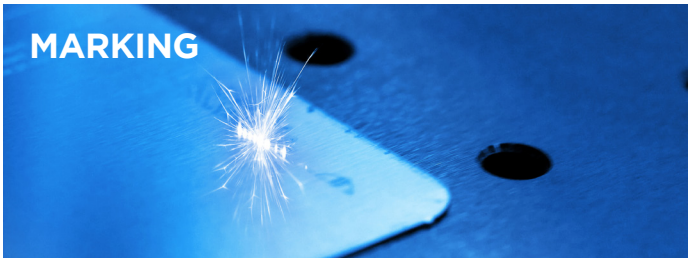
新特光电
Sintec Optronics

48-1 CO_2 LASER DATA SHEET

MOST RELIABLE LASER WITH 10 WATTS OF AVERAGE POWER FOR MARKING AND CODING APPLICATIONS

For more than 25 years Synrad has been delivering the 48 Series to OEMs, integrators, and end-users around the globe. The 48-1 is the most widely used 10 Watt laser for industrial applications. Reliability and near maintenance free marking, coding, and engraving are hallmark characteristics of this classic Synrad laser.

RECOMMENDED APPLICATIONS



Enable fast, easy tracking and identification by applying permanent marks, text, and codes to a wide variety of materials.

Easily applies permanent alpha numeric codes, bar codes, text, and expiration dates to a variety of packaging materials that will not smear or rub off.

Enhance tactile experience or enable quick identification of organic materials by adding distinctive texture, contours, marks, or text.

PROVEN TO DELIVER CONSISTENT RESULTS YEAR AFTER YEAR

- Proven, economical industry standard for reliable performance and long lifetime
- Most popular Synrad laser series, 25+ years of operational history around the globe
- Reliable 24/7 operation, built with Synrad's unique rigid core box structure for the most demanding industrial environments
- Compact size and light weight for easy integration onto a variety of marking, engraving, and small cutting systems
- Flexible materials processing capability with 10.6 µm and 9.3 µm wavelengths available
- Available in air or water-cooled models

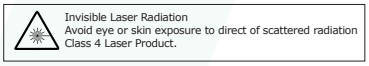
48-1 CO_2 LASER SPECIFICATIONS

Output Specifications		
Wavelength	9.3 µm	10.6 µm
Output Power[1]	> 8 W	> 10 W
Power Stability (cold start)[2]	± 15%	± 10%
Beam Quality (M^2)	< 1.2	
Beam Diameter[3]	3.5 mm	
Divergence (full angle)	4.0 mrad	
Ellipticity	< 1.2	
Polarization	Linear (Vertical)	
Rise Time	< 150 µs	
Operating Frequency	0 - 25 kHz	
Power Supply		
DC Voltage Input	30 VDC	
Maximum Current	7.0 A	
Cooling		
Maximum Heat Load	300 W	
Coolant Temperature	< 40° C (air), 18 - 22° C (water)	
Minimum Flow Rate	250 CFM, 2 required (air) 0.5 GPM, < 60 PSI (water)	
Environmental		
Operating Ambient Temperatures	15 - 40° C	
Maximum Humidity	95%, non-condensing	
Physical		
OEM Air Cooled Dimensions (LxWxH) mm (inches)	429 x 71 x 107 (16.9 x 2.8 x 4.2)	
Water Cooled Dimensions (LxWxH) mm (inches)	460 x 71 x 107 (18.2 x 2.8 x 4.2)	
Weight kg (lbs.)	4.1 kg (9.0 lbs.)	

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

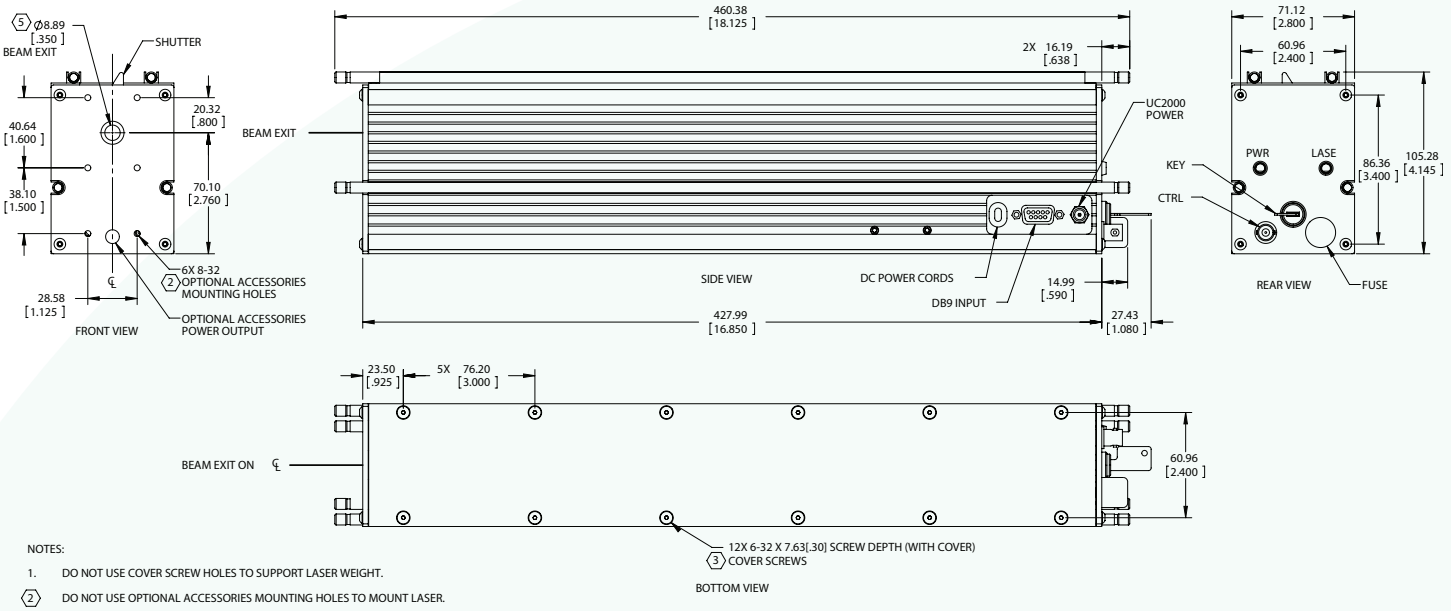
2 - Measured from cold start as $\pm(P_{max}-P_{min})/(P_{max}+P_{min})$

3 - Measured $1/e^2$ diameter at laser output. Please see the manual for the full list of specifications and associated measurement conditions.



48-1 CO_2 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.