



# ML-5120A

## Direct Diode Laser for Soldering and Welding

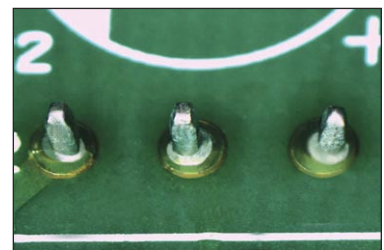
Direct diode lasers are extremely efficient, emitting energy directly from the diodes and eliminating the need for an additional gain medium like Nd:YAG or Nd:YVO<sub>4</sub>.

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.

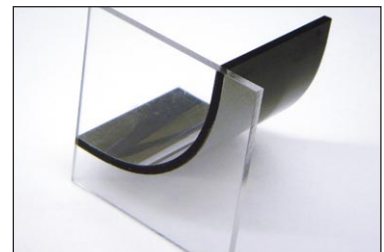
### KEY FEATURES

- 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.

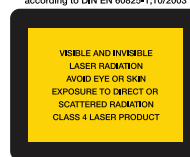
## TECHNICAL SPECIFICATIONS

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

## WEIGHT & DIMENSIONS

	<b>Without cooler</b>	<b>With cooler (option)</b>
<b>Dimensions (L x W x H)</b>	35.5 in X 15.75 in X 27.5 in 900 mm x 400 mm x 696 mm	38.25 in x 15.75 in x 27.5 in 971 mm x 400 mm x 696 mm
<b>Weight</b>	221 lb (100 kg)	265 lb (120 kg)

according to DIN EN 60825-1:10/2003



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