

Infinity | CO₂ lasers

Achieve high performance



Unmatched performance

Achieve better application results with our patented Ceramicore® technology.



Unmatched longevity

No laser gas degradation for exceptional power stability.



Fast part production

High-speed pulsing option for most power levels and wavelengths.

Part of Ceramicore® - Sealed in purity. Designed for life.

With our patented Ceramicore® technology, you get pure ceramic CO₂ lasers engineered for unmatched stability, long life, and continuous-wave productivity.

Versatility to process wide range of applications

Widest selection of lasers with the same footprint

The Infinity Ceramicore® CO₂ laser tubes represent the most universal laser package in the industry. Infinity CO₂ laser tubes are available as 50, 60, 80, 120 and 150-Watt models with a choice of wavelengths and pulse specifications, all with same footprint.

Fan-cooling or water-cooling is available on all power levels except for the 150-Watt laser. All models can easily be integrated and are interchangeable to fit your product lines.

Benefits

Easy to Integrate

The Infinity series is truly a universal laser source for all applications and platforms. Choose the power levels, wavelengths, and pulsing specifications to maximize your ability to handle all your applications. The rise and fall time specifications of the Infinity PLUS CO₂ laser tube are among the fastest in the industry. Experience faster processing speeds with a higher resolution. Increase your part production by up to 4 times compared to conventional CO₂ laser tubes.

All Infinity models are scalable and modular for easy integration into new or existing systems. The footprint, beam specification and laser operation are nearly identical, giving integrators, OEM equipment builders and users maximum versatility and flexibility for their product lines and systems. Ceramicore's superior performance, reliability and longevity outperform conventional CO₂ lasers, enabling the lowest total cost of ownership.

Applications

Faster laser processing

A wide range of industries including automotive, electronics, identification marking or coding, retail packaging, food packaging, job shop production and industrial manufacturing have employed Infinity lasers for:

- Cutting / perforating
- Marking/coding
- Engraving/etching
- Ablation
- 3D polymer sintering
- Textile processing

Advantages

Better process results

Experience consistent power and longevity with the following additional advantages:

- Compact package for robotic and gantry laser mounting
- Retrofit replacement for your old conventional CO₂ laser
- Patented Ceramicore® design ensures longevity
- Inert Ceramicore® prevents laser gas contamination, power loss
- Low thermal expansion Ceramicore® for high stability
- Extended power stability from 2% to maximum power
- Short rise and fall times; good pulsing characteristics
- Advanced RF driver electronics: reliable, efficient and state-of-the-art
- 30% fewer laser components; highest reliability

Specifications

Infinity

Laser						
Model	i50	i60	i80	i100	i120	i150
Central wavelength	10.2 μm, 10.6 μm	10.2 μm, 10.6 μm	10.2 μm, 10.6 μm	10.2 μm, 10.6 μm	10.2 μm, 10.6 μm	10.2 μm, 10.6 μm

Laser performance						
Nominal power	50 W	60 W	80 W	100 W	120 W	150 W
Beam quality	$M^2 \leq 1.2$	$M^2 \leq 1.2$	$M^2 \leq 1.2$	$M^2 \leq 1.2$	$M^2 \leq 1.2$	$M^2 \leq 1.2$
Beam ellipticity	< 1.2:1	< 1.2:1	< 1.2:1	< 1.2:1	< 1.2:1	< 1.2:1
Fall time	< 75 μs	< 75 μs	< 75 μs	< 75 μs	< 75 μs	< 75 μs
Power stability*, water	< ± 5 % (< ± 3 %)	< ± 5 % (< ± 3 %)	< ± 5 % (< ± 3 %)	< ± 5 % (< ± 3 %)	< ± 5 % (< ± 3 %)	< ± 5 % (< ± 3 %)

Laser beam propagation						
Beam diameter, 1/e ² @ 0 m	2.5 ± 0.5	2.5 ± 0.5	2.5 ± 0.5	2.5 ± 0.5	2.5 ± 0.5	2.5 ± 0.5
Beam divergence (full angle)	6 ± 1 mrad	6 ± 1 mrad	6 ± 1 mrad	6 ± 1 mrad	6 ± 1 mrad	6 ± 1 mrad
Polarization	random	random	random	random	random	random

Operating specifications						
Input voltage, current	36 V / 25 A	40 V / 25 A	45 V / 25 A	48 V / 30 A	50 V / 30 A	60 V / 30 A
Frequency range	0.1 kHz – 140 kHz	0.1 kHz – 140 kHz	0.1 kHz – 140 kHz	0.1 kHz – 140 kHz	0.1 kHz – 140 kHz	0.1 kHz – 140 kHz

