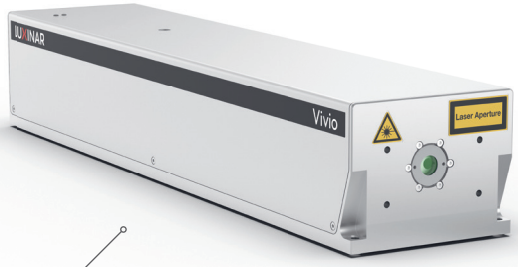
LUXINAR
Industrial lasers that last

Vivio | Nanosecond Lasers

Enduring excellence, pulse by pulse



Long-term reliability
Long laser lifetime due to unique hyperclean UV technology

Pulsecore® technology
Unmatched process control with highest pulse-to-pulse stability

All-in-one design
Easy to integrate with fully-integrated single-board control unit and laser control electronics

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

Compact. Powerful. Reliable.
All-in-one Q-switched lasers
The all new Vivio is the latest addition to our growing line-up of Q-switched lasers. The all-in-one concept comes with a fully-integrated single-board control unit and control electronics. This design allows for easy and rapid integration where space is limited and expensive. Its latest hyperclean UV technology and the integrated purge unit ensure exceptional lifetimes and hands-off operation for 532 nm and 355 nm wavelength.

Pulse control redefined – The core of the Vivio is a high-speed pulse control unit that allows you to achieve application results like never before.

Benefits
Hands-off operation for 24/7 industrial applications
Thanks to the Pulsecore® technology, the Vivio Q-switched laser has the fastest and most precise pulse control for advanced and repeatable manufacturing quality.

The laser comes with a fully integrated single-board control unit and control logic. Its compact design and the high number of control modes ensure an easy integration into various types of industrial laser equipment. The excellent longevity results in lowest operational costs for 24/7 industrial applications.

Applications
Superior manufacturing quality for your applications
The Vivio nanosecond laser offers best pulse-to-pulse stability and the most precise control of the pulse energy for 24/7 industrial applications.

- PCB processing
- Chip marking
- SD card cutting
- Plastic marking and cutting
- On-the-fly and high-speed marking
- Precision and high-contrast marking
- Wafer marking and scribing
- Fine cutting and drilling
- Flat panel display manufacturing
- Coding for tracking and tracing
- And many more demanding applications

Advantages
Engineered for demanding applications

- Most precise and high-speed control of pulse energy
- Best pulse-to-pulse stability
- Short pulse widths
- Rugged and compact all-in-one design
- Best laser longevity
- Low operational costs

Rev. 1.0, 10/2026

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Specifications

Vivio	355		
Laser			
Model	355-20-V	355-10-V	355-6-V
Laser medium	Nd:YVO_4	Nd:YVO_4	Nd:YVO_4
Central wavelength	355 nm	355 nm	355 nm
Laser performance			
Nominal power	20 W @ 60 kHz	10 W @ 60 kHz	6 W @ 40 kHz
Repetition rate	single shot to 400 kHz	single shot to 150 kHz	single shot to 150 kHz
Pulse width	< 25 ns @ 60 kHz	< 20 ns @ 60 kHz	< 20 ns @ 40 kHz
Pulse energy	333 µJ @ 60 kHz	166 µJ @ 60 kHz	150 µJ @ 40 kHz
Peak power	13.3 kW @ 60 kHz	8.3 kW @ 60 kHz	7.5 kW @ 40 kHz
Pulse-to-pulse stability (rms)	< 2.0 % @ 60 kHz	< 2.0 % @ 60 kHz	< 2.0 % @ 40 kHz
Power stability (rms, 8 h)	< 2.0 %	< 2.0 %	< 2.0 %
Laser beam propagation			
Spatial mode	$M^2 \leq 1.2$, TEM_{00}	$M^2 \leq 1.3$, TEM_{00}	$M^2 \leq 1.2$, TEM_{00}
Nom. beam diameter (at waist)	3.0 mm	0.34 mm	0.35 mm
Nom. waist location (from output)	collimated	-340 mm	-340 mm
Nom. beam diameter (at output)	3.0 mm	0.7 mm	0.6 mm
Beam divergence (full angle)	< 0.3 mrad	1.7 mrad	1.5 mrad
Polarization	vertical, > 100:1	vertical, > 100:1	vertical, > 100:1
Circularity	> 90 %	> 90 %	> 90 %
Operating specifications			
Warm-up time	< 5 min (warm start), < 20 min (cold start)	< 15 min	< 15 min
Operating voltage laser	48 VDC	24 VDC	24 VDC
Laser power consumption	< 480 W	< 480 W	< 480 W
External control	RS232, USB, TTL, analog Q-switch control		
Cooling and ambient			
Cooling	water	water	air; optional: water
Ambient temperature	15 – 40 °C, non-condensing	15 – 40 °C, non-condensing	15 – 35 °C, non-condensing
Dimensions and weights			
Dimensions laser head (L × W × H)	630 × 140 × 109 mm^3	400 × 150 × 130 mm^3	400 × 150 × 177 mm^3
Weight laser head	14 kg	14 kg	13 kg

