

ti100f – Fan Cooled CO₂ Industrial Laser



- Output power > 100W**
- Low cost of ownership**
- Compact & lightweight**
- Easy-to-integrate & upgrade, robust design**
- Synrad performance & reliability**

Introducing the ti-100f. The fan cooled universal laser at 100W+ output power is added to the legendary Firestar ti Series, completing a product family with all the features you need for faster, easier processing.

Synrad is pleased to announce the addition of the ti100f to its highly acclaimed Firestar ti-Series line of CO₂ lasers. This fan-cooled laser delivers >100W of average power in a compact, lightweight footprint making it an ideal laser source for integration in OEM systems. It also offers our customers additional flexibility in cooling options. This laser can be mounted either horizontally or vertically in stationary or dynamic systems, making it an extremely versatile choice for your needs. Ti100f is ideally suited for high-speed marking, cutting, coding and engraving applications in rugged industrial environments.

Like our other ti-Series lasers, the ti100f has a fully integrated RF supply eliminating external RF cabling and bulky external RF supplies. And, with the same familiar LED indicators and I/O interface found on many of Synrad's acclaimed Firestar lasers, installation and operation is quick and easy. With the low cost of ownership, and its light weight, yet robust and energy efficient nature of the ti100f, it's a laser you'll want for upgrading your production line.

Firestar ti100f Core Features:

- Also available in 60, 80 and 100W models
- Based on t-series' renowned fast rise/fall time
- Excellent beam quality and pulsing characteristics
- High modulation frequency up to 160 kHz
- Integrated 48V RF design
- Most compact laser in its class
- Low-cost and energy efficient
- Built in "tickle" generator
- Built in "Strike Detect" sensing and feedback
- Color-coded LEDs mirror user outputs
- Lightweight, robust construction
- Easily upgradable and easy integration with common beam exits with the Firestar v and t series lasers

Specifications:

	ti100f (10.6 μm)
Output Power, minimum	>100 W
Power Stability (guaranteed from cold start)	±7%
Warm Power Stability (typical, after 2 minutes)	±5% typical, not guaranteed
Rise Time/Fall Time	< 75 μs / < 100 μs
Beam Waist Diameter	2.0mm ± 0.3mm
Beam Divergence (full angle)	7.0 mR
Mode Quality(M ²)	≤ 1.2
Ellipticity	0.83<e<1.2
Pointing Stability (typical)	<±10% of divergence
Polarization	Linear (vertical)
Wavelength ¹	10.57 - 10.63 μm
Heat Load (max)	1700W
Cooling	Fan
Air Flow Rate ²	(4X) 190 CFM
Input Voltage and Current	48 VDC / 35 A
Dimensions (Inches)	21.4x4.1x5.9
Dimensions (mm)	544x104x150
Weight ³	32.1lbs / 14.6kg

Specifications subject to change without notice.

