

Iradion® Eternity “E” Series

Ceramic CO₂ Lasers, Model E-xx



The new **Iradion Eternity “E”** laser series combines the exceptional performance of a monolithic ceramic resonator with the latest RF design into a single integrated package. The result is a compact, efficient, and powerful laser with fast rise and fall time and great optical characteristics.

Feature	Benefit
Pure ceramic	No contamination, no leaks
Low thermal expansion	Enhanced laser stability
Fast driver electronics	Quick rise and fall time
High efficiency	Air cooled up to 120 Watts
30% fewer parts	Higher reliability
Adjustable power <1 Watt to MAX	Flexibility
Long lifetime	No need to ever refill tube
OEM configurations available	Optimized for your application

Options available:

- Beam Expander
- Laser Diode Pointer

Specifications

E Series Model	E-25-9.3 μm	E-30	E-40
Rated Optical Power (Watts)	25	30	40
Mode Quality (M^2)	≤ 1.2	≤ 1.2	≤ 1.2
Beam Ellipticity	$< 1.2:1$	$< 1.2:1$	$< 1.2:1$
Beam Diameter (mm) $1/e^2$	2.3+/-0.3	2.3+/-0.3	2.3+/-0.3
Beam Divergence (mrad, full angle)	< 8	< 8	< 8
Wavelength (μm)	9.3	10.6 / 10.2	10.6 / 10.2
Rise Time (μs)	< 90	< 90	< 90
Power Stability from Cold (%)	+/-7 % from cold, guaranteed +/-5% after 3-15 mins typical	+/-6 % from cold, guaranteed +/-5 % after 3-15 mins typical	+/-6 % from cold, guaranteed +/-5 % after 3-15 mins typical
Polarization	Random	Random	Random
Cooling	Air or Fan	Air or Fan	Air or Fan
Flow Rate (air)	140CFM x2	140CFM x2	140CFM x2
Input Power (Watts)	720	580	720
Input Voltage / Current	48V / 15A	48V / 12A	48V / 15A
Weight (kg / lbs)	9/20	9/20	9/20

Specifications are preliminary and subject to change without notice

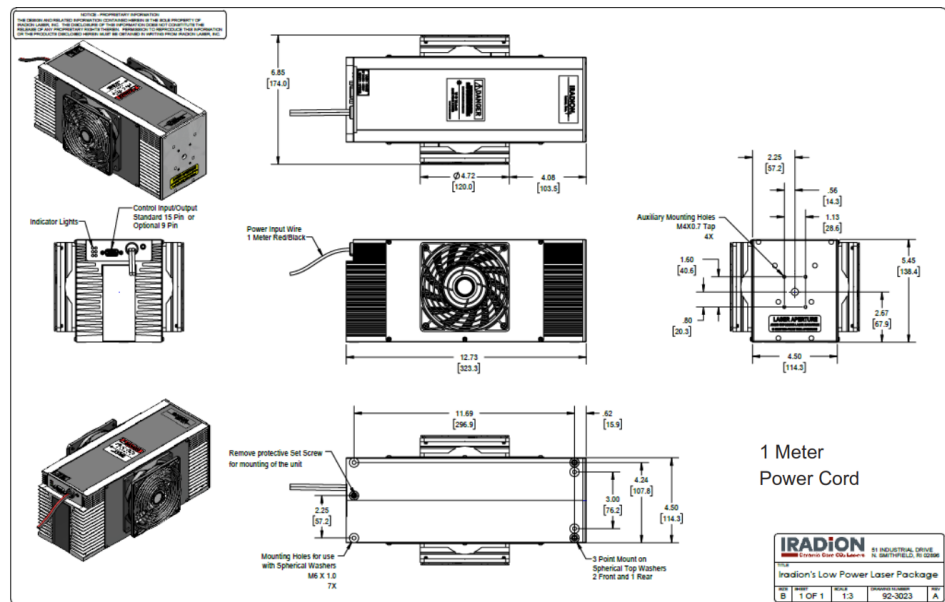
Laser Interface

Connectors	15 pin D	RJ45
Fire Command	Yes	Yes
Interlock	Yes	Yes
Fault Signal	Yes	Yes
RS232 Comm*	Yes	Yes
Ready Signal	Yes	No
Key Switch Control	Yes	No
Forward RF Signal	Yes	No
Reflected RF signal	Yes	No
Lase Light Signal	Yes	No
Temperature Warn	Yes	No

* The laser control card can be monitored via RS232 communications. A variety of signals, laser information, and the temperature can be interfaced to your host controller.

Indicator lights:

LASE	● ●	FAULT
IN LOCK	● ●	TEMP
READY	● ●	POWER



Order Information: Exx*

*Model designator:

F = for fan cooled
A = for air cooled (no fans)

Example: 40 Watt fan cooled
E40F

