

v30 CO₂ Laser

Industry leading laser with 30 Watts of average power for marking, engraving, and ablating applications



High performance CO₂ laser engineered for seamless integration into high-speed industrial equipment

- Advanced waveguide design guarantees exceptionally circular beam quality in both near- and far-fields
- 30 Watts continuous power ensures high throughput
- Optimized for your application: available in multiple wavelengths and air, fan, or water cooled options
- Common beam exits with Synrad vi- and ti-Series lasers enables an easy upgrade path as application of throughput demands increase
- Small footprint and light weight, ideal for small cutting or marking systems
- On-board tickle generator, industry standard 5-24 VDC I/O ports and remote control status via a 15-pin connector makes integration quick and straight-forward



The Marking & Coding Industry Standard

An industry proven performer for more than 15 years, OEMs and system integrators continue to use the v30 as their standard 30 Watt CO₂ laser for their marking and engraving systems. Reliable year after year operation, consistent high quality beam, compact size, and 3-point mounting system make the v30 the perfect fit for marking and engraving systems.

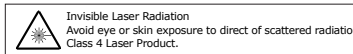
Specifications

Output Specifications			
Wavelength	9.3 μm	10.2 μm	10.6 μm
Output Power ¹	>20 W	>25 W	>30 W
Power Stability (cold start) ²	±7%	±5%	
Power Stability (typical, after 3 min.)	±5%	±3%	
Beam Quality (M ²)	<1.2		
Beam Diameter ³	2.5 mm ± 0.5 mm		
Divergence (full angle)	<7.0 mrad		
Ellipticity	<1.2		
Polarization	Linear (Horizontal)		
Rise Time	<100 μs		
Operating Frequency	0 - 100 kHz		
Power Supply			
DC Input Voltage	30 VDC		
Maximum Current	15 A (air/water), 16 A (fan)		
Cooling			
Maximum Heat Load	480 W		
Coolant Temperature	<40° C (air), 18 - 22° C (water)		
Minimum Flow Rate	140 CFM, 2 required (air) 1.0 GPM, <60 PSI (water)		
Environmental			
Operating Ambient Temperature	15 - 40° C		
Maximum Humidity	95%, non-condensing		
Physical			
	OEM Air	Fan	Water
Dimensions (L) mm (inches)	427 (16.8)	427 (16.8)	433 (17.1)
Dimensions (W) mm (inches)	116 (4.6)	119 (4.7)	116 (4.6)
Dimensions (H) mm (inches)	146 (5.8)	160 (6.3)	148 (5.8)
Weight kg (lbs.)	8.2 (18)	9.7 (21)	8.7 (19)

1 - Power level guaranteed for 1 year from date of shipment, regardless of operating hours, within recommended coolant flow rate and temperature range.

2 - Measured from cold start as $\pm(P_{max} - P_{min}) / (P_{max} + P_{min})$

3 - Measured 1/e² diameter at laser output.



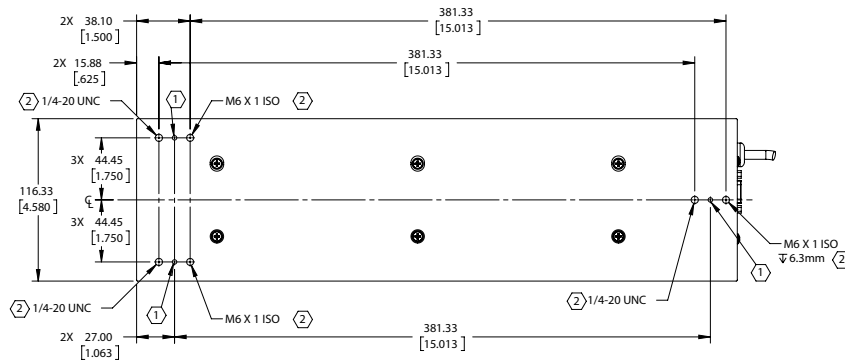
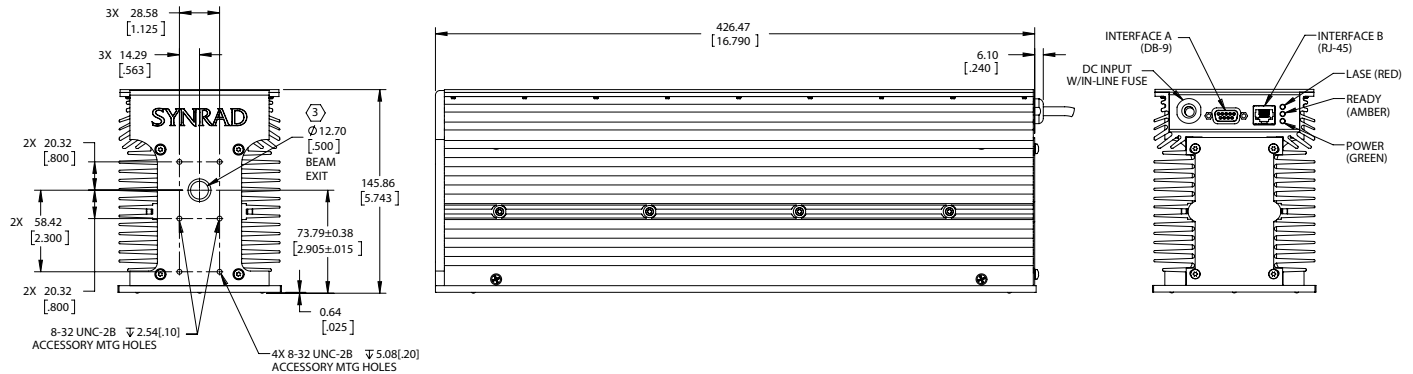
SYNRAD
A Novanta Company

v30 CO₂ Laser

Technical Illustrations dimensions are in mm (inches)

Outline and mounting drawings for fan-cooled and water-cooled models are available on the Synrad website at: <https://www.synrad.com/products/lasers/v-series>.

Air Cooled



NOTES:

- ① HARDENED BALL MOUNTING POINT, 3X (Ø.1875 BALL BEARING).
- ② THIS MOUNTING HOLE PATTERN USED FOR BOTTOM ACCESS FASTENING.
- ③ BEAM PATH MAY NOT BE CENTERED OR PERPENDICULAR TO FACEPLATE APERTURE.

Recommended Applications



Engraving

100 kHz pulse frequency for accurate raster image scanning at high speeds.



Marking

Powerful, accurate laser system that can be used on a wide variety of materials.



Coding

Small footprint, light weight, and high resolution imagery engineered to fit a wide variety of automated manufacturing systems.

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