Laser Direct Writer UVW02

Sejong Scientific Instruments

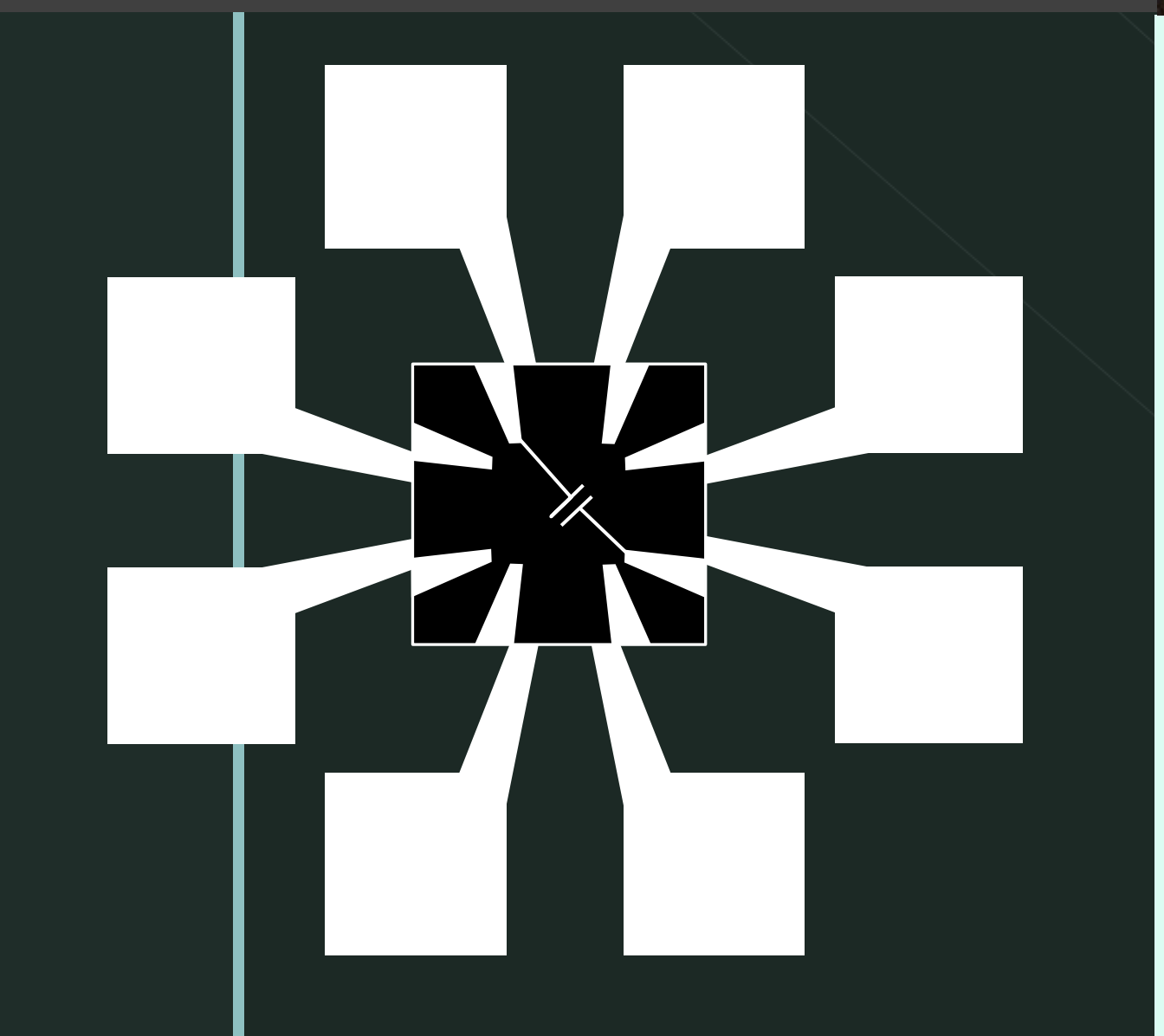
- Easy to use
- Reasonable Price
- Compact Design

Product Information

- Photolithography for various devices
  - Manufacturing unit devices for research
  - Semiconductor devices, solar devices,
  - Microfluidic channel, lab-on-a-chip
- Optical microscope + 405 nm laser focus
- Objectives: 5x, 10x, 20x, 50x, 100x
- automatic switching
- Laser focus, sample focus switchable
- Autofocus function included as standard

