



KT250

KT400

LightWAVE®

Industrial CO<sub>2</sub> Lasers



## Laser

### Characteristics

- Liquid Cooled
- RF Excited
- Wide Operating Power Range
- Exceptional Power Stability  
±6%
- Fast Rise and Fall Time  
≈60 μsec
- Pulsed Up to 200 kHz

### Standard Features

- All Metal Sealed Laser Tube
- Internally Collimated
- Integrated RF
- Common Footprint
- Overbuilt Electronics
- Three Point Mounting
- Other Wavelengths Available
- Manufactured in the USA

LASER CHARACTERISTICS

OUTPUT POWER <sup>1</sup>	≥250 watts	≥400 watts
POWER RANGE	0-250 watts	0-400 watts
PEAK POWER <sup>2</sup>	≥1000 watts	≥1000 watts
DUTY CYCLE RANGE	0-40%	0-70%
POWER STABILITY	±6%	±6%
MAXIMUM PULSE ENERGY <sup>3</sup>	500 mJ	1400 mJ
PULSE LENGTH	≤2.0 ms	≤3.5 ms
PULSE RISE/FALL TIME	≈60 μs	
MODE QUALITY	M <sup>2</sup> < 1.2	
BEAM DIAMETER AT LASER OUTPUT	0.31" ±0.04" (8.0 mm ±1.0 mm)	
BEAM DIVERGENCE (FULL ANGLE)	<2.0 mrad	
POLARIZATION	Linear (parallel to baseplate)	
MODULATION FREQUENCY	200 Hz to 200 kHz	
WAVELENGTH	10.6 μm	

PHYSICAL CHARACTERISTICS

WEIGHT	122 lbs. [55 kg]	
DIMENSIONS	47.25" x 10" x 10.1" [1200 x 254 x 257 mm]	

ELECTRICAL REQUIREMENTS

DC INPUT VOLTAGE	48 V	
DC MAXIMUM CURRENT	220 A	
DC CONTINUOUS CURRENT	<100 A	<160 A

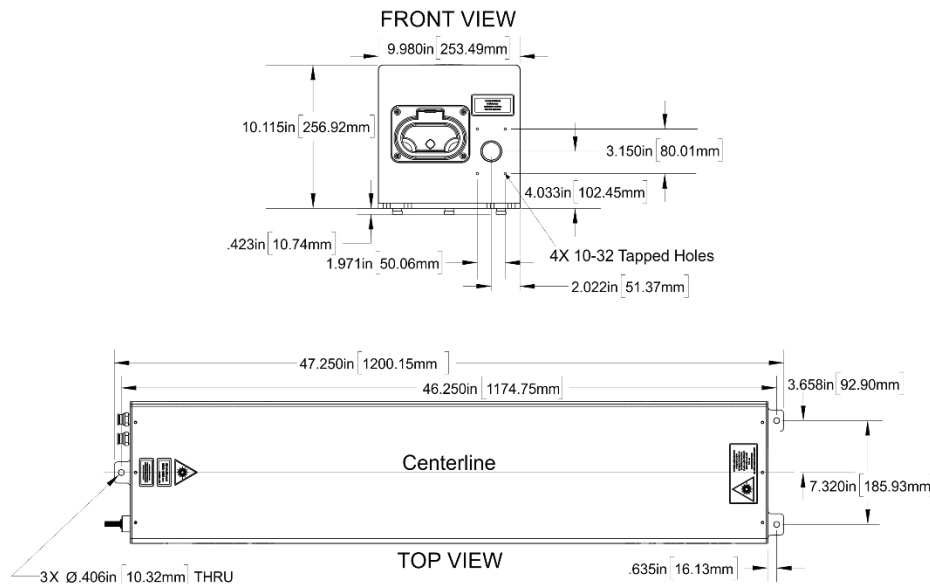
COOLING REQUIREMENTS<sup>4</sup>

HEAT LOAD	<5 kW	<8 kW
FLOW RATE	≥3 GPM (≥11.5 L/min)	
PRESSURE	<60 PSI	
COOLANT	Distilled water with corrosion inhibitor	
COOLANT SETPOINT TEMP.	68°F (20°C)	
COOLANT TEMP. STABILITY (MAX)	±3°F (±1.5°C)	

ENVIRONMENTAL CONDITIONS

AMBIENT TEMP. RANGE	50°F - 100°F [10°C - 38°C]	
RELATIVE HUMIDITY	<95% non-condensing	

MECHANICAL SPECIFICATIONS



<sup>1</sup> Measured at maximum duty cycle and a 3.8 kHz pulse repetition frequency (prf).  
<sup>2</sup> Measured at 10% duty cycle at 1 kHz prf.  
<sup>3</sup> Maximum pulse energy at rated power.  
<sup>4</sup> Refer to the manual for details.



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Disclaimer

The laser is a component of a laser system. It is the responsibility of the OEM to provide all required laser safety features. Check with CDRH for safety requirements. Do not operate laser without proper safety training. The laser parameters listed within this sheet are subject to change without notice.