Rev. 1.0, 10 / 2026

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Industrial lasers that last

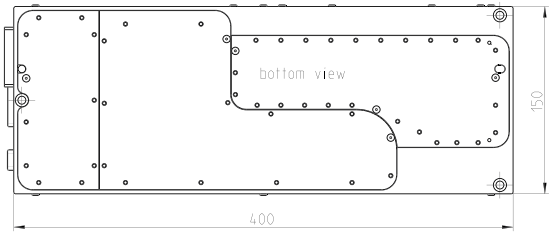
Specifications

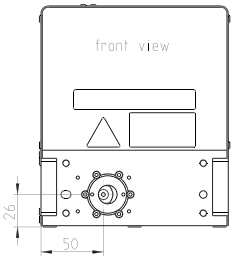
Vivio	532		
Laser			
Model	532-55-V	532-20-V	532-14-V
Laser medium	Nd:YVO_4	Nd:YVO_4	Nd:YVO_4
Central wavelength	532 nm	532 nm	532 nm
Laser performance			
Nominal power	55 W @ 60 kHz	20 W @ 60 kHz	14 W @ 60 kHz
Repetition rate	single shot to 400 kHz	single shot to 150 kHz	single shot to 200 kHz
Pulse width	< 25 ns @ 60 kHz	< 20 ns @ 60 kHz	< 25 ns @ 60 kHz
Pulse energy	916 µJ @ 60 kHz	333 µJ @ 60 kHz	233 µJ @ 60 kHz
Peak power	36.6 kW @ 60 kHz	16.6 kW @ 60 kHz	9.3 kW @ 60 kHz
Pulse-to-pulse stability (rms)	< 2.0 % @ 60 kHz	< 2.0 % @ 60 kHz	< 1.0 % @ 60 kHz
Power stability (rms, 8 h)	< 2.0 %	< 2.0 %	< 2.0 %
Laser beam propagation			
Spatial mode	$M^2 \leq 1.2$, TEM_{00}	$M^2 \leq 1.3$, TEM_{00}	$M^2 \leq 1.2$, TEM_{00}
Nom. beam diameter (at waist)	3.0 mm	0.34 mm	0.4 mm
Nom. waist location (from output)	collimated	-340 mm	-340 mm
Nom. beam diameter (at output)	3.0 mm	0.9 mm	0.8 mm
Beam divergence (full angle)	< 0.3 mrad	2.6 mrad	2.0 mrad
Polarization	horizontal, > 100:1	horizontal, > 100:1	horizontal, > 100:1
Circularity	> 90 %	> 90 %	> 90 %
Operating specifications			
Warm-up time	< 5 min (warm start), < 20 min (cold start)	< 15 min	< 15 min
Operating voltage laser	48 VDC	24 VDC	24 VDC
Laser power consumption	< 480 W	< 480 W	< 480 W
External control	RS232, USB, TTL, analog Q-switch control		
Cooling and ambient			
Cooling	water	water	air; optional: water
Ambient temperature	15 – 40 °C, non-condensing	15 – 35 °C, non-condensing	15 – 35 °C, non-condensing
Dimensions and weights			
Dimensions laser head (L × W × H)	630 × 140 × 109 mm^3	400 × 150 × 130 mm^3	400 × 150 × 177 mm^3
Weight laser head	14 kg	14 kg	13 kg

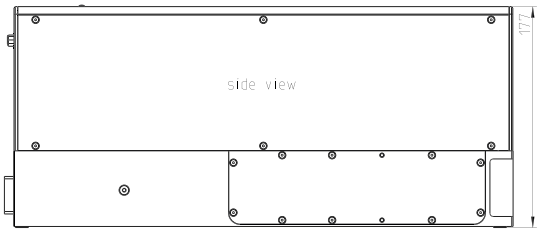
All values measured after laser warm-up. Luxinar follows a policy of continuous product improvement. All specifications are subject to change without notice. Luxinar Holding GmbH is DIN EN ISO 9001 certified. Rev. 1.0, 09 / 2026 | 903-0328-00

