



# GEM UV Laser Marking Machine

GEM-UV-003



## GEM LASER LIMITED

A Legend Laser machine Manufacture & Solutions

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## Product Advantage



### OVERVIEW

GEM-UV-003 UV laser marking machine output 355nm UV light, focusing spot is very small, and the heat affected area is minimal, which is mainly used for ultra-fine marking, special materials marking and carving.

### Independent Intellectual Property and Patent

Stable performance, high reliability, operated in 24 hours continuously and steadily, suitable for mass production.

### High Precision and Excellent Light Mode

Precision marking and 100% positive feedback



### Long Life and Easy Maintenance

20 times service life than traditional machine, decrease maintenance greatly.

### Low Costs

High electro-optic conversion efficiency, 75% lower energy consumption than traditional lamp pumping marking machine.



## Specifications

Item	Model	GEM-UV-003
1	Laser wavelength	355nm
2	Laser power	3W@30KHz
3	Repeat frequency	10-150KHz(max200KMz)
4	Marking range	80mm×80mm
5	Marking line width	≤0.015mm
6	Marking depth	≤0.01mm
7	Minimum character	0.06mm
8	Marking line speed	9000mm/s
9	Repeat accuracy	±0.01mm
10	Power Supply	220V/ Single-phase/50Hz/60Hz/16A
11	Whole power	1.5KW

## GEM-UV-003 Dimensions

845 mm × 850m × 1600 mm

## Features

- A widely applications, make up for the lack of infrared laser processing capacity;
- B. good light beam, small focus spot, available for ultra-fine marking;
- C. small heat affected, avoid machining material damage, high yield;
- D. high speed tagging, high efficiency and high accuracy;
- E. non-wear parts, low cost and low maintenance cost;
- F. stable and can run for a long time

## Work environment requirements

- 1) environmental temperature requirements between 15-35 degrees, requiring air conditioning;
- 2) humidity requirement is <60%. No condensation should be installed dehumidifier;
- 3) power grid requirements: 220V; 50Hz/60Hz;
- 4) power grid fluctuation: + 15%, the power grid ground line in line with international requirements. If the voltage amplitude is more than 15%, electronic automatic voltage regulation and steady flow device shall be installed;
- 5) there should be no strong electromagnetic interference in the vicinity of the installation equipment. Avoid radio transmitter stations (or relay stations) around the installation site;
- 6) ground amplitude: less than 50um; vibration acceleration: less than 0.05g. Avoid a large number of stamping and other machine tools in the vicinity;
- 7) space requirements to ensure that no smoke, dust, metal, polishing, grinding and other dust, a serious working environment;
- 8) air pressure: 86-106kpa;
- 9) some place should be equipped with anti-static floor, strengthen shielding and so on;
- 10) the water quality of working cooling circulating water has strict requirements, requiring the use of pure water, deionized water or distilled water, not using tap water, mineral water and other liquids containing higher metal ions or other minerals.

## Device configuration list (Standard)

Products name	Parts name	Specifications&Model	Origin
Optical system	Laser	Pulse-355-003 laser	China
	Beam expander	10X	China
	Galvanometer	SCANLBA/仿SCANLBA	Germany/China
	focusing lenses	f-θ100	China
Control System	Main control box	Pulse-355-003-DY	China
	Computer	IPC 58	China
	Display	LCD	China
	Marking control card	USB Digital card	GEM
	Marking software	GEM-MS001	GEM
Cooling System	Cooling Machine	1000W	China
Focusing system	Workbench	Manual lift	China

## Applications;

It's widely used in special materials marking, cutting and processing, such as all kinds of glass, LCD panel, textiles, chip ceramics, semiconductor wafers, IC grains, sapphires, polymer films, etc.

## Laser Marked Samples

