Firestar ti100p Pulsed Laser - Addendum to Firestar ti-Series Operator's Manual

19 Dec 2013

Important Note: This page contains important information about operating the **ti100p** that differs from standard ti-Series lasers. Otherwise refer to the *ti-Series Operator's Manual* on the *SYNRAD Laser Manuals CD* (included in the Ship Kit) for mounting, connecting, and operating information.

The ti100p is currently available in 9.3 µm and 10.6 µm wavelengths.

The ti100p is a pulsed laser; therefore, the maximum PWM duty cycle is limited to 50%.

Maximum Pulse Repetition Frequency (PRF) is 100 kHz.

Pulse width is limited to 500 µs maximum.

The ti100p is shipped with a beam expander mounted and aligned to the faceplate. Available expansion ratios are 3X, 4X, and 5X. Beam diameter ($1/e^2$) at the beam expander output is shown in the table below:

Expander Ratio	Beam Diameter	Beam Divergence
3X	6.6 mm	~2.3 mrad
4X	8.8 mm	~1.8 mrad
5X	11.0 mm	~1.4 mrad

Do not apply a tickle signal. Do not use a UC-2000 Controller or other PWM signal source that generates a tickle signal. Applying a tickle signal to the ti100p may interfere with its pulsing performance.

The minimum power supply requirement for the ti100p laser is:
Voltage: 48 V ± 1.0 VDC
Current: 35 A (50 A peak for $\leq$ 500 µs)