

100 Watts of Pulsed CO₂ Power With 300+ Watts Peak Power

Pulstar^{series} P100



Introducing Synrad's first pulsed Laser!

Synrad Inc. is proud to introduce a first of its kind to its highly acclaimed line of CO₂ lasers with the *pulstar p100*. Featuring 100 Watts of average CO₂ power and 400W of peak pulse power (typical), the *p100* is ideally suited for a wide variety of applications, including high speed drilling and perforating, where quicker results, deeper cutting/ marking, and minimal charring and burning on delicate materials is crucial.

With fully integrated RF components, the *p100* completely eliminates the need for external RF cabling and bulky external RF supplies. And, with the same familiar LED indicators, interface, and I/O signal configuration found on many of Synrad's acclaimed Firestar lasers, installation/operation is a quick and easy.

Lighter than competing lasers on the market with a smaller footprint and compact body size, the *p100*'s versatile design and internal beam conditioning make it an excellent choice for manufacturers and OEMs seeking big power in a smaller, easy to handle package.

For more information about the *p100* pulsed CO₂ laser, contact Synrad today, or visit the *p100* online at: www.synrad.com/p100

Specifications:

Model	p100
Average Output Power*	100W
Peak Pulse Power (typical)	400W
Peak Pulse Energy (typical)	190mJ
Mode Quality	M ² ≤ 1.2
Ellipticity	< 1.2
Rise Time	< 40µsec
Beam Waist Diameter (at 1/e ²)	7.5mm ± 1.1mm
Beam Divergence (full angle)	< 2.1mrad
Wavelength (typical)	10.5µm - 10.7µm
Power Stability (guaranteed from cold start)	±7%
Power Stability (typical after two minutes)	±5%
Duty Cycle Range	0% - 37.5%
Polarization	Linear (Vertical)
Cooling	Water
Heat Load (max)	2000W
Flow Rate**	1.5-2.0GPM, < 60PSI
Input Voltage / Current***	48 ± 1.0 VDC / 40A
Dimensions (in)	22.2 x 5.2 x 6.1
Dimensions (mm)	563 x 132 x 155
Weight	30.0 lbs / 13.6kg

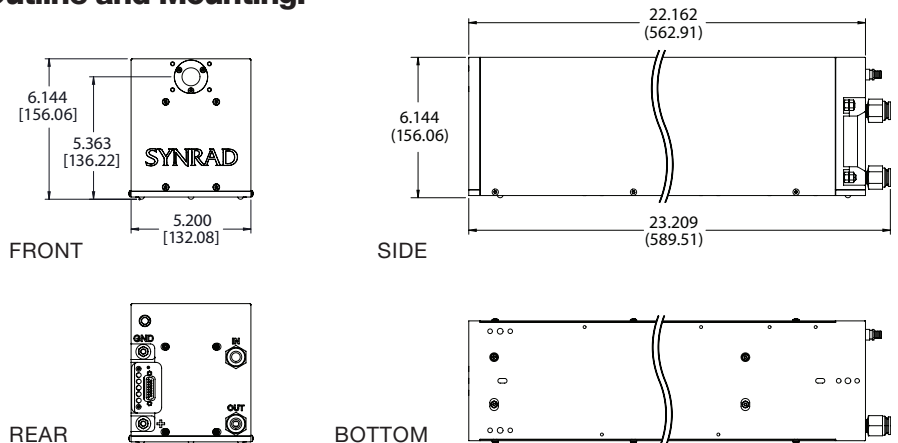
Specifications subject to change without notice.

*Power level guaranteed for 12 months regardless of operating hours, applied over recommended coolant flow rate & temp. range
 **At coolant temperatures above 22°C, derate power 0.5 W/°C to 1 W/°C up to a coolant temperature of 30 °C.
 ***75A peak for < 700µs

Pulstar p100 Core Features:

- Average output power of 100W
- Peak pulse power of 400W (typical)
- Peak pulse energy (typical) of 190mJ
- Max pulse width of 600µs
- Fast rise time of less than 40µs
- Pulsed up to 100kHz
- Duty cycle range of 0% to 37.5%
- Excellent mode quality
- Hybrid free-space / waveguide resonator
- Built in gas purge port
- Protective optical window
- Easy-to-integrate, compact design
- 15% lighter than competition
- Best-in-class energy efficiency

Outline and Mounting:



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