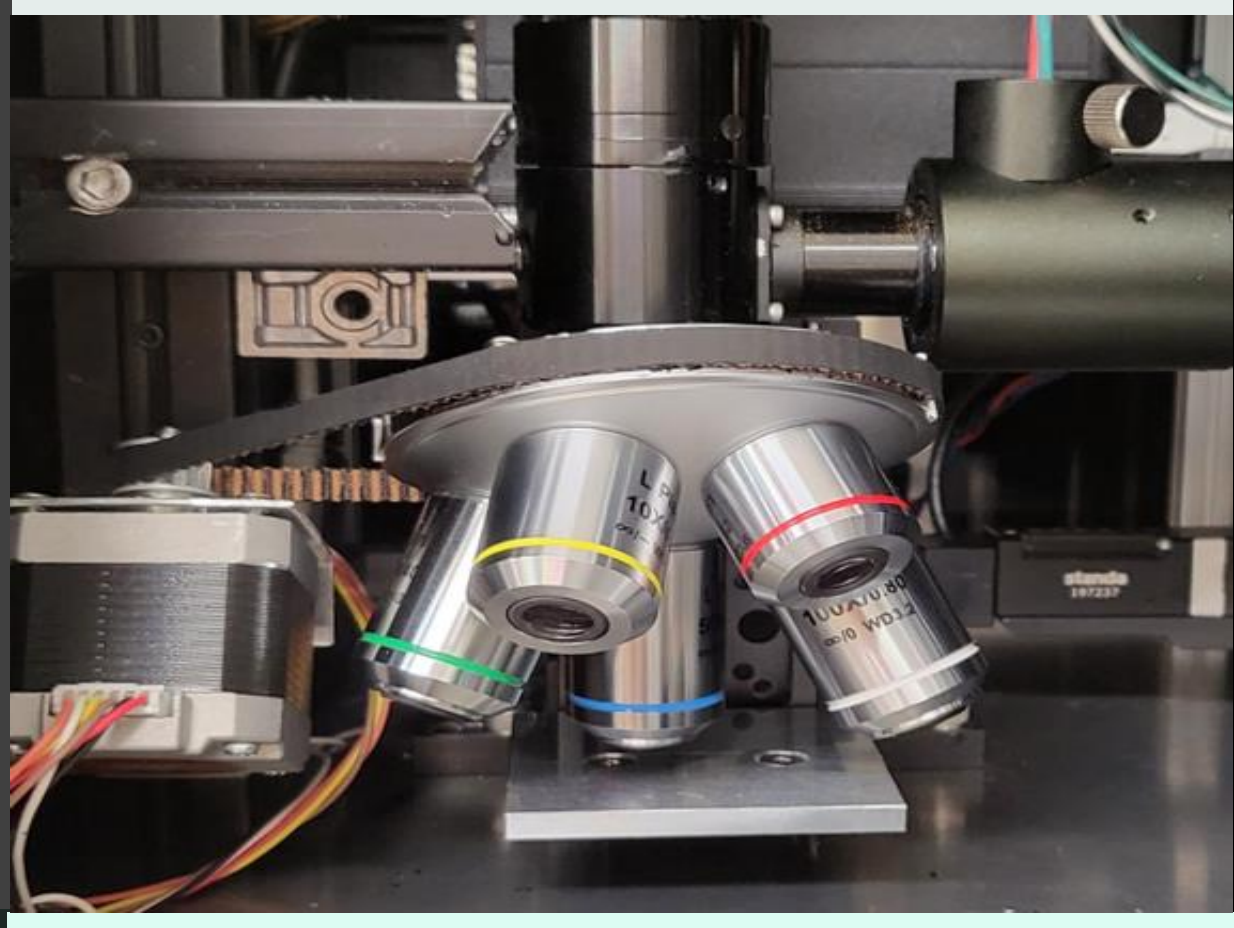
Performance

- Minimum linewidth: ~1 μm
- Sample stage resolution: 0.125 μm
- Scannable range: up to 25 mm x 25 mm



Features

- Affordable price for small-scale research
- Open design specialized research through modification
- Compact design (height: 47cm), USB connection → Glove box insertable



Usage

- Various semiconductor devices
- Production of solar energy devices
- Microfluidics, Lab-on-a-chip

