

# High performance *t-series* technology in a fully integrated package

## firestar-ti 60, 80 & 100W



Maximum power and performance is the drive behind *firestar t*-technology. Developed in 2001, the highlights of this design are the fast rise/fall time (typically <50µsec) and high beam quality.

In 2009, responding to market demands for more compact and lower cost lasers, while retaining the performance and reliability of the existing *t-series*, we developed a new RF technology to eliminate the separate RF power supply and associated cables.

The resulting *firestar ti-series* is compact, lower cost, more energy efficient, and delivers the high power, fast pulsing, and optical quality essential for applications such as laser coding and large area engraving, where high-speed scanning or modulating of the laser beam is required.

The *ti-series*' combination of compact size, high performance, and low price allows our OEM customers to succeed in their worldwide markets.

## Specifications

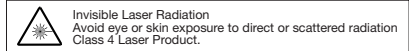
Model	<i>ti60</i>	<i>ti60W</i>	<i>ti80</i>	<i>ti80W</i>	<i>ti100W</i>
Output Power	60W		80W		100W
Mode Quality	$M^2 \leq 1.2$		$M^2 \leq 1.2$		$M^2 \leq 1.2$
Ellipticity	<1.2		<1.2		<1.2
Rise Time	<75µsec		<75µsec		<75µsec
Beam Diameter	2.0 ±0.3mm		2.0 ±0.3mm		2.0 ±0.3mm
Beam Divergence (full angle)	7.0mR		7.0mR		7.0mR
Wavelength	10.57-10.63µm		10.57-10.63µm		10.57-10.63µm
Power Stability, from cold start (guaranteed)	±7%		±7%		±7%
Polarization	Linear (Vertical)		Linear (Vertical)		Linear (Vertical)
Cooling	Air	Water	Air	Water	Water
Heat Load (max)	900W		1200W		1700W
Flow Rate, Air	150 CFM x 2	N/A	190 CFM x 2**	N/A	N/A
Flow Rate, Water (18-22°C)	N/A	1-2 GPM, <60 PSI	N/A	1-2 GPM, <60 PSI	1-2 GPM, <60 PSI
Input Voltage / Current	48 VDC / 18A		48 VDC / 22A		48VDC / 35A
Dimensions* (in)	20.7 x 4.5 x 5.8	21.4 x 4.1 x 5.9	20.7 x 4.5 x 5.8	21.4 x 4.1 x 5.9	21.4 x 4.1 x 5.9
(mm)	526 x 114 x 148	544 x 104 x 150	526 x 114 x 148	544 x 104 x 150	544 x 104 x 150
Weight*	28.9 lbs / 13.1 kg	26.2 lbs / 11.9 kg	28.9 lbs / 13.1 kg	26.2 lbs / 11.9 kg	26.2 lbs / 11.9 kg

\* Air-cooled models are measured and weighed without optional fan cover

\*\*Static air pressure 0.7 inch H<sub>2</sub>O (173Pa)

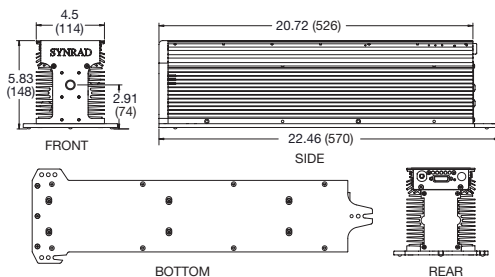
Beam specifications measured at 1/e<sup>2</sup>.

All specifications are preliminary and are subject to change without notice.

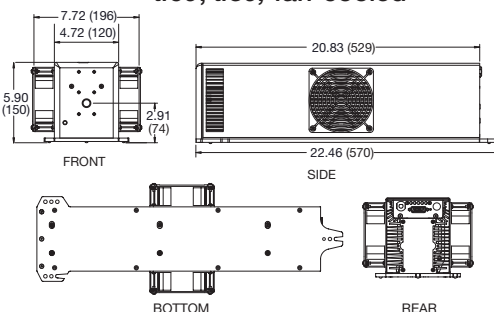


## Outline & Mounting

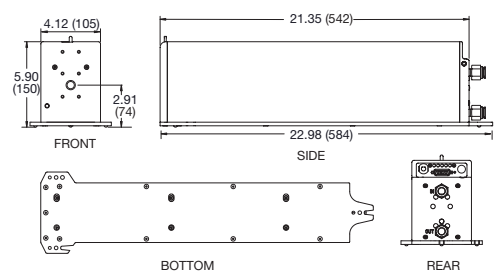
*ti60, ti80, OEM, air-cooled*



*ti60, ti80, fan-cooled*



*ti60, ti80, ti100, water-cooled*



Dimensions are in inches (millimeters)