



# IRADION

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

## ETERNITY SERIES

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

Iradion **Eternity 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 Eternity	E25	E30	E40
Rated Optical Power (W)	25	30	40
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)	9.3	10.2, 10.6	10.2, 10.6
Rise Time (µs)	<75		
Power Stability, Fan	<± 5%		
Polarization	Random		
Cooling	Fan		
Input power / Heat Load (Watts)	580	580	720
Input Voltage, Current	48V / 12A	48V / 12A	48V / 15A
Frequency Range (kHz)	0.1 -140 kHz		
Operating Temperature °C (°F)	5 - 40 (40 - 104)		
Operating Humidity	Non-Condensing		
Shipping Temperature °C (°F)	-10 - 60 (14 - 140)		
Weight (kg / lbs.)	9 / 20		
Dimensions L x W x H (mm)	323.8 x 174.0 x 138.4		

\*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

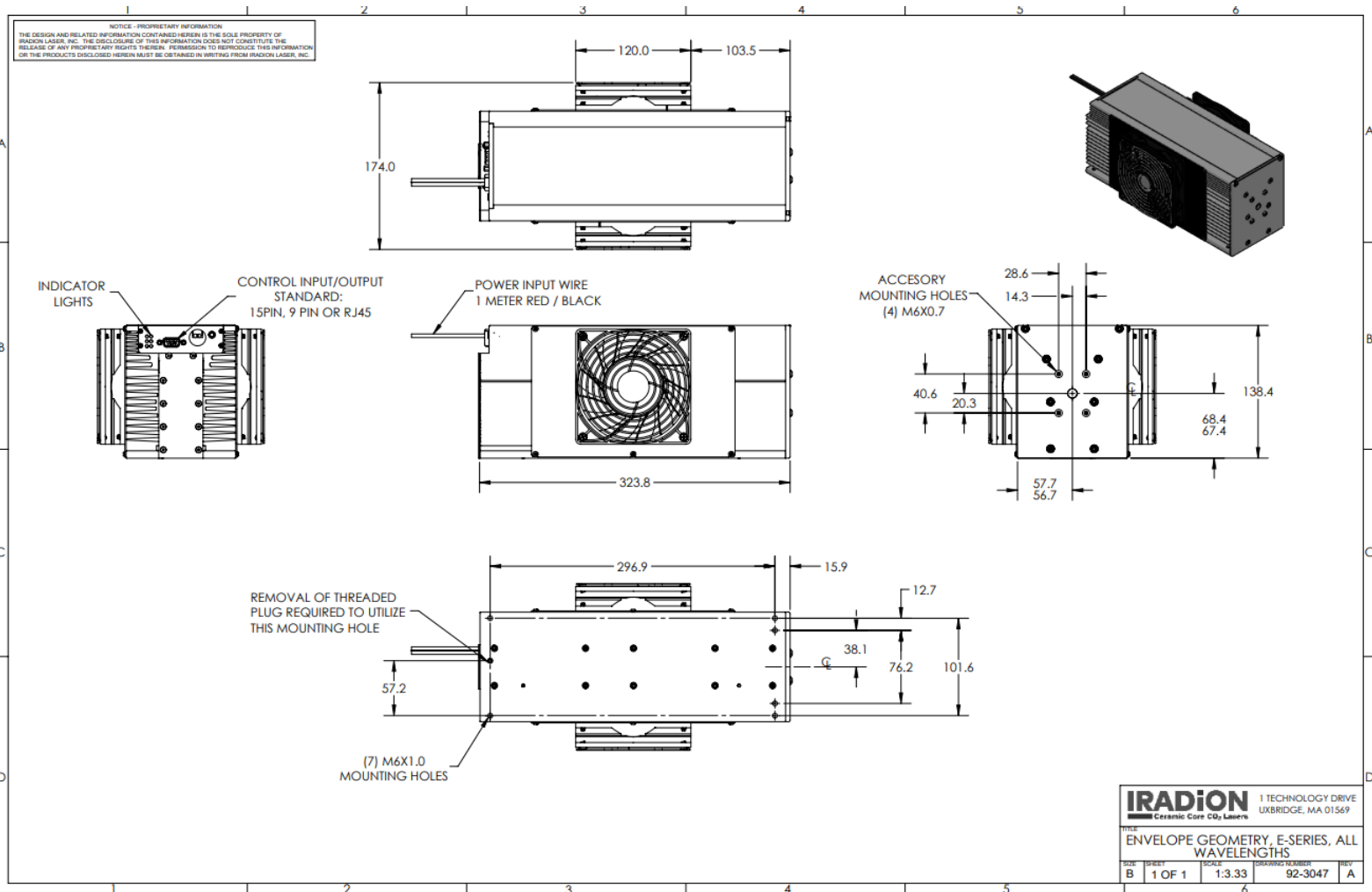
- Cutting/perforating
- Marking/coding
- Engraving/etching
- Wire Stripping
- Fiber optic splicing
- Medical surgery

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## MECHANICAL DIMENSIONS:



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



Eternity Datasheet



Eternity Manual



Patents: US 7460577 B2, US 8295319 B2  
 92-3059 Rev C 1-2023

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