Beam specifications measured at 1/e²

1 Typical, actual wavelength range may vary from 10.2 - 10.8 μm

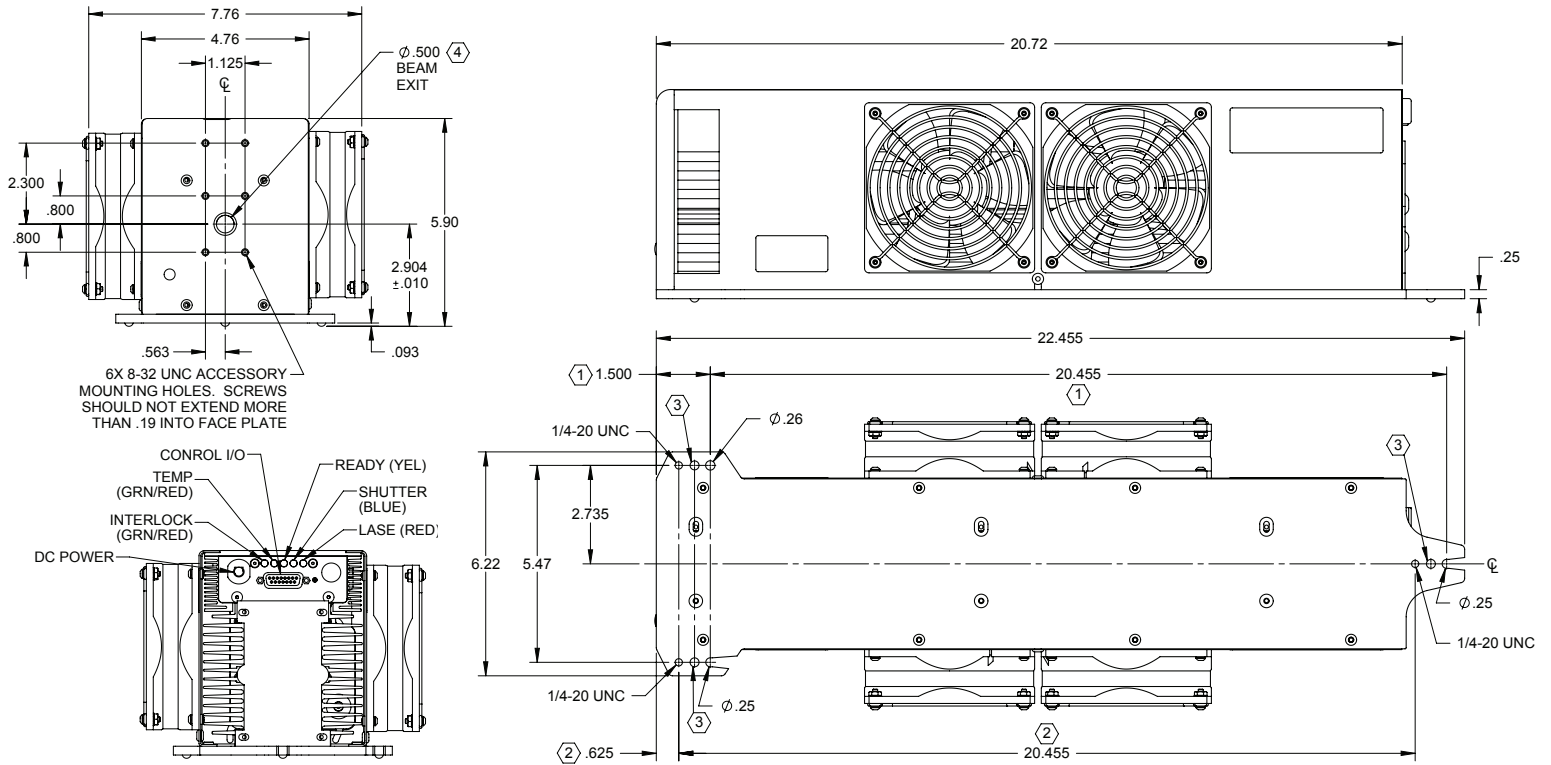
2 At zero static air pressure

3 With fans and fan covers

Primary Cooling Method	Synrad ti Series Product Family		
	ti60	ti80	ti100
Air	✓	✓	
Water	✓	✓	✓
Fan	✓	✓	✓

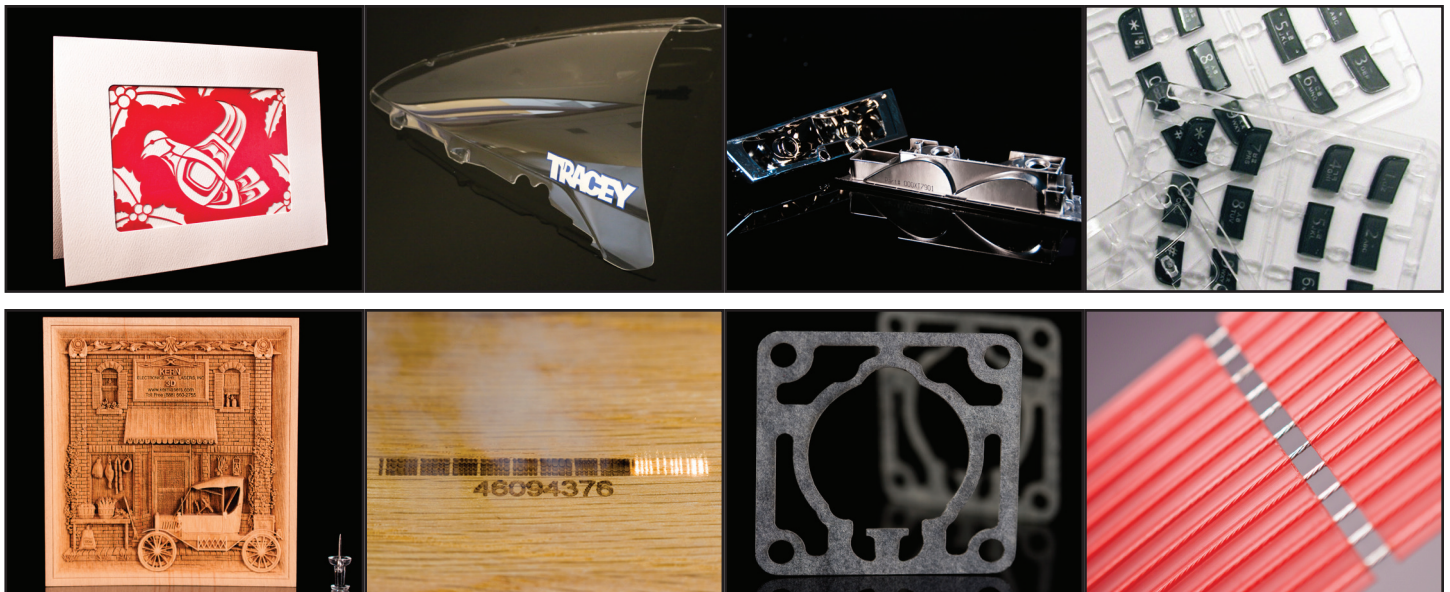
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Outline and Mounting:



Typical Applications:

The high average power, fast rise and fall times, enables high-speed marking, coding, cutting and engraving of materials. These are only examples of potential uses for the ti100f. Contact your Synrad Representative to determine the best laser for your application



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

