



ML-5120A

Direct Diode Laser for Soldering and Welding

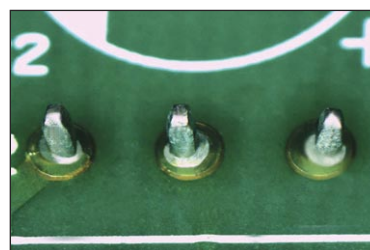
Direct diode lasers are extremely efficient, emitting energy directly from the diodes and eliminating the need for an additional gain medium like Nd:YAG or Nd:YVO₄.

The ML-5120A operates in the infrared wavelength of 915 nm which is readily absorbed by both metals and plastic. Featuring built-in temperature control, ML-5120 provides precise heating for small parts. Is ideal for laser soldering electronic components on printed circuit boards and laser plastic welding applications.

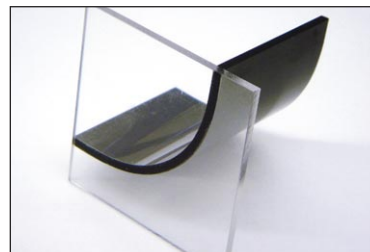
KEY FEATURES

- Temperature feedback and control
- 915 nm operating wavelength interacts efficiently with metals and plastics
- Weld and solder both metal and plastic
- Optional fiber delivery system. Optical fiber delivery systems with 2 energy-sharing deliveries are available for increased productivity.*1
- Equipped with a power monitor as standard equipment
- Energy efficient and environmentally friendly process

TYPICAL APPLICATIONS



Laser soldering



Plastic welding

*1. Temperature control available on one channel only.

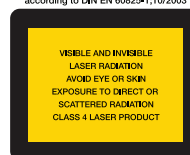
TECHNICAL SPECIFICATIONS

Model		ML-5120A
Maximum rated output power		120W
Output control (pulse/CW switching allowed)	Pulse width	REPEAT mode standard 0.1~500.0 ms (0.1 ms steps) CW mode standard 0.1~1000.0 s (0.1 s steps)
	Pulse repetition rate	1~5000 pps (REPEAT mode)
Modulation function		1~5000 Hz (rectangular wave, triangular wave, sinusoidal wave) (CW mode)
Wavelength		915±15 nm
Safety shutter		With open/close sensor
Positioning guide beam		Built-in visible laser (red)
Output power stability		±3% or less @ 10 W or more (within ambient temperature ±5° C)
Temperature control function		Laser is operated by ON/OFF control action with monitoring temperature at focal point. * This function is available for focusing units FOCH-30B series.
Maximum energy sharing		Up to 2 deliveries of laser output, including power sharing, are available. (Option)
No. of schedules		256
Measurement function		Laser pulse energy (J), Average power (W)
Power requirements	Without chiller	Single-phase, 200 V to 240 V AC (+6% / -10%) 50/60 Hz
	With chiller (option)	Single-phase, 180 V to 220 V AC When the input power supply exceeds 220 V in the model with cooler, use an insulation transformer to keep the voltage within specifications is recommended.
Power consumption	Without chiller	Maximum: 0.7 kW (Standby: 0.2 kW)
	With chiller (option)	Maximum: 1.1 kW (Standby: 0.5 kW)
Max. apparent power	Without chiller	800 VA
	With chiller (option)	1100 VA
External datacom		RS-485
Heat exchange method		Air cooled

WEIGHT & DIMENSIONS

	Without cooler	With cooler (option)
Dimensions (W x D x H)	15.75 in x 35.5 in x 27.5 in 400 mm x 900 mm x 696 mm	15.75 in x 38.25 in x 27.5 in 400 mm x 971 mm x 696 mm
Weight	221 lb (100 kg)	265 lb (120 kg)

according to DIN EN 60825-1:10/2003



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