

9.3 μm Series Lasers

Sealed CO₂ Lasers - 9.3 μm wavelength

Certain applications may experience improved efficiency at wavelengths other than the standard 10.6μm wavelength. For these, Synrad offers the 48-1, 48-2, *firestar vi30*, *firestar v30*, and *firestar ti* series lasers in 9.3μm wavelength models. The 9.3μm series is useful for processing materials that are highly absorptive of this wavelength, such as Kapton, PET, and others.

Like all Synrad lasers, the 9.3μm series is based on our rugged, all-metal sealed tube design to ensure long operating lifetimes and optimum performance.



Specifications

Model	48-1-9.3	48-2-9.3	vi30-9.3	v30-9.3	ti60-9.3	ti80-9.3	ti100-9.3
Output Power	8W	18W	20W	20W	60W	80W	100W
Mode Quality (M ²)	<1.2	<1.2	<1.3	<1.3	<1.3	<1.3	<1.3
Ellipticity	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2
Rise Time (μs)	<150	<150	<100	<100	<75	<75	<75
Beam Diameter (mm)	3.5	3.5	2.5	2.5	2.2	2.2	2.2
Beam Divergence (mR) (full angle)	<4	<4	<7	<7	<7	<7	<7
Wavelength (μm)	9.23 - 9.31	9.23 - 9.31	9.23 - 9.31	9.23 - 9.31	9.23 - 9.31	9.23 - 9.31	9.23 - 9.31
Power Stability (from cold start guaranteed)	±15%	±7%	±7%	±7%	±7%	±7%	±7%
Polarization	Linear (vertical)	Linear (vertical)	Linear (horizontal)	Linear (horizontal)	Linear (vertical)	Linear (vertical)	Linear (vertical)
Cooling	Air or Water	Air or Water	Air	Air or Water	Air or Water	Air or Water	Water
Heat Load (max)	300	500	500	450	900	1200	1700
Flow Rate, Air	250 CFM x 2	250 CFM x 4	140 CFM x 2	140 CFM x 2	150 CFM x 2	190 CFM x 2	N/A
Flow Rate, Water (18-22°C)	0.5 GPM	0.8 GPM	NA	1.0 GPM	1-2 GPM	1-2 GPM	1-2 GPM
Input Voltage/ Current	30VDC/7A	30VDC/14A	48VDC/10A	30VDC/15A	48VDC/18A	48VDC/22A	48VDC/35A
Dimensions (inches) Air	16.9x2.8x4.2	31.9x2.8x4.2	16.8x3.5x5.45	16.8x4.6x5.8	20.7x4.5x5.8	20.7x4.5x5.8	N/A
Water	16.9x2.8x4.2	31.9x2.8x4.2	NA	17.1x4.1x5.8	21.4x4.1x5.9	21.4x4.1x5.9	21.4x4.1x5.9
Weight Air	9 lbs / 4.1 kg	18 lbs / 8.2 kg	13 lbs / 5.9 kg	18 lbs / 8.2 kg	28.9 lbs / 13.1kg*	28.9 lbs / 13.1kg*	N/A
Water	9 lbs / 4.1 kg	18 lbs / 8.2 kg	NA	19.2 lbs / 8.7 kg	26.2 lbs / 11.9 kg	26.2 lbs / 11.9 kg	26.2 lbs / 11.9 kg

Beam specifications measured at 1/e²

*Fan cooled model

Specifications subject to change without notice



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