

10.2 μm Series Lasers

Sealed CO₂ Lasers - 10.2 μm wavelength

Certain applications may experience improved efficiency at wavelengths other than the standard 10.6μm wavelength. For these, Synrad offers the *firestar vi30*, *firestar v30* and *firestar ti* series lasers in 10.2μm wavelength models. Our 10.2μm series of lasers are useful for processing materials that are highly absorptive of this wavelength which include many thermoplastic films often used in the packaging and converting industries, specifically those that have polypropylene content.

Like all Synrad lasers, the 10.2μm series is based on our rugged, all-metal sealed tube design to ensure long operating lifetimes and optimum performance.



Specifications

Model	vi30-10.2	v30-10.2	ti60-10.2	ti80-10.2	ti100-10.2
Output Power	25W	25W	60W	80W	100W
Mode Quality (M ²)	<1.4	<1.4	<1.3	<1.3	<1.3
Ellipticity	<1.2	<1.2	<1.2	<1.2	<1.2
Rise Time (μs)	<100	<100	<75	<75	<75
Beam Diameter (mm)	2.5	2.5	2.2	2.2	2.2
Beam Divergence (mR) (full angle)	<7	<7	<7	<7	<7
Wavelength(μm)	10.20 - 10.30	10.20 - 10.30	10.20 - 10.30	10.20 - 10.30	10.20 - 10.30
Power Stability (from cold start guaranteed)	± 5%	± 5%	± 7%	± 7%	± 7%
Polarization	Linear (horizontal)	Linear (horizontal)	Linear (vertical)	Linear (vertical)	Linear (vertical)
Cooling	Air	Air or Water	Air or Water	Air or Water	Water
Heat Load (max)	500	450	900	1200	1700
Flow Rate, Air	140 CFM x 2	140 CFM x 2	150 CFM x 2	190 CFM x 2	N/A
Flow Rate, Water (18-22° C)	NA	1.0 GPM	1-2 GPM	1-2 GPM	1-2 GPM
Input Voltage/ Current	48VDC/10A	30VDC/15A	48VDC/18A	48VDC/22A	48VDC/35A
Dimensions (inches) Air	16.8x3.5x5.45	16.8x4.6x5.8	20.7x4.5x5.8	20.7x4.5x5.8	N/A
Water	NA	17.1x4.1x5.8	21.4x4.1x5.9	21.4x4.1x5.9	21.4x4.1x5.9
Weight Air	13 lbs/ 5.9 kg	18 lbs/ 8.2 kg	28.9 lbs / 13.1kg*	28.9 lbs / 13.1kg*	N/A
Water	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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