



# IRADION

**Ceramic Core CO<sub>2</sub> Lasers**

## INFINITY SERIES

### CERAMIC CO<sub>2</sub> LASER

Iradion **Infinity Series** patented laser design hermetically seals the CO<sub>2</sub> laser gas in a monolithic ceramic core resonator, and energizes it with the latest RF electronics. The compact, integrated package achieves exceptional performance and long-term reliability.

### SPECIFICATIONS:

Model Infinity	i50	i60	i80	i100	i120
Rated Optical Power (W)	50	60	80	100	120
Mode Quality (M <sup>2</sup> )	≤ 1.2				
Beam Ellipticity	< 1.2:1				
Beam Diameter (mm), 1/e <sup>2</sup> @ 0m	2.5 ±0.5				
Beam Divergence (mrad, Full angle)	<7				
Wavelength (μm)	10.2, 10.6	10.2, 10.6	10.2, 10.6	10.2, 10.6	10.2, 10.6
Rise Time (μs)	<75				
Power Stability. Fan (Water)	<±5% (<±3%)				
Polarization	Random				
Cooling	Fan / Water				
Input power / Heat Load (Watts)	900	1000	1125	1440	1500
Input Voltage, Current	36V / 25A	40V / 25A	45V / 25A	48V / 30A	50V / 30A
Frequency Range (kHz)	0.1 - 140				
Operating Temperature °C (°F)	5 - 40 (40 - 104)				
Operating Humidity	Non-Condensing				
Shipping Temperature °C (°F)	-10 - 60 (14 - 140)				
Weight (kg / lbs.)	14.7 / 32.4				
Dimensions L x W x H (mm)	535.4 x 198.1 x 157.0				

\*Power Stability is measured after 5 minutes warmup.  
Specifications are typical and subject to change without notice

### FEATURES & BENEFITS

- Patented Ceramic Core Design - excellent beam quality
- Aluminum Oxide Ceramic - no leakage or metal contamination
- Low Thermal Expansion - enhanced power and beam pointing stability
- Expanded Power Stability - consistent from 2% to maximum power
- 30% Fewer Laser Components - higher reliability
- Good Pulsing Characteristics – short rise and fall times
- Fast Driver Electronics - single-chip design, reliable, efficient and state of the art

### APPLICATIONS

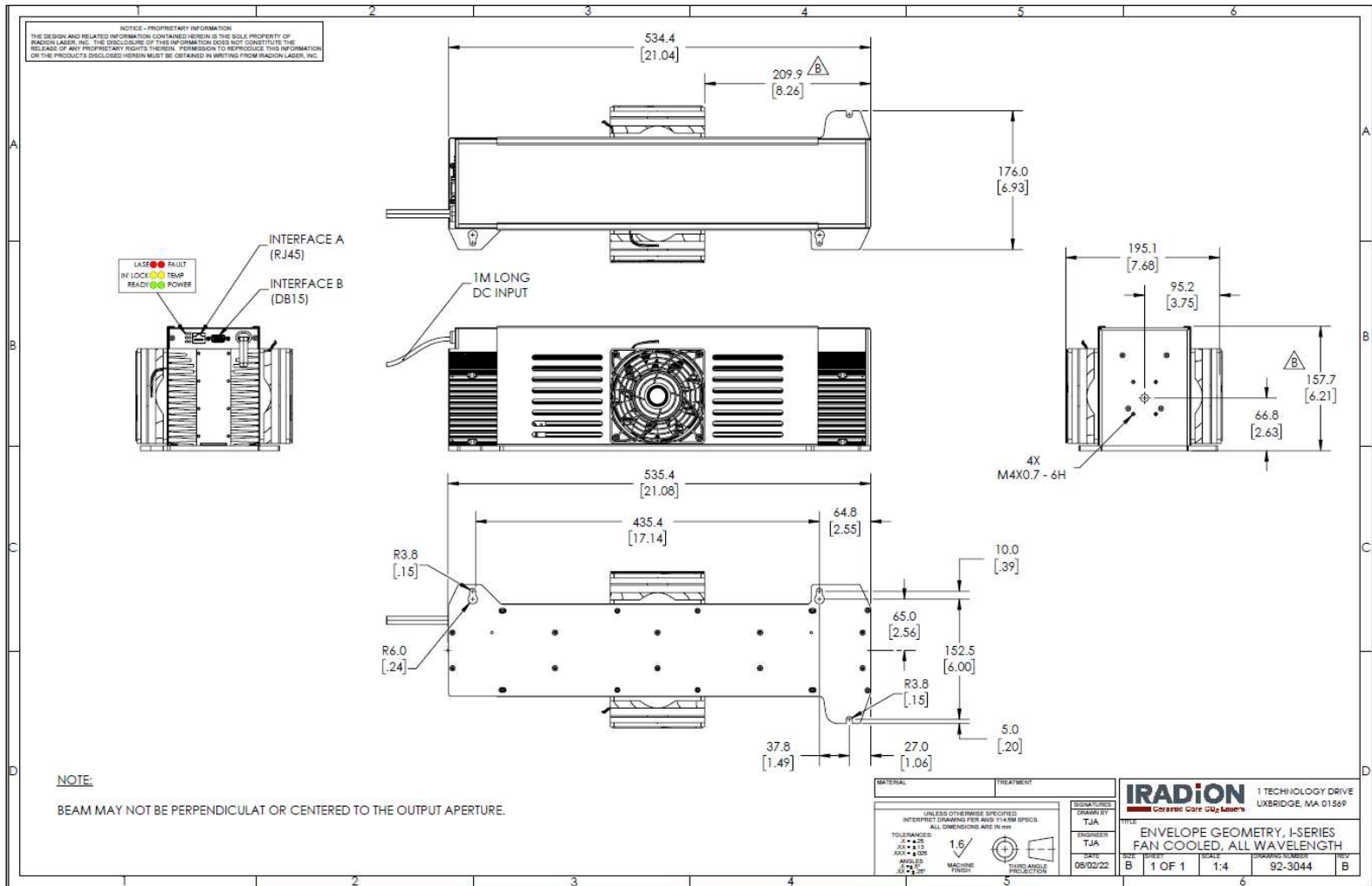
- Cutting/perforating
- Marking/coding
- Engraving/etching
- Ablation
- 3D polymer sintering
- Textile processing

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## MECHANICAL DIMENSIONS:



\*Note the drawing above is of an Infinity Fan cooled laser.



Patents: US 7460577 B2, US 8295319 B2  
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