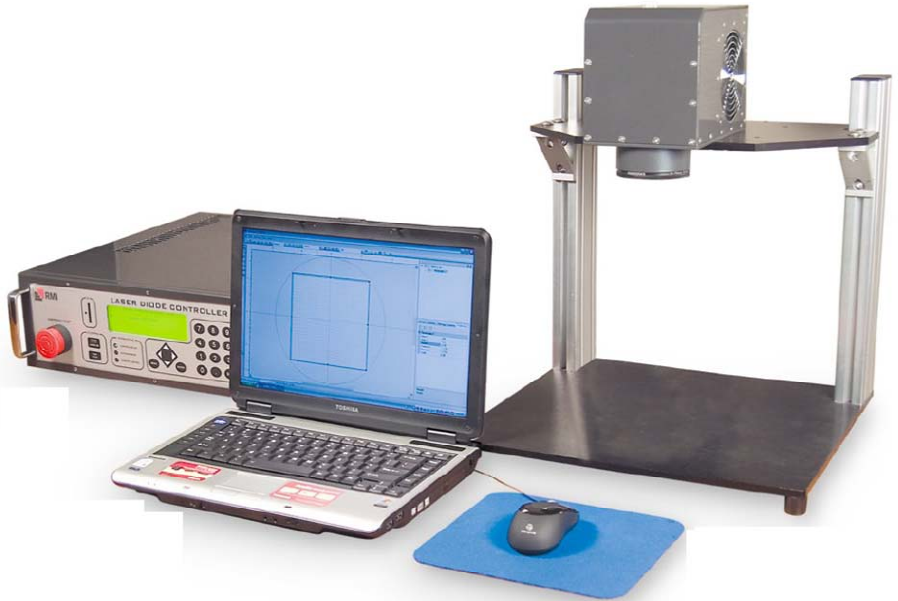


Laser Marking Systems

U-Series

U-Series Laser Marking Systems

**Fast Clean Permanent
Marks:
Laser marking for all
metals, plastics,
ceramics, composites,
silicon and stone**



The U-Series delivers precision, non-impact marks on a variety of materials including metals and plastics. With the ability to mark linear and elliptical text, barcodes, 2D Data Matrix, QR codes, serial numbers, logos, and photo-quality graphics, the U-Series has the versatility to meet almost any marking application.

YVO4 Laser Technology All of our laser markers utilize Nd:YVO4 technology. Nd:YVO4 lasers feature several inherent advantages over other types of laser systems. When compared to traditional CO2 and Nd:YAG lasers, Nd:YVO4 lasers are more energy efficient. This means that our U-Series laser marker can achieve a more precise mark while consuming less power. Lower power consumption eliminates the need for external power supplies and large cooling systems, marking the U-Series laser marker far smaller than comparable systems. Also YVO4 lasers can achieve a smaller spot size and higher energy density than most competing systems, making it ideal for marking on highly reflective surfaces like: gold, silver, aluminum and other metals. Nd:YVO4 technology is also key in extending the life of our laser diodes to more than 30,000 hours!

Marking for Manufacturing The U-Series laser markers are ideal for high speed manufacturing environments where easy

integration and low maintenance are the key to maximum uptime and high productivity. The U-Series Laser Diode Controller is equipped with built-in hardware connections for easy integration into most factory automated environments.

Desktop Laser Marking

The U-Series precision laser marker is an ultra-compact, turnkey system that can fit into tight workspaces, or can easily be moved to different production areas. The system requires only a standard 110V/200V outlet to operate and eliminates the use of bulky external chillers and power supplies.

Hardware connectivity:

- Digital I/O
- Serial (RS-232)
- USB
- LAN

Applications

- Logos
- Production Line marking
- Sequential Series Numbers
- 2D Data Matrix Codes
- Barcodes

Security & Tracking

- UID
- TAS

Graphics & File Formats

Raster & Vector
Up to 1,270 DPI
Photo Quality Images
Graphics / Logos
True Type fonts



