

# Iradion® Infinity Series

Ceramic CO<sub>2</sub> Lasers, Model 15XXT



The new **Iradion Infinity** CO<sub>2</sub> 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.

| <b>Feature</b>               | <b>Benefit</b>                 |
|------------------------------|--------------------------------|
| 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 W to MAX | Flexibility                    |
| Long lifetime                | No need to ever refill tube    |
| OEM configurations available | Optimized for your application |

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

[www.iradionlaser.com](http://www.iradionlaser.com)

# Specifications

| Infinity 15XX* Models                       | 155             | 156             | 158             | 1510            | 1512            |
|---|-----------------|-----------------|-----------------|-----------------|-----------------|
| Rated Optical Power (Watts)                 | 50              | 60              | 80              | 100             | 120             |
| Mode Quality (M2)                           | ≤ 1.2           | ≤ 1.2           | ≤ 1.2           | ≤ 1.2           | ≤ 1.2           |
| Beam Ellipticity                            | < 1.2:1         | < 1.2:1         | < 1.2:1         | < 1.2:1         | < 1.2:1         |
| Beam Diameter (mm) 1/e <sup>2</sup>         | 2.5             | 2.5             | 2.5             | 2.5             | 2.5             |
| Beam Divergence (mrad, full angle)          | <7              | <7              | <7              | <7              | <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             | <75             | <75             | <75             | <75             |
| Power Stability, Fan Cooled (% from Cold)   | <± 5 %          | <± 5 %          | <± 5 %          | <± 5 %          | <± 5 %          |
| Power Stability, Water Cooled (% from Cold) | <± 3 %          | <± 3 %          | <± 3 %          | <± 3 %          | <± 3 %          |
| Polarization                                | Random          | Random          | Random          | Random          | Random          |
| Cooling                                     | Air, fan, water | Air, fan, water | Air, fan, water | Air, fan, water | Air, fan, water |
| Input Power (Watts)                         | 720             | 1000            | 1125            | 1350            | 1500            |
| Input Voltage / Current                     | 36V / 20A       | 40V / 25A       | 45V / 25A       | 48V / 28A       | 50V / 30A       |
| Weight (kg/lbs)                             | 14.7 / 32.4     | 14.7 / 32.4     | 14.7 / 32.4     | 14.7 / 32.4     | 14.7 / 32.4     |

Specifications are preliminary and subject to change without notice

These specification do not apply to the “x” series; “x” series laser have customer specific specification.

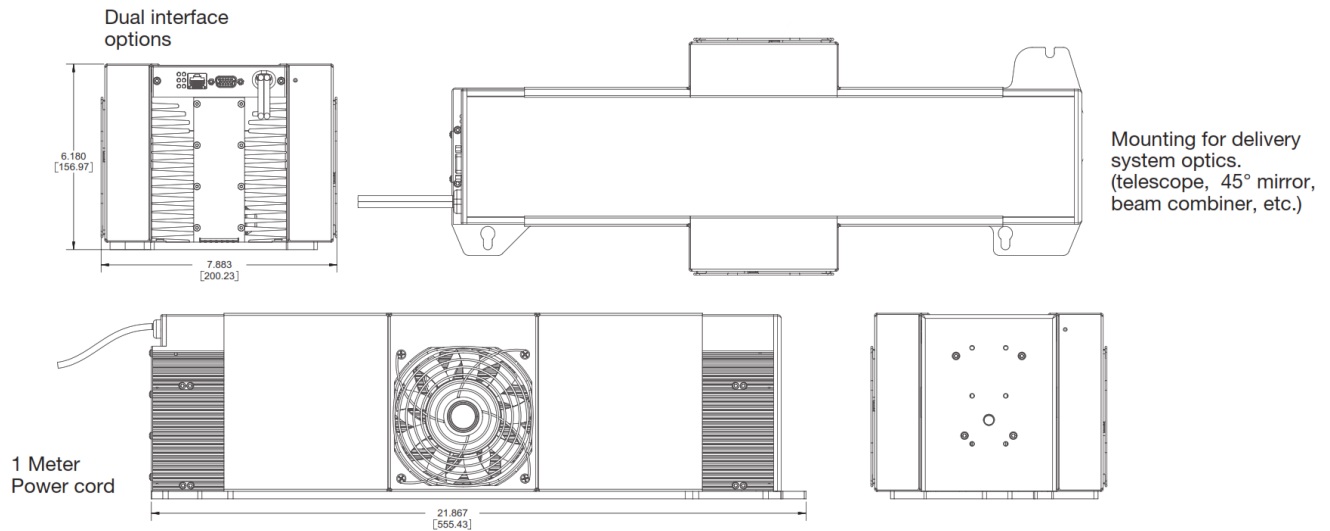
## Laser Interface

| 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: 15XX\*T**

\*Model designator:

F = for fan cooled

W = for water cooled

A = for air cooled (no fans)

Example: 60 Watts water cooled 156WT

Patents: US 7460577 B2  
US 8295319 B2



Invisible Laser Radiation  
Avoid eye Skin exposure to  
direct or scattered radiation.  
Class 4 Laser Product.

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RoHS  
CE



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