



KT100

KT150

KT200

LightWAVE®

Industrial CO₂ Lasers



Laser

Characteristics

- Liquid Cooled
- RF Excited
- Wide Operating Power Range
- Exceptional Power Stability
- Fast Rise and Fall Time
- Pulsed up to Quasi-CW
- Under 50 lbs.

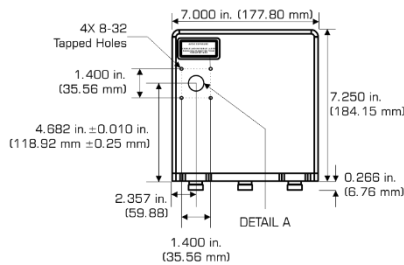
Standard Features

- Metal Sealed Laser Cavity
- Integrated Red Beam
- Internally Collimated
- Integrated RF
- Common Footprint
- Overbuilt Electronics
- Manufactured in the USA

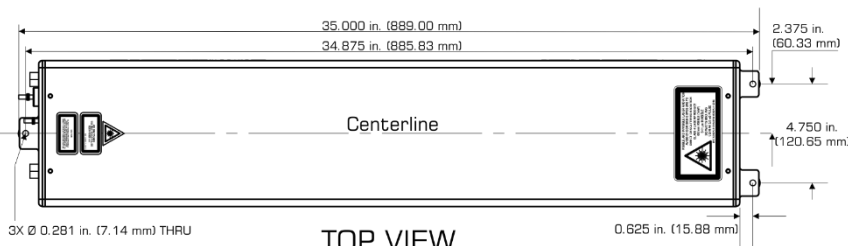
LASER PARAMETERS	KT100-9.3	KT100-10.6	KT150-9.3	KT150-10.6	KT200-9.3	KT200-10.6
WAVELENGTH (μm)	9.3	10.6	9.3	10.6	9.3	10.6
OUTPUT POWER ¹ (W)	≥100	≥100	≥150	≥150	≥200	≥200
POWER RANGE (W)	10-100	10-100	10-150	10-150	10-200	10-200
TYPICAL PEAK POWER ² (W)	≥400	≥400	≥400	≥400	≥400	≥400
DUTY CYCLE RANGE (%)	≤40	≤40	≤60	≤60	≤75	≤75
POWER STABILITY ³ (%)	±5	±5	±5	±5	±5	±5
MAXIMUM PULSE ENERGY (mJ)	>200	>200	>450	>450	>750	>750
PULSE LENGTH (mS)	≤2.0	≤2.0	≤3.0	≤3.0	≤3.75	≤3.75
PULSE RISE/FALL TIME (μs)	<50					
MODE QUALITY	$M^2 < 1.2$					
BEAM ELLIPTICITY	<1.2					
BEAM DIAMETER AT LASER OUTPUT	0.24" ±0.04" (6.0 mm ±1.0 mm)					
BEAM DIVERGENCE - FULL ANGLE (mrad)	<2.5					
POLARIZATION	Circular or Linear					
MODULATION FREQUENCY (kHz)	0.2 to 200					
PHYSICAL CHARACTERISTICS						
WEIGHT	48.5 lbs. [22 kg]					
DIMENSIONS	35" x 7" x 7.25" [889 x 178 x 184 mm]					
ELECTRICAL REQUIREMENTS						
DC INPUT VOLTAGE (VDC)	48					
DC PEAK CURRENT (A)	75					
DC CONTINUOUS CURRENT (A)	<35		<45		<55	
COOLING REQUIREMENTS⁴						
HEAT LOAD (kW)	1.6 kW		2.0 kW		2.4 kW	
FLOW RATE	≥1.5 GPM (≥5.7 L/min)					
COOLANT MAXIMUM PRESSURE (PSI)	90					
COOLANT	Distilled water with corrosion inhibitor					
COOLANT SETPOINT TEMP. RANGE	68°F - 77°F (20°C - 25°C)					
COOLANT TEMP. STABILITY	±1°F (±0.5°C)					
ENVIRONMENTAL CONDITIONS						
AMBIENT TEMP. RANGE	50°F - 100°F [10°C - 38°C]					
RELATIVE HUMIDITY ⁴	Non-Condensing					
ALTITUDE	≤6500 ft. (2000 m)					

MECHANICAL SPECIFICATIONS

FRONT VIEW



TOP VIEW



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.

¹ Measured at maximum duty cycle and a 5 kHz pulse repetition frequency (PRF).
² Measured at 10% duty cycle at 1 kHz PRF.
³ Power stability may not be met at low duty cycle or acoustic PRF.
⁴ Refer to the manual for details.



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