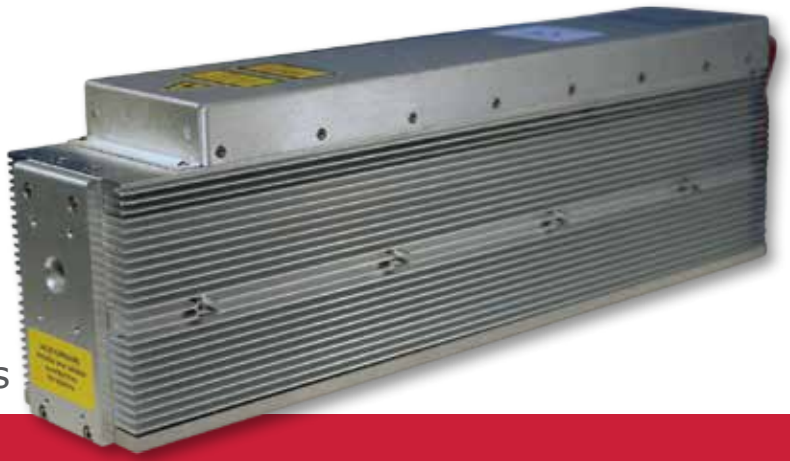
NEW
vi40 CO_2 Laser

High quality imaging and fast throughput for demanding industrial marking, coding and engraving applications



Next gen laser engineered for seamless integration onto modern high-speed, high-volume processing equipment.

- Gen2 tube design efficiently manages thermal resistance and power to deliver a stable, accurate beam for precise image control
- Real-time condition monitoring with an industry first temperature broadcast feature to avoid unexpected downtime and costly system repairs
- Up to 100 kHz max pulse frequency enables high speed engraving, marking, and coding applications for high-volume manufacturers and processors
- 40W continuous power for faster throughput
- Industry best maximum operating environment temperature ensures reliable operation in a wide range of conditions
- Compact, lightest 40W CO_2 laser available, easily fits into tight spaces and onto weight sensitive systems

Specifications

Output Specifications		
Wavelength, µm		10.57 - 10.63
Power Output, continuous[1]		40W
Power Stability[2]		± 5%/± 3%
Mode Quality (M^2)		≤ 1.2
Beam Waist Diameter, mm (at $1/e^2$)[3]		2.5 ± 0.5
Beam Divergence, full angle, mrad		< 7.0
Ellipticity		<1.2
Polarization		Linear, horizontal
Rise Time		<100 µs
Input Specifications		
Power Supply Voltage		48 VDC ± 2.0 VDC
Power Supply Maximum Current[4]		15A
Input Signals	Tickle Signal	PWM Command Signal
Voltage (5V Nominal)	+3.5 to 6.7 VDC	+3.5 to 6.7 VDC
Current	10 mA @ +6.7 VDC	10 mA @ +6.7 VDC
Frequency	5 KHz (1 µs duration)	DC - 100 - kHz
Cooling Specifications		
Maximum Heat Load		680 Watts
Maximum Chassis Operating Temperature		70° C
Minimum Flow Rate		190 CFM per fan (2 required)
Environmental Specifications		
Operating Ambient Temperature Range[5]		15° C - 45° C
Humidity		0 - 95%, non-condensing
Physical Specifications		
Length		16.8 in. (427 mm)
Width		3.5 in. (89 mm)
Height		5.45 in. (138 mm)
Weight		13.00 lbs. (5.9 kg)

Gen2 Tube Design

Building off the proven vi30 architecture the new Gen2 tube design in the vi40 lowers thermal resistance to deliver more power from the same sized package. The vi40's stable, accurate beam creates detailed imagery and ensures proper marking depth without external correction optics. Throughput speed has also been improved with higher max pulse frequency, especially useful in high-speed, high-volume coding applications for manufacturers and processors.

Temp Broadcast

Customer-inspired feature that provides real-time temperature measurements of the laser. Direct temperature data is transmitted on user output line intervals of 250 ms for real-time feedback on operating conditions. Temperature data can be integrated into machine control systems to trigger system cooling and/or provide advanced warning of potential fault conditions. During the initial system design phase direct laser temperature data is useful to ensure proper cooling and ventilation.

