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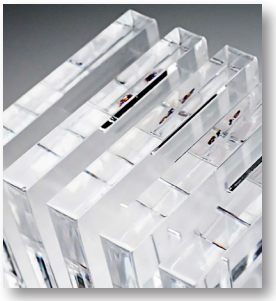
i401 CO_2 LASER - DATA SHEET

Robust, reliable laser with more than 400 Watts of average poser for high speed cutting and drilling applications

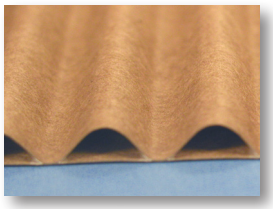
High performance CO_2 laser engineered with excellent power and divergence stability for demanding industrial applications

- 400 Watts of average power for faster throughput and higher yields across a variety of target materials, 30 Watts continuous power ensures high throughput
- Internal beam conditioning delivers near perfect circular output in both near and far fields, ensuring a focused spot size with high power density for greater detail and faster processing speeds
- Highly reliable RF modules ensure maximum uptime and are field-replaceable for improved serviceability
- Real-time performance monitoring reduces unplanned downtime with onboard advanced diagnostics that are Industry 4.0 ready

Paper & Paperboard Finishing



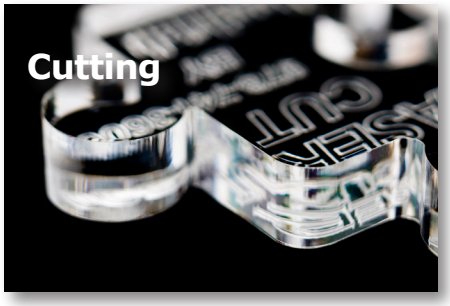
Acrylic Cutting



CLEAN CUTS, FASTER THROUGHPUT

The i401 has excellent power and stability that provide consistently high quality results at even the most demanding speeds. With zero contact to the target material, the i401 is the perfect solution for high-speed cutting applications. Surface deformation commonly associated with mechanical cutting systems are eliminated.

RECOMMENDED APPLICATIONS



400 Watts of continuous output power drives faster throughput for higher production yields. Excellent divergence stability minimizes HAZ for clean, polished edges cuts.

Avoid deformation caused by mechanical processes: the i401 provides a non-contact, fully digital solution that allows customized results on even the most challenging materials.

Excellent power stability and 400 Watts of average laser power delivers the precision and throughput speed required for high speed label kiss cutting.

i401 CO_2 LASER - SPECIFICATIONS

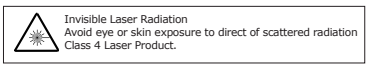
Output Specifications		
Wavelength	10.2 µm	10.6 µm
Output Power[1]	>400 W	
Power Stability (typical, after 3 min.)	±5%	
Power Stability (cold start)[2]	±7%	
Beam Quality ($M^{2)}$	<1.2	
Beam Diameter[3]	6.7 mm ± 0.7 mm	
Divergence (full angle)	2.5 mrad ± 0.3 mrad	
Ellipticity	<1.2	
Polarization	Linear (45°)	
Rise Time	<100 µs	
Operating Frequency	0 - 100 kHz	
Power Supply		
DC Input Voltage	48 VDC	
Maximum Current	125 A	
Cooling		
Maximum Heat Load	6000 W	
Coolant Temperature	18 - 22° C (water)	
Minimum Flow Rate	4.0 GPM, <60 PSI	
Environmental		
Operating Ambient Temperatures	15 - 40° C	
Maximum Humidity	95%, non-condensing	
Physical		
Dimensions (LxWxH) mm (inches)	1227 x 208 x 300 (48.3 x 8.2 x 11.8)	
Weight kg (lbs.)	59.0 kg (130 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 ±(Pmax-Pmin)/(Pmax+Pmin)

3 - Measured 1/e2 diameter at laser output.

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



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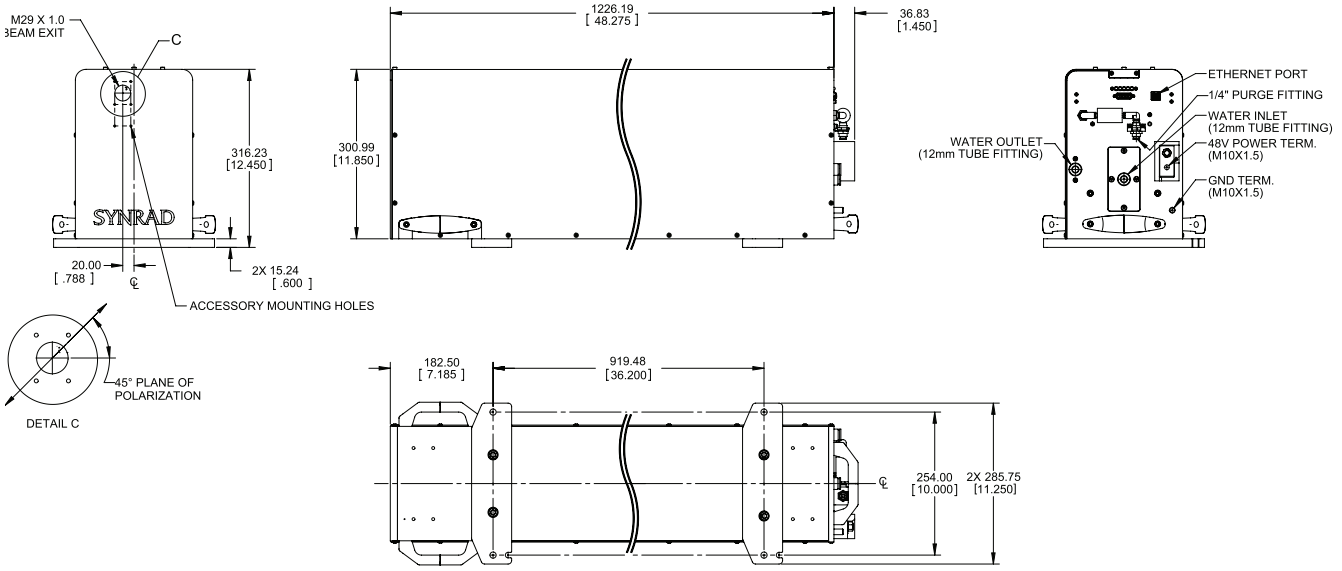
i401 CO_2 LASER - Outline and Mounting Illustrations

dimensions are in mm (inches)



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