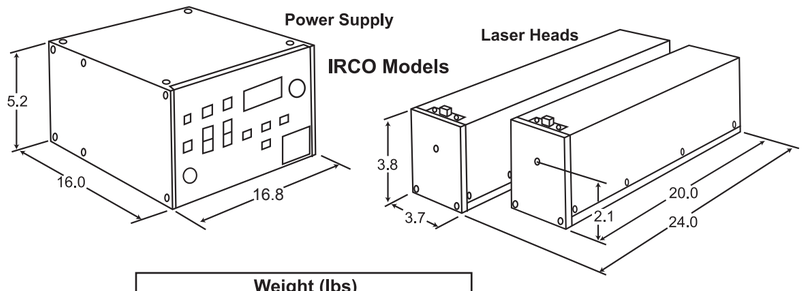
IRCO Series CO Waveguide Lasers

Specification (general)	Model Number IRCO-1	IRCO-3
Output power (watts)	1.0	3.0
Output Wavelength (microns)	5.2-5.9*	5.2-5.9*
Beam Diameter (1/e^2 point) (mm)	1.75	1.9
Beam Divergence (full angle) (mrad)	3.8	3.5
Polarization*	Linear, Wavelength dependent	
Fresnel Number	0.57	0.50
Free Space Mode	TEM $_{00}$**	
Gain Linewidth (FWHM) (MHz)	340	315
Gain Length (in)	10.0	14.0
Cavity Length (in)	11.9	15.9
Free Spectral Range (MHz)	500	375
Amplitude Stability	<1 hour ± 2%, > 1 hour ± 3%	
Input Power (watts)	100/120/150/230 VAC, 50/60 Hz (160/200)	
Cooling (W=Water)	W	W



*The nominal wavelength without tuning is multiline (3-6 line). Tuning requires an optional grating configuration. Either vertical or horizontal polarization is available for all models. Grating tunable systems operate on a minimum of 10 transition wavelengths with power in excess of 50 milliwatts per line.
**Occasional donut mode occurs during temperature cycling.
NOTE: All specifications subject to change without prior notification.



Weight (lbs)	
Laser Heads:	**Power Supply:**
IRCO-1 : 13.5	All Models: 18.5
IRCO-3 : 17.5	

INFRARED INSTRUMENTS

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SAN MARCOS, CA 92079
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www.infraredinstruments.com

IRCO Series CO Waveguide Lasers





The lasers described in the brochure represent a unique and exciting advance in state-of-the-art laser design. Infrared Instruments is well-known for its ultra stable, long-lived; compact CO_2 and CO lasers. Located in San Marcos, California, Infrared Instruments designs, develops and manufactures rugged, reliable laser systems which provided a new level of convenience in operation and performance.

Our company is committed to the design and manufacture of a wide range of specialized lasers to the OEM, as well as for custom end-user applications. Our sealed-off design offers a cost effective laser well-suited for the most demanding applications. Infrared Instruments lasers offers the user a wide selection of operating output powers and wavelengths. These lasers can be reprocessed and refilled, offering years of reliable performance. All critical laser components undergo a 100% QC inspection. Each system is burned in for a minimum of 100 hours before shipping as a complete set of dedicated components. You can receive an IR Series CO_2 and CO waveguide laser with the same high level of confidence that we have in shipping it to you.

Features
- TEM$_{00}$
- Hard Sealed optics
- Minimum 10 line tunability
- Water cooled
- Heater stabilization (optional)
- Switching mode, DC high voltage power supply
- State-of-the-art design

Benefits
- Excellent amplitude stability
- Compact, efficient design
- Power output to 20 watts
- Portable, light-weight system
- No optical alignment required

Applications
- Cutting and drilling of: plastics, ceramics, wood, and paper
- Medical Applications
- LIDAR
- Infrared Sensing
- Interferometry
- Spectroscopy

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