1 - 48 VDC input voltage to obtain guaranteed output power.

2 - From cold start at 99% duty cycle/After two minutes (typical)

3 - Measured at laser output

4 - 17A peak for < 1ms

5 - Published specifications guaranteed at a temperature of 22° C. Some performance degradation may occur in ambient temperatures above 22° C. For air-cooled lasers, laser power typically decreases 0.5 - 1% per degree Celsius increase in ambient temperature

Specifications are preliminary and are subject to change without notice

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

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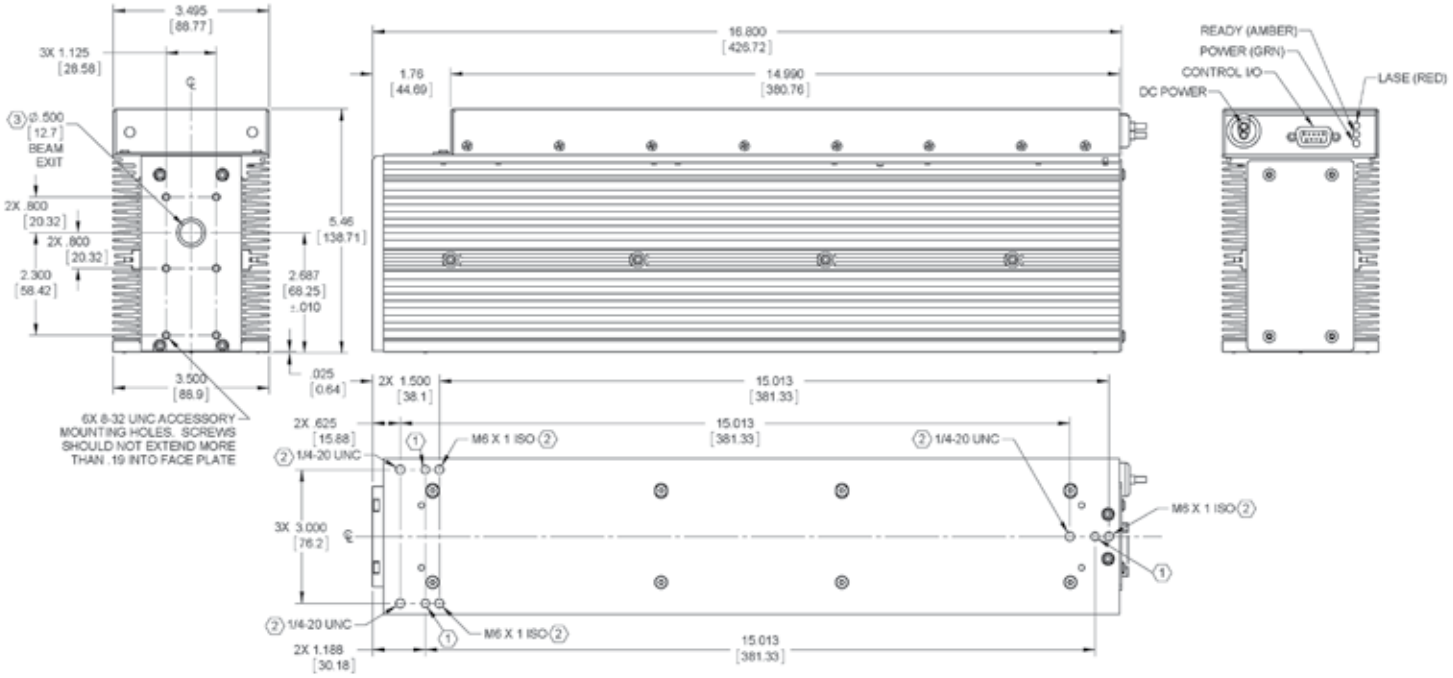
Technical Illustrations dimensions are in inches [mm]



Recommended Applications

100 kHz pulse frequency for accurate raster image scanning at high speeds.

Powerful, accurate laser system that can be used on a wide variety of materials.

Small footprint, light weight, and high resolution imagery engineered to fit a wide variety of automated manufacturing systems.

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