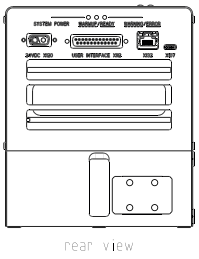
Technical drawings

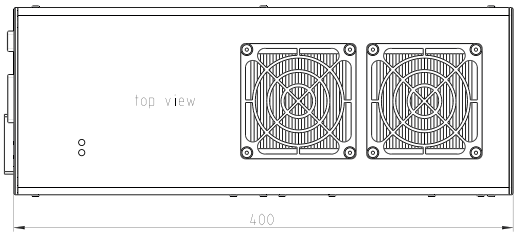
Vivio 355-6-V, Vivio 532-14-V



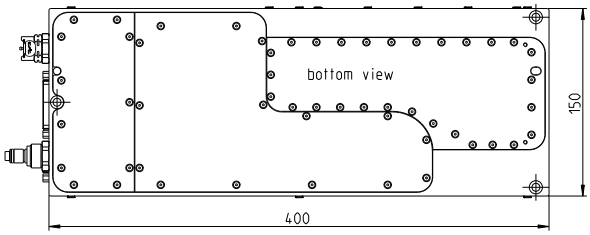


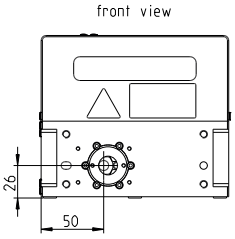


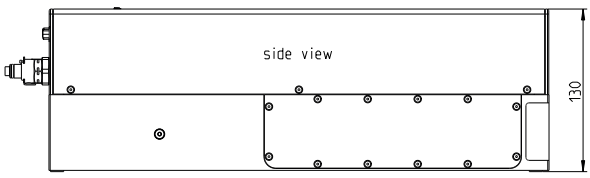


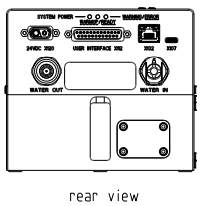


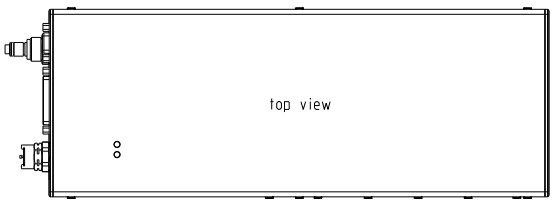
Vivio 355-10-V, Vivio 532-20-V





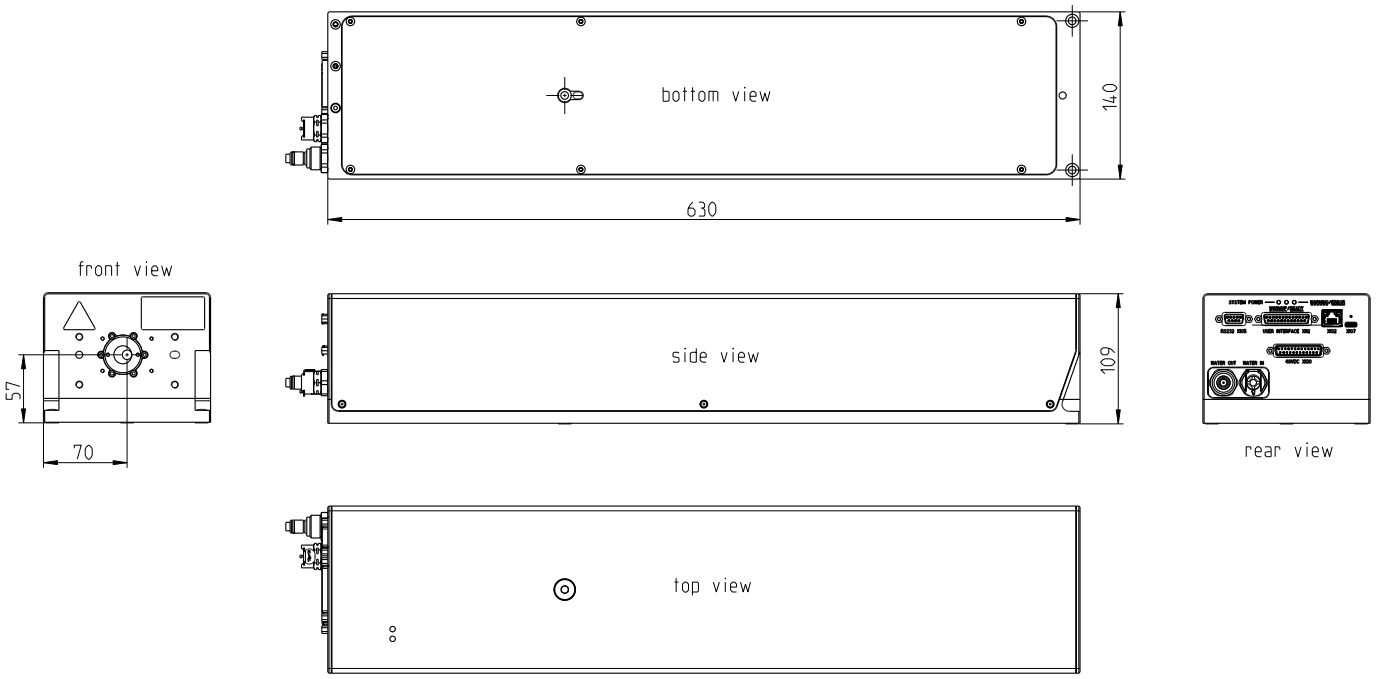






Technical drawings

Vivio 355-20-V, Vivio 532-55-V





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