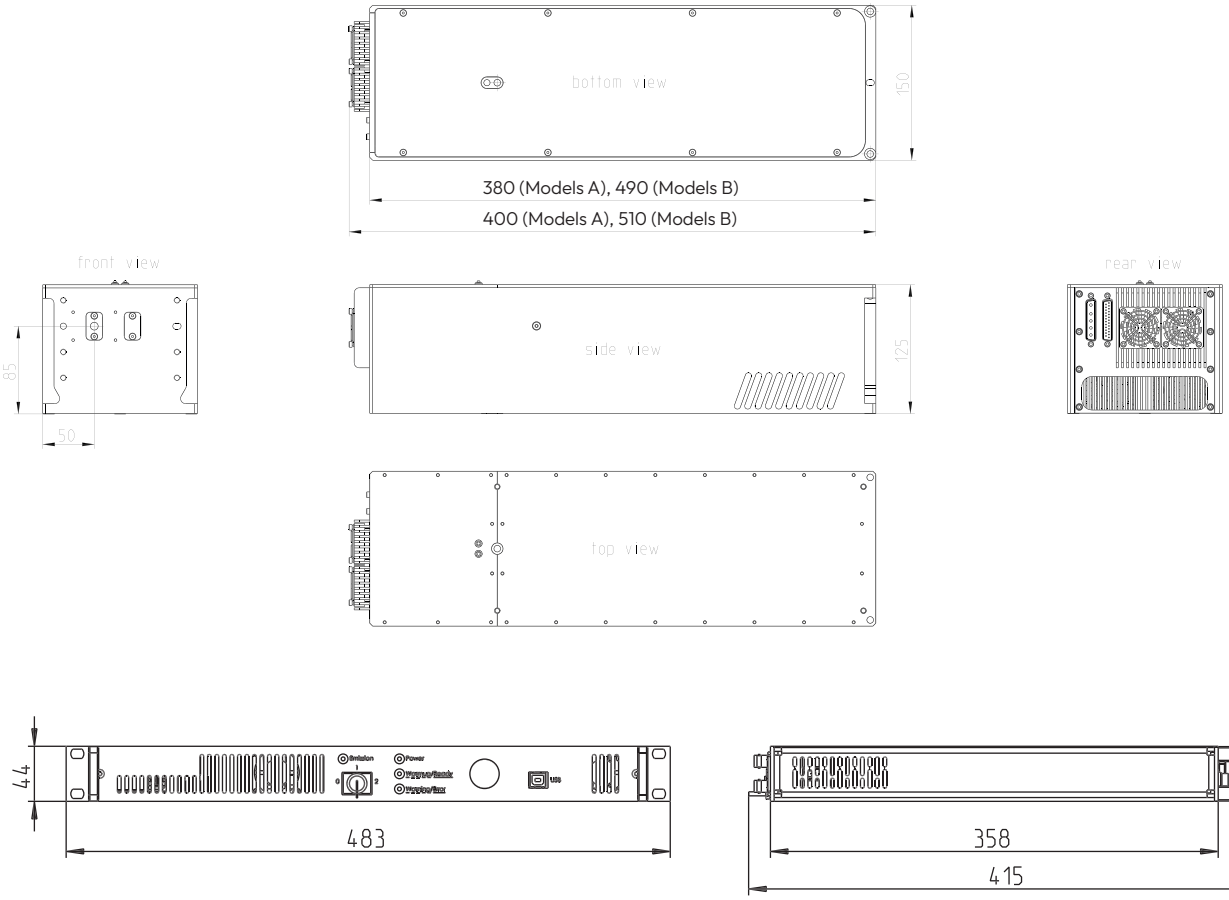
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Specifications

Nanio Air	1064	
Laser		
Model	1064-7-Y-70	1064-7-Y-100
Laser medium	Nd:YAG	Nd:YAG
Central wavelength	1064 nm	1064 nm
Laser performance		
Nominal power	7 W @ 10 kHz	7 W @ 10 kHz
Repetition rate	single shot to 100 kHz	single shot to 100 kHz
Pulse width	< 70 ns @ 10 kHz	> 100 ns @ 10 kHz
Pulse energy	700 µJ @ 10 kHz	700 µJ @ 10 kHz
Peak power	> 10 kW @ 10 kHz	> 6 kW @ 10 kHz
Pulse-to-pulse stability (rms)	< 1.0 % @ 10 kHz	< 1.0 % @ 10 kHz
Power stability (rms, 8 h)	< 1.0 %	< 1.0 %
Laser beam propagation		
Spatial mode	$M^2 < 1.15$, TEM_{00}	$M^2 < 1.15$, TEM_{00}
Nom. beam diameter (at waist)	0.7 mm	1.1 mm
Nom. waist location (from output)	-92 mm	-160 mm
Nom. beam diameter (at output)	0.7 mm	1.1 mm
Beam divergence (full angle)	2.2 mrad	1.4 mrad
Polarization	vertical, > 100:1	vertical, > 100:1
Circularity	> 90 %	> 90 %
Operating specifications		
Warm-up time	< 10 min	< 10 min
Operating voltage laser	115 – 230 VAC ± 10 %, 50 – 60 Hz	115 – 230 VAC ± 10 %, 50 – 60 Hz
Laser power consumption	< 350 W	< 350 W
External control	RS232, USB, TTL, analog Q-switch control	
Cooling and ambient		
Cooling	air, optional: water	air, optional: water
Ambient temperature	15 – 35 °C, non-condensing	15 – 35 °C, non-condensing
Dimensions and weights		
Dimensions laser head (L × W × H)	510 × 150 × 125 mm^3	510 × 150 × 125 mm^3
Dimensions 19“ control unit (L × W × H)	358 × 447 × 44 mm^3, 1 RU high	358 × 447 × 44 mm^3, 1 RU high
Weight laser head	12 kg	12 kg
Weight control unit	6 kg	6 kg

All values measured after laser warm-up. Luxinar follows a policy of continuous product improvement. All specifications are subject to change without notice. Luxinar Holding GmbH is DIN EN ISO 9001 certified. Rev. 1.0, 10 / 2026 | 903-0328-00

Technical drawings



	Available laser models
Models A	1064-16-V, 1064-7-Y-30, 1064-7-Y-50
Models B	355-5-V, 355-3-V, 532-10-V(-SP), 532-4-Y-50, 1064-7-Y-70, 1064-7-Y-100

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