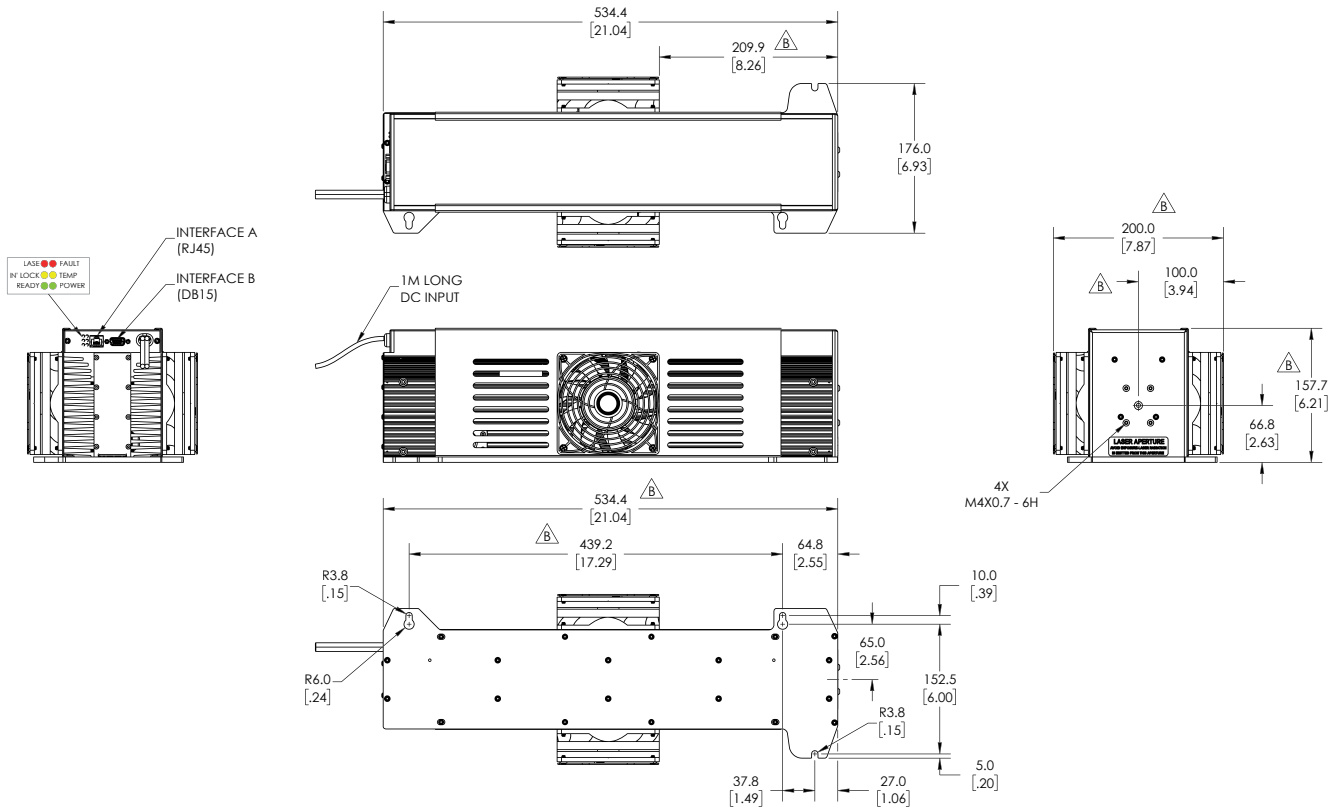
Cooling and ambient						
Cooling	fan / water	fan / water	fan / water	fan / water	fan / water	water
Input power/heat load	900 W	1000 W	1125 W	1440 W	1500 W	1800 W
Operating temperature	5 °C – 40 °C / 40 °F – 104 °F	5 °C – 40 °C / 40 °F – 104 °F	5 °C – 40 °C / 40 °F – 104 °F	5 °C – 40 °C / 40 °F – 104 °F	5 °C – 40 °C / 40 °F – 104 °F	5 °C – 40 °C / 40 °F – 104 °F
Operating humidity	non-condensing	non-condensing	non-condensing	non-condensing	non-condensing	non-condensing
Shipping temperature	–10 °C – 60 °C / 14 °F – 140 °F	–10 °C – 60 °C / 14 °F – 140 °F	–10 °C – 60 °C / 14 °F – 140 °F	–10 °C – 60 °C / 14 °F – 140 °F	–10 °C – 60 °C / 14 °F – 140 °F	–10 °C – 60 °C / 14 °F – 140 °F

Dimensions and weights						
Dimensions laser head (L × W × H)	534.4 mm × 200.0 mm × 157.7 mm (water-cooled width: 176.0 mm)	534.4 mm × 200.0 mm × 157.7 mm (water-cooled width: 176.0 mm)	534.4 mm × 200.0 mm × 157.7 mm (water-cooled width: 176.0 mm)	534.4 mm × 200.0 mm × 157.7 mm (water-cooled width: 176.0 mm)	534.4 mm × 200.0 mm × 157.7 mm (water-cooled width: 176.0 mm)	643.2 mm × 176.0 mm × 157.7 mm
Weight laser head	14.7 kg / 32.4 lbs.	14.7 kg / 32.4 lbs.	14.7 kg / 32.4 lbs.	14.7 kg / 32.4 lbs.	14.7 kg / 32.4 lbs.	14.7 kg / 32.4 lbs.

Nominal power: Power measured at 25 °C and may derate up to 1% per 1 °C for higher laser head temperatures. Power stability: stability test was conducted at rated voltage and rated power, ± (P_{max}–P_{min}) / (P_{max}+P_{min}) after the laser warm up period of (5 minutes).

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



> Industrial lasers
that last