

v30 CO₂ LASER DATA SHEET

INDUSTRY LEADING LASER WITH MORE THAN 30 W OF AVERAGE POWER FOR MARKING, ENGRAVING AND ABLATING

An industry proven performer for more than 15 years, OEMs and system integrators have used 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 unique 3-point mounting system make the v30 the perfect fit for marking and engraving systems.

RECOMMENDED APPLICATIONS

CODING



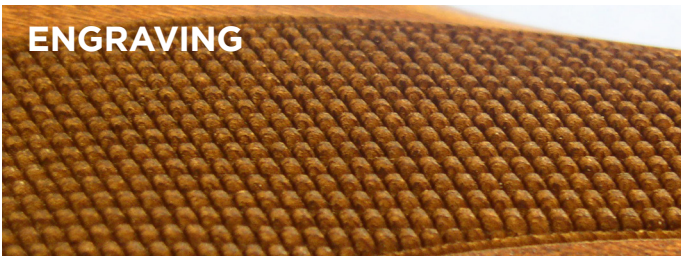
Small footprint, light weight, and high resolution imagery engineered to fit a wide variety of automated manufacturing systems.

MARKING



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

ENGRAVING



Stable operation over a wide range of settings enables precise control of material removal, allowing consistent ablation depth or detailed 3D engraving.



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

v30 CO₂ LASER SPECIFICATIONS

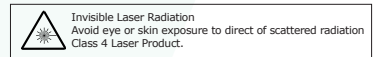
Output Specifications			
Wavelength	9.3 μm	10.2 μm	10.6 μm
Output Power ¹	> 20 W	> 25 W	> 30 W
Power Stability (typical, after 3 min.)	± 5%	± 3%	
Power Stability (cold start) ²	± 7%	± 5%	
Beam Quality (M ²)	< 1.2		
Beam Diameter ³	2.5 mm ± 0.5 mm		
Divergence (full angle)	< 7.0 mrad		
Ellipticity	< 1.2		
Polarization	Linear (Horizontal)		
Rise Time	< 100 μs		
Operating Frequency	0 - 100 kHz		
Power Supply			
DC Voltage Input	30 VDC		
Maximum Current	20 A		
Cooling			
Maximum Heat Load	450 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 Temperatures	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 kg (18 lbs.)	9.7 kg (21 lbs.)	8.7 kg (19 lbs.)

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

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

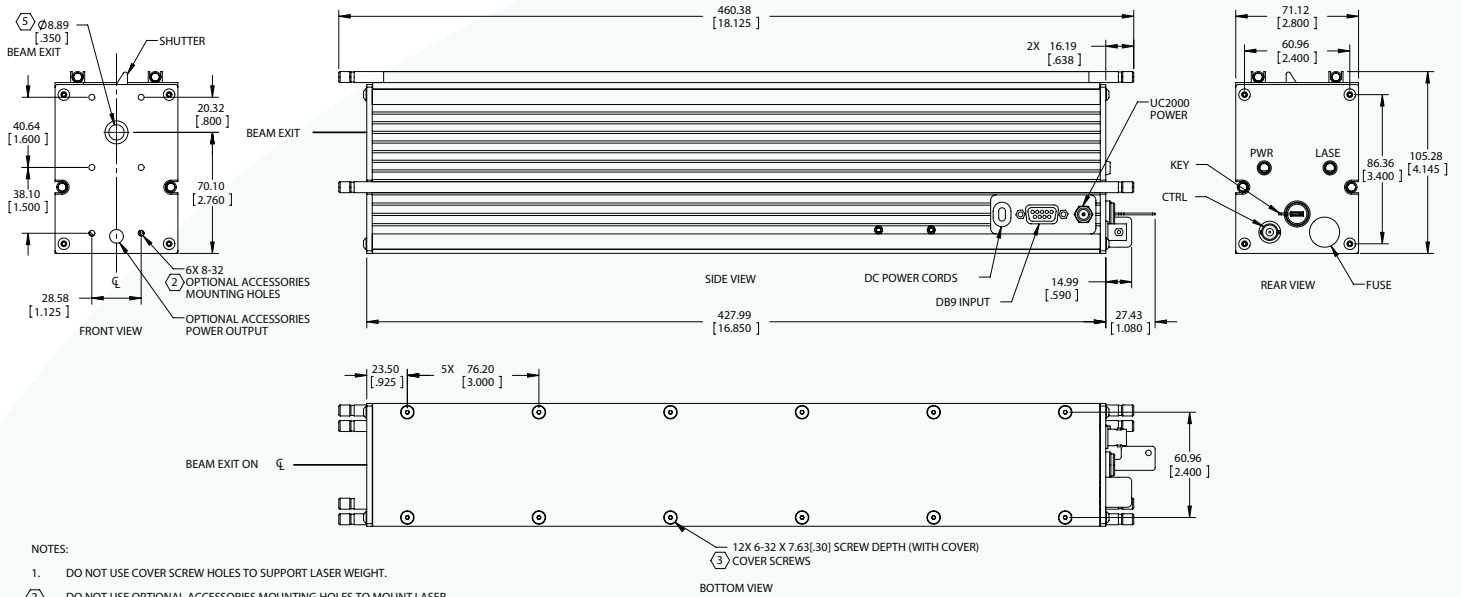
3 - Measured 1/e² diameter at laser output.

Please see the manual for the full list of specifications and associated measurement conditions.



v30 CO₂ LASER - OUTLINE & MOUNTING ILLUSTRATIONS

Dimensions are in mm (inches)



NOTES:

1. DO NOT USE COVER SCREW HOLES TO SUPPORT LASER WEIGHT.
2. DO NOT USE OPTIONAL ACCESSORIES MOUNTING HOLES TO MOUNT LASER.
3. LASER IS MOUNTED BY REMOVING COVER SCREWS AND REPLACING WITH APPROPRIATE LENGTH SCREWS FOR YOUR MOUNTING APPLICATION. USE A MINIMUM OF FOUR SCREWS IN A SYMMETRICAL PATTERN TO PROPERLY DISTRIBUTE MOUNTING FORCES. DO NOT REMOVE COVER.
4. WEIGHT: 9 LBS.
5. BEAM PATH MAY NOT BE CENTERED OR PERPENDICULAR TO FACEPLATE APERTURE.

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