APPLICATIONS

Marker Head

	Model U-10...10 Watts	Model U-15...15 Watts
Laser Source	Built-in, Diode Pumped Nd:YVO ₄	Built-in, Diode Pumped Nd:YVO ₄
Wavelength	1064nm	1064nm
Laser Source Output	CW - Continuous Wave Mode 10 W	CW - Continuous Wave Mode 15 W
Peak Power	Up to 75 kW	Up to 120 kW
Q-switch pulse width	~7 ns @ 10kHz	~7 ns @ 10kHz
100mm Lens Spot Size / Max Marking Area	~30 μm / 2.36 x 2.36" 60 x 60mm	~40 μm / 2.36 x 2.36" 60 x 60mm
163mm Lens Spot Size / Max Marking Area	~40 μm / 3.94 x 3.94" 100 x 100mm	~50 μm / 3.94 x 3.94" 100 x 100mm
254mm Lens Spot Size / Max Marking Area	~60 μm / 5.91 x 5.91" 150 x 150mm	~70 μm / 5.91 x 5.91" 150 x 150mm
F-Theta lenses available(back focal length)	100, 163, 254 mm	100, 163, 254 mm
Cooling System	Thermoelectric/ Air	Thermoelectric/ Air
Operational Temperature Range*	~ 50–104° F~10-40° C	~ 50–95° F~10-35° C
Operational Humidity Range*	80% non-condensing	80% non-condensing
Weight	13.23 lbs 6.0kg†	13.23 lbs 6.0kg†
Dimensions L x W x H**	9.05 x 5.71 x 8.07" 230 x 145 x 205 mm†	9.05 x 5.71 x 8.07" 230 x 145 x 205 mm†

Controller

Operational Temperature Range	~ 50–104° F~10-40° C	~ 50°– 95° F ~10-35° C
Operational Humidity Range*	80% non-condensing	80% non-condensing
Power Source	AC 100 - 240V, 6A, 50/60Hz	AC 100 - 240V, 6A, 50/60Hz
Consumption Power	<400 W nominal, 500 W max	<500 W nominal, 600 W max
Weight (with set of cables)	25.57 lbs. 11.6 kg	25.57 lbs. 11.6 kg
Dimensions L x W x H**	17.91 x 17.52 x 5.31" 455 x 445 x 135 mm	17.91 x 17.52 x 5.31" 455 x 445 x 135 mm

SD Cards & LD Controller Memory

LD Controller accepts SD Memory Cards.
16 MBs of Internal Memory allows for independent marking operation.

Computer (optional)

PC notebook or Industrial PC; w/ Windows XP Pro
Power Source Notebook: AC 100 - 240V, 5A, 50/60Hz
PC: AC 115 / 230 selectable, 50 / 60 Hz
Software: SymbolWriter-Pro

COMPARISON CHART OF LASER MARKING TECHNOLOGIES

SPECIFICATIONS	Nd:YVO ₄ (U-10,U-15)	Nd:YVO ₄ (U-5G)	CO ₂	Nd:YAG (Flash-lamp)	Nd:YAG (Diode-pumped)
Wavelength	1064nm	532nm	10.6μm	1064nm	1064nm
Power (W)	10,15	6	10 - 100	50 ~ 100+	3 ~ 20+
Marking Spot (micron)	30-70	20-40	300	50-100	50-100
Resolution DPI(Dots Per Inch)	846	1,270	84	508-254	508-254
Energy Efficiency	High	High	Medium	Low	Medium
Cooling Efficiency	High	High	Medium	Low	High
Peak Power	High	High	Low	High	High
Operating Cost	Very Low	Very Low	Medium	High	Low
Maintenance Intervals(hrs)	30,000+	30,000+	< 5,000	300 -1,000	10,000+

APPLICATIONS

Metals	•	•		•	•
Metals (High Reflectivity)	•	•			
Silicon		•			
Plastic	•	•		•	•
Composites	•	•			
Ceramics	•	•		•	
Rubber	•	•	•	•	•
Wood/Paper			•		
Glass		•	•		
Leather	•	•	•		

Distributed by

comtech
NORTH AMERICA

*25 Years of Providing Quality Solutions
for Manual and Automated Assembly*

PO Box 309 • Bloomfield Hills, MI 48303
Phone: (248) 594-2400
Fax (248) 594-2403
www.comtechnorthamerica.com

* Units stated at maximum output parameters without F-Theta lens.

** Allow a minimum of 2" (5 cm) of open space around the Marker Head and Controller for a free air circulation. Additionally, ensure at least 4" (10 cm) of open space at the rear of the controller and marker head for cable attachment and maintenance access.