

f201 CO₂ Laser

Robust, reliable laser with more than 200 Watts of average power for high speed cutting and drilling applications



High performance CO₂ laser engineered with excellent power and divergence stability for demanding industrial environments

- Excellent power stability for kiss-cutting multi-layer material, scoring and perforating flexible packaging material, and thin film welding
- Fully integrated laser/RF design minimizes size and weight; perfect for mounting on robotic arms, high speed cutting systems, or full integration onto flatbed cutting systems
- Simple interfaces to water-cooling and control signals, with three point Metric/English mounting system minimizes integration time for OEMs and system integrators
- Standard gas purge to maintain internal optic integrity even in harsh environments, and water cooling for higher electronic component efficiency and longer lifetime



High Speed Label Kiss-Cutting

The 10.2 μm wavelength configuration expands the range of target materials to include polypropylene based films, commonly used for adhesive labels. The f201 has excellent power output and stability that provide consistently high quality results run after run. The f201 now offers a wider range of laser processing capabilities for OEMs and integrators building high-speed labeling and packaging systems.

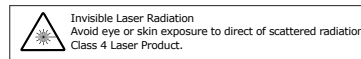
Specifications

Output Specifications		
Wavelength	10.2 μm	10.6 μm
Output Power ¹	>200 W	
Power Stability (cold start) ²	±7%	
Power Stability (typical, after 3 min.)	±5%	
Beam Quality (M ²)	<1.3	
Beam Diameter ³	4.5 mm ± 0.1 mm	
Divergence (full angle)	4.0 mrad ± 0.2 mrad	
Ellipticity	<1.3	
Polarization	Linear (Horizontal)	
Rise Time	<150 μs	
Operating Frequency	0 - 100 kHz	
Power Supply		
DC Input Voltage	96 VDC	
Maximum Current	36 A	
Cooling		
Maximum Heat Load	4000 W	
Coolant Temperature	18 - 22° C (water)	
Minimum Flow Rate	2.0 GPM, <60 PSI	
Environmental		
Operating Ambient Temperature	15 - 40° C	
Maximum Humidity	95%, non-condensing	
Physical		
Dimensions (LxWxH) Inches (mm)	1229 x 279 x 165 (48.4 x 11.0 x 6.5)	
Weight	43.5 kg (96 lbs.)	

1 - Power level guaranteed for 2 years 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.



SYNRAD

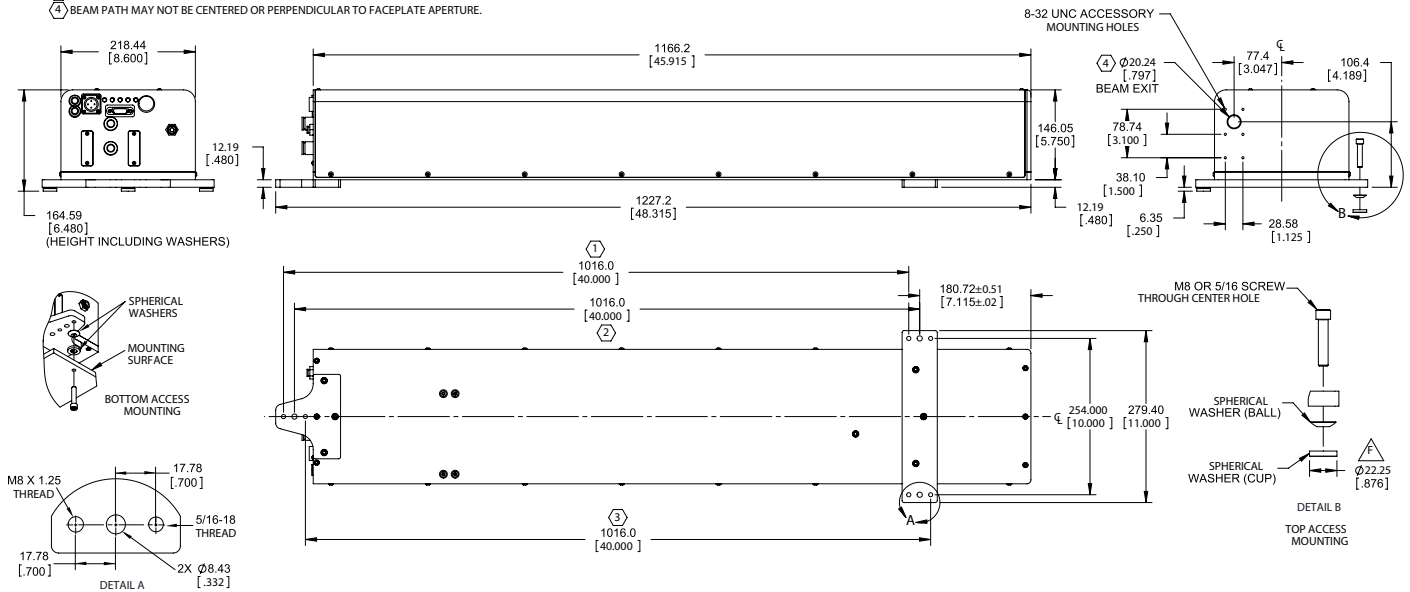
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Outline and Mounting Illustrations dimensions are in mm (inches)

NOTES:

- ① THIS MOUNTING HOLE PATTERN IS USED WHEN BOTTOM ACCESS MOUNTING IS DESIRED WITH M8 FASTENERS.
- ② THIS MOUNTING HOLE PATTERN IS USED WHEN TOP ACCESS MOUNTING IS DESIRED, STANDARD OR METRIC FASTENERS.
- ③ THIS MOUNTING HOLE PATTERN IS USED WHEN BOTTOM ACCESS MOUNTING IS DESIRED WITH 5/16-18 FASTENERS.
- ④ BEAM PATH MAY NOT BE CENTERED OR PERPENDICULAR TO FACEPLATE APERTURE.



Recommended Applications



Cutting

The f201 excels at acrylic cutting, delivering smooth, polished edges in a single pass. Digital control, exceptional power and divergence stability enable detailed cuts, with change-on-the-fly capability.



Scoring

200 Watts average laser power delivers precise scoring at high speed, perfect for flexible packaging production lines. Digital control enables on-the-fly changes, reducing production downtimes associated with traditional die pattern change-overs.



Textiles

Cut and seal edges of the newest high tech fabrics with the f201. Add strategically placed surface treatments for breathability, ventilation, or heat retention, all with the same system.

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