



UV-V6 Series UV520FC

UV LASER MARKING MACHINE

V6 Intelligent Control Platform
High-Speed Coding · Fine Marking · Stable & Reliable



Introduction

- ▶ Delivers reliable performance under low, high, and fluctuating temperature conditions.
- ▶ Powered by the new-generation SUNINE V6 platform, providing powerful computing capability and real-time connectivity.
- ▶ Adjustable scanning head design adapts to different installation environments, enabling flexible integration into production lines.
- ▶ Minimizes the risk of damage when marking on thin and delicate materials.

Applications

Food, Beverage & Alcohol

Paper boxes, plastic bottles, glass bottles, aluminum cans, flexible packaging, bottle caps



Biopharmaceutical

Medicine boxes, aluminum foil, composite film bags, plastic bottles, glass bottles, ampoules



Cosmetics & Personal Care

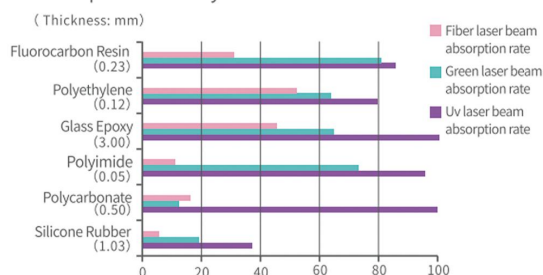
Plastic bottles, tubes, composite films, paper boxes, labels, spray bottles, bottle caps



High-Contrast Marking with Damage-Free Surface Processing

The 355nm UV laser features excellent absorption characteristics on various plastics and heat-sensitive materials, enabling clear and high-contrast marking. With minimal thermal impact, it reduces the risk of material deformation, carbonization, and burr formation. Actual marking results depend on sample testing.

Absorption Rates by Various Resin Materials



Stable & Durable Laser Head with Flexible Beam Delivery



- ▶ Compatible with Various Materials, Low-Damage Precision Processing Supports metals, plastics, films, and coatings. Optimized energy control reduces burning, deformation, and damage, ensuring clear marking on thin and fragile materials.
- ▶ Wide Temperature Range Stable Operation Tested for high, low, and fluctuating temperatures, ensuring reliable performance in complex production environments with reduced downtime.
- ▶ Adjustable Galvanometer Scanner Multi-angle adjustment for easy integration into various automated production lines.
- ▶ Flexible Installation Design Supports extension arms and 90° optical path components for versatile installation.
- ▶ IP54-Rated Laser Head Dustproof and water-resistant design for reliable operation in harsh industrial environments.

SUNINE V6 Software Platform & Industrial HMI

- ▶ The intelligent marking optimization algorithm automatically adjusts marking paths based on character structure and content, improving processing efficiency and marking quality.
- ▶ Supports fast editing of vector graphics, text, barcodes, and other marking contents. The software is continuously upgraded and optimized with a user-friendly interface, enabling operators to quickly master the system.
- ▶ Supports marking of various texts, images, and QR codes, with both vector and dot matrix marking modes available.
- ▶ Equipped with a 10-inch color touchscreen featuring waterproof, dustproof, and anti-interference protection. The display offers a response time of $\leq 50\text{ms}$ and supports a 180° wide viewing angle for convenient operation.



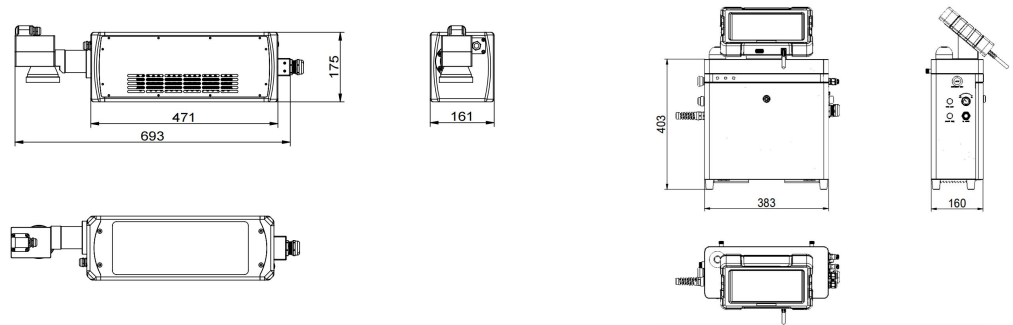
Wide Temperature Range Variable-Air Cooling System



The special air-cooling design enables the laser to maintain its operating temperature within 5-40 °C, with full-range power stability of 3%, adapting to harsh working environments. It maintains a stable laser temperature to protect core optical components, preventing overheating aging, lens deformation, and low-temperature condensation damage. Reduces thermal stress, improves equipment reliability, extends laser lifespan, and minimizes maintenance downtime.

Model		UV520FC
Basic Configuration	Laser power	5W
	Laser type	UV Laser Source (Sunine Laser Source)
	Laser wavelength	355nm
	Marking field	Standard: 110mm x 110mm (Maximum: 600 x 600mm)
	Positioning method	Red-light positioning and preview
Marking Features	Writing speed	1350 characters / second
	Production line speed	0~300m/min (varies according to materials and printing contents)
	Lines of characters	No limits within mark field
	File format	BMP/DXF/PNG/JPEG/PLT/JPG
	Code type	Code128A, Code128B, Code128C, Code39, Code93, EAN-13, PDF417, 01 Code; QR, DM, GS1-DM, AztecCode, HanxinCode, DotCode
System Features	Operating system	SUNINE V6 platform Linux Based
	Type of marking	Both dot matrix and vector
	Language	Chinese Simplified, Chinese Traditional, English, German, Spanish, French, Italian, Japanese, Korean, Portuguese, Russian, Arabic, etc.
	Interfaces	RS-232C / USB2.0 / Ethernet, I/O
	Machine material	Anodized aluminum (Laser Head) & Stainless Steel (Control Unit)
Structure and Conditions	Power supply	100~240V - 50/60Hz
	Max. consumption	≤400W
	N.W.	30kg
	Dimensions	693mm x 161mm x 175mm (Laser head) 403mm x 383mm x 160mm (Control unit)
	Cooling system	Air-cooled
	Working conditions	5-40°C; 30%-85% RH (No-condensing)

Dimensions (mm)



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