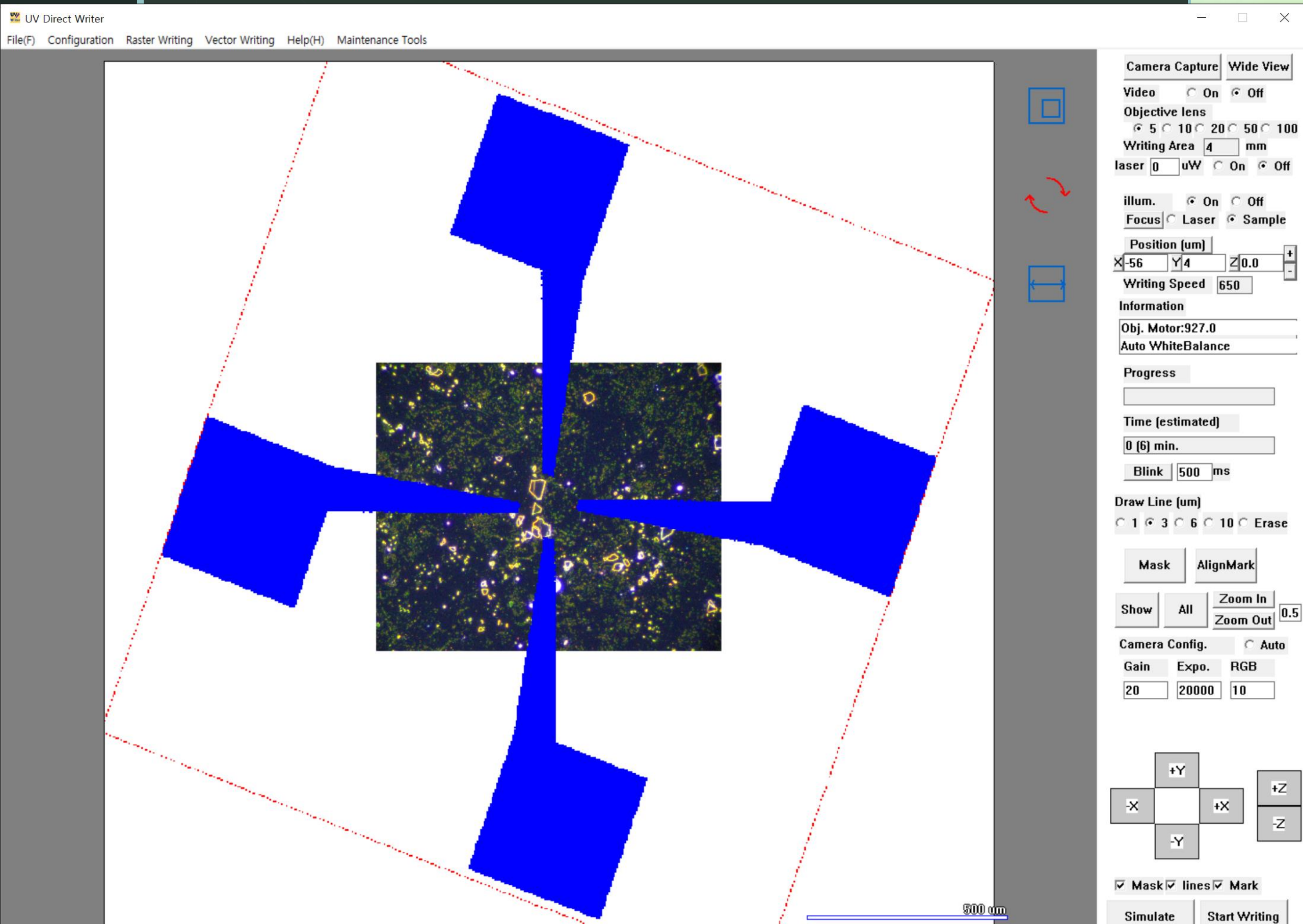
convenience features

- ✓ Load pattern image file
- ✓ Draw lines directly with the mouse
- ✓ Auto-focusing!
- ✓ fine patterns and contact pads at once
- ✓ Keyboard operation → position adjustment
- ✓ Mouse operation → move to a specific location on the sample

Features:

Micro photolithography equipment
Minimum line width: <1 um (depending on PR thickness)
objective lens: 5x, 10x, 20x, 50x, 100x
Focus plane automatically adjusted by selecting objective lens
Laser diode: 405 nm, 50 mW
Laser intensity adjustable (to 500 uW @ 100x objective lens)
Writing scan speed adjustable
While observing confocal image, lines can be drawn by user
Software zoom-in and zoom-out for line drawing
2 writing mode: Raster writing and Vector writing
Raster writing: filling area after opening external image file
Thick (thin) pen writing with high (lower) laser intensity
Vector writing: line pattern writing drawn by mouse clicking

Stand alone equipment with USB interface from PC
sample mount: 5 cm x 5 cm flat stage, large wafer available
scanner: motorized XYZ stage
Wide view area: from 5x objective lens
Precise aligning: from 100x objective lens
9 image patched image
automatic focusing
Dimension (including chassis): 28 x 36 x 46 cm^3
User interface for real-time monitoring while writing
Mouse control of Mask image: moving, stretching, rotating on camera image



Best cost-effective research unit device processing equipment

- ❖ Draw the pattern you want freely without a metal mask..
- ❖ Existing photolithography resist is used as is.
- ❖ It can be used in small laboratories to manufacture various device electrodes at an affordable price.
- ❖ GPIB and USB interface functions are provided as standard for connecting general external devices.
- ❖ We provide technical support for additional interfaces and active assistance with software changes.
- ❖ Compact design (height: 44cm), a miniaturized design with a single USB connection, allows for gas atmosphere control when installed in a glove box.

Aim for independence in research equipment.!!!

- ❖ We use standardized parts that allow users to freely modify them for original research.
- ❖ It was created on an open-source basis so that it can be modified and conduct specialized research.
- ❖ We provide a software library so that customers can change the program as they wish.
- ❖ We change the program (paid service) to reflect the needs of individual users.
- ❖ We guarantee 1 year of free A/S and support software updates according to PC changes for 10 years.

SEJONG
SCIENTIFIC INSTRUMENTS

Laser Direct Writer (UVW02)

(Inc.) Sejong Scientific Instruments